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- **Act as a platform for the publications of scholarship in globally respected and world-class journals.**

## **PREFACE**

**These AGBA's "Proceedings" (Advances in Global Business Research) contain all papers that have been accepted for presentation at the 15<sup>th</sup> Annual World Congress of the Academy for Global Business Advancement (AGBA) that is being hosted by the AACSB accredited National Institute of Development Administration (NIDA), Bangkok, Thailand on July 2 --- 4, 2018.**

**All papers contained in these proceedings were subjected to anonymous (blind review) process and were subsequently improved by the authors before accepted for inclusion within these referred American proceedings.**

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**AGBA also wishes to extend its heartfelt thanks to Conference Organizing Committee chaired by Mr. Wayne (John) Shabita for organizing a fabulous conference.**

**We place on record our sincere thanks to all delegates and authors for their participation and support, and look forward to having them with us next year at AGBA's 16<sup>th</sup> Annual World Congress.**

**Thank you very much.**

**Sincerely,**

**Christopher J. Marquette  
Gary L. Frankwick  
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## Table of Contents

<b>The Importance of Professional Skepticism as a Mediating Factor of the Influence of Audit Experience on an Auditor’s Ability to Detect Fraud.....</b>	<b>13</b>
<b>Relevance of Spiritual Leadership for the Organizations in the Digital Age: An Evaluation.....</b>	<b>22</b>
<b>Entrepreneurship Education, Personal Attitude, and Demographic Variables as Determinant of Entrepreneurial Intentions: A Study in Indonesia Higher Education Context.....</b>	<b>32</b>
<b>Integration of Supply Chain and Information Technology Toward Supply Chain Performance of the Small-Medium Enterprises.....</b>	<b>59</b>
<b>ISO Certification, Type of Industry, Profitability, Firm Size and Carbon Emission Disclosure: Empirical Evidence from Nordic Countries.....</b>	<b>70</b>
<b>The Influence of Person-Organization Fit and Quality of Work Life Towards Employee Performance.....</b>	<b>80</b>
<b>Students’ Attitudes towards Use of Cloud Computing in Lately Established State Universities in Sri Lanka.....</b>	<b>88</b>
<b>Attitude towards email advertising among the students in Rajarata University of Sri Lanka.....</b>	<b>94</b>
<b>An Analysis of the Impacts of International Trade, Foreign Direct Investment (FDI), Energy Consumption, and Gross Domestic Product (GDP) on Carbon Dioxide Emission in Thailand.....</b>	<b>100</b>
<b>Social Capital Roles in Maintaining Investment Sustainability in Lumajang Regency.....</b>	<b>118</b>
<b>Determinant Variable Toward level of Donor Trust and Amount of Infaq Payment (Empirical Study at Foundation of Social Fund in Jember, Indonesia) .....</b>	<b>124</b>
<b>Agropolitan Development Strategic of Local Resources Base to Enhance the Leading Commodities.....</b>	<b>135</b>
<b>Household Income and School Transitions: Does Gender Matter? Evidence from Indonesia.....</b>	<b>145</b>

<b>Measuring Nation Branding as Perceived by SMEs.....</b>	<b>156</b>
<b>The Model of Brand Image in the Digital Media Industry.....</b>	<b>167</b>
<b>Impact of Financial Variables on Common Stock Systematic Risk.....</b>	<b>177</b>
<b>The Model of Customer Delight in the Cosmetics Industry.....</b>	<b>190</b>
<b>The Impact of Integrated Reporting on Value Creation for Shareholders: The Moderating Effect of Board Effectiveness: Case of Sri Lanka.....</b>	<b>201</b>
<b>Factors Affecting Loan Repayment Performance of MFISS.....</b>	<b>220</b>
<b>Flexible Asset Management Model Empirical Study of Manufacturing Companies Listed in Indonesian Capital Market.....</b>	<b>227</b>
<b>Growth, Redistribution Income, and Poverty.....</b>	<b>238</b>
<b>Adoption of SMEs Online Shopper with Unified Theory of Acceptance and Uses Technology 2 (UTAUT 2) Approach Model.....</b>	<b>248</b>
<b>Entrepreneurship Education in the Digital Era.....</b>	<b>259</b>
<b>The Accessibility of Financial Information on ASEAN Countries Official Website.....</b>	<b>268</b>
<b>Developing Distinctive Capabilities in Regional Development Banks in Indonesia.....</b>	<b>300</b>
<b>Assessing Higher Education Performance in Indonesia: Between Efficiency Score and University Rank.....</b>	<b>311</b>
<b>Fiscal Decentralization and Community Welfare in the Regional Areas of Indonesia.....</b>	<b>330</b>
<b>Rethinking Money Stability: Shifting Value and Transformation of Money.....</b>	<b>340</b>
<b>Maritime Economy Model for Tourism Special Economic Zone (SEZ) Cape Kelayang to Promote Performance of Tourism-based Micro and Small Enterprises on Belitung Island.....</b>	<b>349</b>
<b>Mobile Commerce in India and Role of M/S BSNL PSU Telecom Service Provider.....</b>	<b>359</b>
<b>4P Concept of Marketing Mix, Needs to be Redefined for B2G Type of Business Units/Organizations.....</b>	<b>371</b>

<b>Changing Regulatory Regime: An Impetus for Innovation for Indian Pharmaceutical Industry.....</b>	<b>379</b>
<b>Effect of Dividend Policy on Shareholder Value: A Study of Investment Companies Listed in the Nairobi Stock Exchange.....</b>	<b>389</b>
<b>Impact of Mode of Entry Decision on Financing Strategy of Indian MNEs undertaking Outward Foreign Direct Investment.....</b>	<b>409</b>
<b>HRD Interventions, Employee Creativity and Organizational Innovation: An Empirical Study.....</b>	<b>417</b>
<b>An Overview of Online Education in India.....</b>	<b>429</b>
<b>Antecedents of Customer Satisfaction, Loyalty, Trust and Retention: An Understanding of Physical Retailing.....</b>	<b>436</b>
<b>A Case Study on Barbeque Nation: A Breakthrough in Indian Dining Experience.....</b>	<b>444</b>
<b>Blue Ocean Strategy in Advertising: Reflection on the Indian Perspective.....</b>	<b>456</b>
<b>Case Study:JW MARRIOTT.....</b>	<b>465</b>
<b>A Case Study on Sleepy Owl Coffee: An Innovative Make-In-India Cold Brew Coffee Start-up.....</b>	<b>475</b>
<b>ASEAN Towards Digital Economy: The Development of Equity Crowdfunding in Malaysia, Singapore, and Thailand.....</b>	<b>486</b>
<b>Linking Customer Loyalty with Employee Satisfaction and Employee Loyalty: A Moderated Mediation Model.....</b>	<b>494</b>
<b>Directors' Remuneration: A Matter of Transparency.....</b>	<b>502</b>
<b>Disruptive Innovations - A Vehicle of Growth: Case Study of Adobe India.....</b>	<b>512</b>
<b>AI Based Traffic Management at Urban Intersection.....</b>	<b>522</b>
<b>Business Development and Women Empowerment Through Rural Women Worker Cooperatives: An Empirical Study with Special Reference to Dairy Cooperatives in Kerala, India.....</b>	<b>529</b>
<b>Dynamics of Protein Supplement Industry.....</b>	<b>544</b>
<b>Assessing the Impact of Entrepreneurial Orientation in Fostering</b>	

<b>Entrepreneurial Intentions of University Graduates: An Empirical Analysis.....</b>	<b>554</b>
<b>Predicting Entrepreneurial Satisfaction: Women Digital Entrepreneurs’ Perspective.....</b>	<b>569</b>
<b>Strategic Flexibility and Innovation of an Organisation Using Electric Circuit Framework - SAP-LAP Analysis.....</b>	<b>588</b>
<b>Telemedicine: The Indian Perspective.....</b>	<b>598</b>
<b>Household Income and School Transitions : Does Gender Matter? Evidence from Indonesia.....</b>	<b>610</b>
<b>Purchase Intention Umrah Travel in Indonesia Through E-Commerce.....</b>	<b>620</b>
<b>Developing Lean Systems in Electronic Automotive Parts Manufacturing Industry: A System Dynamics Approach.....</b>	<b>630</b>
<b>A Case Study on Godrej Consumer Products Limited: The Sustained Strategy.....</b>	<b>639</b>
<b>Designing Hybrid Flexible Systems for Generation X: The Millennials (Developing ARC framework for 2S: Scaling and Sustenance) .....</b>	<b>649</b>
<b>Impact of Business Process Reengineering on Performance of Bharat Sanchar Nigram Limited.....</b>	<b>659</b>
<b>Institutional Enablers of National Innovation System: A Total Interpretive Structure Modelling Approach.....</b>	<b>670</b>
<b>Inter-surface Organizational Problems and Technology Management.....</b>	<b>679</b>
<b>Antecedents of Performance of International Joint Ventures: A Meta-Analysis Review.....</b>	<b>691</b>
<b>Changes in Practicing Teachers’ Self efficacy in Teaching Scientific Inquiry.....</b>	<b>702</b>
<b>Expansion and Acceptance of E-commerce in Technologically Proliferating Nations: Evidence from India.....</b>	<b>712</b>
<b>The Effect of Celebrity Endorsement on Customers’ Attitudes, Emotional Value and Purchase Intention Toward a Footwear Brand. The Successful Business Case of Son Tung</b>	

<b>MTP Endorsing Biti's in Vietnam.....</b>	<b>722</b>
<b>Strategic Innovations Factors in Startups: A Cross-case Analysis of Indian Startups.....</b>	<b>730</b>
<b>A Structural Equation Modeling of Variables Influencing the Customer Loyalty of Automobile Insurance in Thailand.....</b>	<b>737</b>
<b>Modeling Value Drivers for Successful Blockchain Adoption.....</b>	<b>747</b>
<b>The Impact of Human Capital on Access to Financial Services for SMEs: Does Gender matter? A Comparative study of Botswana and Tanzania.....</b>	<b>756</b>
<b>Structural Equation Modeling of Factors Influencing Innovative Behavior of Production Employees in Thai Animal Feed Manufactures.....</b>	<b>766</b>
<b>Performance and Significance of Infrastructure Mutual Funds in India.....</b>	<b>772</b>
<b>Total Interpretive Structural Modelling (TISM) of Enablers of a Value-Based Healthcare Organization.....</b>	<b>782</b>
<b>Praxial Interlanguage Education (PIE): Developing Corporate Social Responsibility in International Higher Education.....</b>	<b>792</b>
<b>Going Home and Helping Out? Returnees as Propagators of CSR in an Emerging Economy.....</b>	<b>802</b>
<b>Differences in Employee Perceptions on Downward and Upward Communications.....</b>	<b>822</b>
<b>Using the Involvement Construct to Understand the Impact of Movies and TV Shows on the Activities and Behaviors of Saudi Tourists.....</b>	<b>831</b>
<b>Social Entrepreneurship in India: An Emerging Business Model to Serve Society.....</b>	<b>862</b>
<b>Service Innovation: Towards a Sustainable Competitive Advantage in the Higher Education Sector.....</b>	<b>880</b>
<b>Strategic Thinking of CEOs on Framing a Strategy: A System Dynamics Approach in Indian Automobile Market.....</b>	<b>888</b>

<b>Structural Equation Modeling: An Emerging Tool in Social Sciences.....</b>	<b>898</b>
<b>Strong, Yet We are Vulnerable: Psychological Panorama of Sustainable Women Entrepreneurs.....</b>	<b>907</b>
<b>Challenges and Innovation - Unique Proposition: Hyatt Hotels Corporation.....</b>	<b>917</b>
<b>Value Relevance of Integrated Reporting: Evidence from Listed Companies in Sri Lanka.....</b>	<b>927</b>
<b>Changing the Experience of Flying: Vistara – the New Kid on the Block!.....</b>	<b>936</b>
<b>Training of Prison Inmates Before Release; The Low Recidivism Rate in Malaysia.....</b>	<b>945</b>
<b>Socioeconomic Characterization of Aquaculture Opportunities and Incentives in Kenya’s Fish Value Chains in the Context of Entrepreneurship.....</b>	<b>960</b>
<b>Dwindling Significance of Tax Rate in Financing the Outward Foreign Direct Investment by Indian MNEs.....</b>	<b>972</b>
<b>The Use of Patent as a Strategy in Entrepreneurial Organization.....</b>	<b>977</b>

# The Importance of Professional Skepticism as a Mediating Factor of the Influence of Audit Experience on an Auditor's Ability to Detect Fraud

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## **Abstract**

*The objective of this study is to examine the mediating effect of profesional skeptiscm on audit experience in terms of an auditor's ability to dectect fraud. This study used a survey method by providing a questionnaire containing statements on certain perceptions. The population in this study was internal auditors who work at the Representative Office of Finance and Development Supervisory Board (Badan Pengawasan Keuangan dan Pembangunan-BPKP) throughout the Indonesian Provinces. The number of useable questionnaires was 164. A Partial Least Square (PLS) approach was used to analyse the data with WarpPLS 3.00 software. The results of this study prove that the effect of audit experience and professional skepticism on an auditor's ability to detect fraud showed significant influences. Furthermore, professional skepticism can partially mediate the effect of audit experience in terms of the auditor's ability to detect fraud. It is anticipated that the results of this study will provide important references for both auditor practitioners and academics.*

**Keyword** : profesional skeptiscm, audit experience, the auditor's ability, fraud.

## **INTRODUCTION**

Fraud in Indonesian government institutions has now reached an alarming level. Fraud cases such as corruption, financial report manipulation and asset embezzlement can also occur in the public sector. The internal auditor of the government, called the Government's Internal Supervisory Apparatus (APIP) is the first line of defense in the prevention of fraud committed in government institutions. With its functional capacity and authority, APIP should be able to prevent the occurrence of fraudulent acts through its oversight role in audit, review, evaluation and monitoring. In the case of a financial audit, the internal auditor may also issue an opinion on the financial audit of a particular program whose funds come from various sources. Thus, APIP has greater potential in the detection of fraud (Rahayu & Gudono, 2016).

Auditors' duties, especially in detecting fraud, should be supported by professional skepticism, independence, professionalism and accompanied by sufficient audit experience. Various factors are examined to explain the cause of the inability of internal auditors to detect

fraud. These factors can be internal (within auditors) as well as external. The Public Company Accounting Oversight Board-PCAOB (2007) mentioned that one of the serious problems with auditors when it comes to responding to fraud risk is professional skepticism which makes auditors fail to meet the standards. According to the Association of Indonesian Government Internal Audit-AAIPI (2014), one of the characteristics that an internal auditor must have is professional skepticism in order to be able to decide or determine the extent of accuracy and truth from the evidence as well as information from the auditee.

Research conducted by Beasley, Carcello, and Hermanson (2001) states that one of the causes of audit failure is the level of professional skepticism of inadequate auditors. Audit skepticism is closely related to the auditor's ability to detect fraud. Hurtt, Eining, and Plumlee (2008) also explained the same phenomenon in terms of the scale of professional skepticism by testing the impact of professional skepticism on the ability to detect fraud by internal auditors. Therefore, knowing the factors that influence the professional skepticism of an auditor becomes very important.

The experience of an auditor is one of the factors affecting professional skepticism of the auditor because more experienced auditors can detect fraud more accurately on financial statements (Nasution & Fitriany, 2012). Work experience is demonstrated by an auditor's hours spent performing audit procedures. In addition, the problem-solving perspective of experienced auditors is better than that of inexperienced auditors.

Furthermore, there have been several previous studies that have discussed factors affecting professional skepticism, such as Handayani and Merkusiwati (2015), Oktaviani (2015), Silalahi (2013), Anisma, et al. (2011) and Bayu (2007). However, the results of those studies are inconsistent. Therefore, this study takes one of the factors from previous research and re-examines it; it is the audit experience.

In addition, this study is different to other previous studies related to the basic theory. This study uses Attribution theory (Heider, 1980) while the research by Rahayu and Gudono (2016) used The Fraud Triangle and the theory of Diamond Fraud. According to Attribution theory, auditors' behaviour can be influenced by both internal and external factors. Thus, professional skepticism and an auditor's ability to detect fraud will be greater if there are sufficient internal and external factors. Besides this, Cognitive Dissonance Theory (Festinger, 1957) is also used in this study. This theory is considered appropriate to explain how professional skepticism relates to the auditor's experience and ability to detect fraud. Thus, this study contributes to academic work due to its ability to explain the importance of professional skepticism for auditors as well as its relationship with the auditor's experience and ability to detect fraud. In addition, by reading this study, auditor practitioners will be able to understand that in order to improve the ability to detect fraud, professional experience and skepticism are required.

## **LITERATURE REVIEW**

### **Theoretical Background**

Attribution theory (Heider, 1980) is used in this study. It explains that individual behaviour is formed from internal and external strengths. According to this theory, the success or failure of auditors in detecting fraud can be caused by internal attribution (an auditor's ability to assess fraud) and external attribution (an auditor has difficulties in detecting fraud) (Jaffar, Haron, Iskandar, &

Salleh, 2011). In this study, the internal factor is professional skepticism while the external factor is audit experience.

Furthermore, the theory of cognitive dissonance was introduced by Festinger (1957) and developed as an approach to understanding the common areas of communication and social influence. Robbins and Judge (2008) argued that the way to avoid dissonance is to reduce unconformity and it will be determined by the importance of the elements that create this dissonance. If the elements are not important, the pressure to correct this imbalance will be low. Auditors who have more experience and sufficient competences will be able to reduce dissonance as well as when they are accompanied by high rewards because the rewards are predicted to balance the dissonance. The theory of cognitive dissonance in this study is used to explain the effect of professional skepticism in the influence of audit experience on the auditor's ability to detect fraud. Cognitive dissonance occurs when the auditor has high confidence in the auditee, causing his professional skepticism to be at a low level. Meanwhile, the audit standards require that auditors need to have high professional skepticism. Situational occurrences such as fraud detected on financial statements or situations such as communication problems between the former auditors and a new one will also affect the opinion conveyed to the company. These differences relate to individual mindsets in terms of dissonance or inconsistency in performing the audit of financial statements (Kushasyandita, 2012).

### **Professional Skepticism**

Professional auditors' skepticism refers to the attitude of auditors in performing audit assignments and includes thoughts that always question and critically evaluate the audit evidence. Professional skepticism should be used during the process of collecting and assessing audit information (IAI, 2000, SA section 230, AICPA, 2002, AU 230). In using professional skepticism, the auditor should not be satisfied with less persuasive evidence because of his belief that the management is honest (AAIPI, 2014). An auditor must have an attitude of professional skepticism to test the audit evidence obtained. Fullerton and Durtschi (2004) concluded that if an auditor has high professional skepticism, his/her ability to develop information when confronted with cheating symptoms will also be high.

A level of skepticism needs to be applied in the audit so that the execution of the examination can be effective and efficient requiring the auditor to apply professional skepticism in evaluating the evidence. Auditors can enhance their level of professional skepticism in anticipation of audit risks such as high material misstatement risk (Octaviani, 2015).

### **Audit Experience**

Experience based on length of work refers to an auditor's experience calculated based on a time and number of years so that auditors who have long worked as auditors can be said to be experienced, because the longer they have worked as an auditor the more they are able to add and expand their knowledge of accounting and auditing (Kusumastuti, 2008). An auditor is required to have many experiences in the field of auditing and accounting because they can contribute significantly to the development of audit duties. The auditor's ability to detect fraud is usually present amongst auditors with experience in auditing. The experienced auditor can not only find unusual cheating but, in addition, the auditor can provide an accurate description of the findings. Experience in this research refers to experience of auditors in the implementation of audit both in terms of time duration, as well as the number of audit assignments that have been done.

Furthermore, according to Adnyani, Atmadja, and Herawati (2014), having sufficient experience will make an auditor more confident in detecting fraud that has occurred in his audit assignment. Therefore, with experience, auditors will be better able to disclose fraud.

### **An Auditor's Ability to Detect Fraud**

According to the Association of Certified Fraud Examiners (ACFE), fraud is the presence of personal gain by presenting something that is inconsistent with actual circumstances, such as deceptive and dishonest elements that harm others. Fraud is a deliberate fraud commonly described as lies, plagiarism, and theft (Karyono, 2013). Previous studies have stated that an auditor's ability to detect fraud can be categorised into two main factors: internal factors and external factors in terms of the auditor's ability. The task of fraud detection is an unstructured task that requires an auditor to have techniques or a choice of ordinances and to seek additional information from various sources. The key to detecting fraud is to be able to see errors and irregularities.

### **Hypotheses Development**

The experience of the auditor is a measure of the length of time and length of service that an auditor has gone through when carrying out the audit assignment. An auditor who has audit experience will improve his/her ability to perform the examination. By having enough experience, the auditor will be more confident in detecting cheating. Auditors who have different levels of experience will also differ in their ability to detect fraud. In general, for experienced auditors, the sensitivity of irregularities in the organisation will be easily detected (Rafael, 2013). According to Hilmi (2011), audit experience has an influence on the ability of auditors to detect fraud. This is because work experience can deepen and expand the quality of someone's work. Auditors will also be more familiar with the causes of mistakes that occur, either because of pure human errors, tools, or because of deliberate fraud (Anggriawan, 2014). Auditors with a high level of experience will find it easier to find fraud, because the number and type of cases they have found will be more than the less experienced auditors (Nasution & Fitriany, 2012; Rafaeil, 2013). Based on that, this study proposes that:

*H1: Audit experience has a positive influence on an auditor's ability to detect fraud.*

Furthermore, audit experience refers to the experience of audits that have been conducted by internal auditors, whether it is a financial examination, performance inspection and/or examination with a specific purpose. Auditors who have audit experience also become one of the important factors in influencing the professional skepticism of auditors. Auditors who have audit experience may be able to detect fraud in financial statements, in addition to for the fact that experienced auditors may be better than inexperienced auditors at having a problem-solving perspective (Oktaviani, 2015). Greater audit experience is expected to affect the professional skepticism of an auditor so that he/she is more able to detect fraud. Various research results from Marbun (2016), Oktaviani (2015), Silalahi (2013) and Nasution and Fitriany (2012) support the experience of audit factors affecting professional skepticism. Based on that, this study proposes that:

*H2: Audit experience has a positive influence on professional skepticism.*

Moreover, Standard on Auditing (SA)-200 states that professional skepticism of an auditor is an attitude that includes a mindset that is always questioning, alert to conditions that may indicate possible misstatement, whether caused by fraud or error, and an important assessment of

audit evidence. The attitude of professional skepticism is the foundation that auditors must have in performing their duties; professional skepticism causes the auditor not to easily believe management assertions which further increases his/her ability to detect fraud (Kee, 1970). According to Carpenter, Durtschi, and Gaynor (2002), if auditors are more skeptical, they will be able to better assess the existence of fraud at the planning stage of the audit, which then leads auditors to increase fraud detection at subsequent audit stages. Besides, Fullerton and Durtschi (2004) revealed that internal auditors who have a high level of professional skepticism will have a high willingness to seek information if there are signs of cheating. The more information obtained by the auditor, the more the auditor is able to prove the existence of fraud.

Similarly, previous studies conducted by Winardi and Permana (2015), Rafael (2013), Pramudyastuti (2014) and Kartikarini and Sugiarto (2016) proved that professional skepticism positively affects the auditor's ability to detect fraud because auditors with high skepticism will improve their detection ability by developing additional information searches when faced with cheating symptoms. The more additional information the auditor obtains, the more capable the auditor is of proving the magnitude or absence of the fraudulent symptoms. Based on that, this study proposes that:

*H3: Professional skepticism has a positive influence on an auditor's ability to detect fraud.*

Finally, auditors who have a lot of audit experience may be able to detect fraud through professional skepticism held by the auditor. This is supported by a previous study conducted by Marbun (2016) in which audit experience proved to have an effect on the auditor's ability to detect fraud through professional skepticism as a mediator. For that reason, this study uses professional skepticism as a mediating variable that mediates the influence of audit experience on an auditor's ability to detect fraud. Based on that, this study proposes that:

*H4: Professional skepticism mediates the influence of audit experience on an auditor's ability to detect fraud.*

## METHODOLOGY

### Research Framework

Based on the hypotheses development above, the research framework is shown in Figure 1.

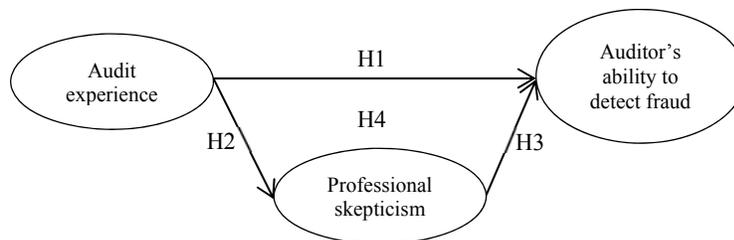


Figure 1. Research Framework

### Sampling and Data Collection

Data were collected through a questionnaire survey for internal auditors in the Representative Office of Finance and Development Supervisory Board (Badan Pengawasan Keuangan dan

Pembangunan-BPKP) throughout the Indonesian Provinces. Proportionate stratified random sampling was used to decide the number of questionnaires to distribute. In total, 349 questionnaires were distributed and only 164 questionnaires were collected.

**Measures**

Survey questionnaire items were designed based on the review of literature and the purpose of this study. Research items for the following three constructs were then developed. Audit experience was measured with eight items modified from Hasanah (2010). Professional skepticism was measured with 14 items modified from Hurtt, et al. (2003). Meanwhile, auditor’s ability to detect fraud was measured with 15 items modified from Pramudyastuti (2014). All the items were measured using a 7-point Likert scale.

**Data Analysis Technique**

WarpPLS 3.00 was applied to analyse the collected data with a Partial Least Square (PLS) approach. To test reliability and validity, this study followed Hair et al. (2013) with several criteria: factor loading > 0.7, Average Variance Extracted (AVE) > 0.5 and composite reliability (CR) > 0.7. For the hypotheses testing, the significance of the *p*-value was seen as the criterion demonstrating whether the hypothesis was supported or not. Meanwhile, to test the mediating effects, this study referred to Sholihin and Ratmono (2013) with the criteria: if the coefficient of  $X \rightarrow Y = X \rightarrow Y$  with mediating variable, the mediating effect does not exist; if the coefficient of  $X \rightarrow Y < X \rightarrow Y$  with mediating variable, a partial mediating effect exists; and if the coefficient of  $X \rightarrow Y < X \rightarrow Y$  with mediating variable and no significance, a full mediating effect exists.

**RESULTS**

From 164 collected data, 94 respondents were male and 70 were female. Most of the respondents had more than two years’ work experience as an internal auditor. For the validity and reliability of the items, the results show that all of the factor loadings are higher than 0.7 with AVE > 0.5 and CR > 0.7 which indicates that validity and reliability were satisfied.

Furthermore, Table 1 shows the results of the hypotheses testing. The results show that audit experience has a positive influence on an auditor’s ability to detect fraud ( $\beta=0.41, \rho<0.01$ ). It indicates that an auditor who has sufficient audit experience will be able to detect fraud faster and more accurately than the one who has less experience. Therefore, hypothesis 1 is supported. This result is supported by Pramana et al. (2016) and Rafael (2013) who proved the same. Besides, according to Attribution theory, audit experience as an external attribution can influence the way an auditor carries out their assessment process as well as their behaviour in making audit decisions.

Table 1. The hypotheses testing results for direct effects

Hyp.	Path	Standardised Estimate	<i>p</i> -value
H1	Audit experience → auditor’s ability	0.41	<0.01
H2	Audit experience → professional skepticism	-0.27	<0.01
H3	Professional skepticism → auditor’s ability	-0.22	<0.01

For the influence of audit experience on professional skepticism, the result shows that it has a negative relationship ( $\beta=-0.27, \rho<0.01$ ). This indicates that when an auditor has a lot of audit experience, the level of their professional skepticism is low. This result is opposite to the

hypothesis. Thus, hypothesis 2 is not supported. This result is also opposite to most of the previous studies (Marbun, 2016; Oktaviani, 2015; Silalahi, 2013). A possible reason for this result is that when auditor has high audit experience, he/she will have more knowledge regarding any tendency or possibility of fraud. However, an auditor's professional skepticism becomes low. It may also suggest that their working hours may not affect the way they think about the auditee.

Similarly, for the influence of professional skepticism on auditor's ability to detect fraud, the result shows that it has a negative relationship ( $\beta=-0.22$ ,  $p<0.01$ ). This indicates that an auditor with high professional skepticism will have a low ability to detect fraud, and vice-versa. This result is not consistent the previous studies by Marbun (2016), Pramana et al. (2016) and Kartikarini (2016) nor with cognitive dissonance theory which stated the opposite. Therefore, H3 is not supported. The possible reason for this result is that an auditor who has low professional skepticism may still be able to detect fraud well because s/he is trained to do that. Thus, with low professional skepticism but sufficient training, an auditor can also detect fraud of the auditee.

Finally, for the mediating effect of professional skepticism, the result shows that it mediates the influence of audit experience on auditor's ability to detect fraud. This can be seen in Table 2 which shows that the indirect effect of audit experience to auditor's ability to detect fraud is  $\beta=0.19$  ( $p<0.05$ ). This is a decrease from the direct effect which is  $\beta=0.41$  ( $p<0.01$ ). This result indicates that partial mediation exists in this model. Therefore, H4 is supported. The results of this study support Attribution theory that states that a person's behaviour is determined by a combination of internal strength factors, in this case professional skepticism possessed by the auditor, and external strengths like audit experience obtained by the auditor during the audit assignment. Thus, audit experience possessed by the auditor in the presence of professional skepticism may affect the auditor's ability to detect fraud.

Table 2. The hypothesis testing for indirect effect

Hyp.	Path	Standardised Estimate	p-value
H4	Audit experience → auditor's ability	0.19	<0.05
	Audit experience → professional skepticism	-0.30	<0.01
	Professional skepticism → auditor's ability	-0.16	<0.01

## DISCUSSION AND CONCLUSIONS

Based on the results of this study, several conclusions can be drawn as follows. Firstly, according to Attribution theory (Heider, 1980), there are internal and external attributions that influence individual behaviour. Audit experience can be seen as the external attribution that can develop an auditor's ability to detect fraud. Sufficient audit experience will make an auditor have various pieces of knowledge about the tendency or possibility of fraud (Paramana et al., 2016; Rafael, 2013; Nasution & Fitriyani, 2012). Therefore, it is important for the auditors to have more experience so that they can gain more knowledge regarding fraud cases. Secondly, audit experience will also increase the professional skepticism of the auditor which further improves an auditor's ability to detect fraud. In line with the findings of Marbun (2016), an auditor who has a lot of experience will be able to detect fraud accurately through professional skepticism. This is because audit experience with various pieces of knowledge will be able to improve professional skepticism which then helps an auditor to detect fraud more accurately. Thus, professional skepticism is an important mediating variable in this situation.

Thirdly, however, the results of this study show that audit experience and professional skepticism individually have a negative influence on an auditor's ability to detect fraud. These results are inconsistent with most of the previous studies. Therefore, further research regarding these results may need to be addressed. Even so, the possible reasons for these results have been mentioned in the previous section.

In terms of the implications, the findings of this study are useful for both academics and practitioners especially in terms of offering knowledge that audit experience and professional skepticism are very important for improving an auditor's ability to detect fraud. Senior auditors can share their experience or supervise the audit assignment of their junior auditors so that fraud can be detected accurately in a short time.

The limitation of this study is that the respondents for this study were drawn from internal auditors from a government institution which may not be generalisable to other auditor professionals such as external auditors or internal auditors in the private sector. Thus, a future study needs to deal with this issue.

## REFERENCES

- AAIPI. 2014. Standar Audit Intern Pemerintah Indonesia. Jakarta: Asosiasi Auditor Intern Pemerintah Indonesia.
- Adnyani, Nyoman, Atmadja, Anantawikrama Tungga, dan Herawati, Nyoman Trisna. 2014. Pengaruh Skeptisme Profesional Auditor, Independensi dan Pengalaman Auditor Terhadap Tanggungjawab Auditor Dalam Mendeteksi Kecurangan dan Kekeliruan Laporan Keuangan (Studi Kasus pada Kantor Akuntan Publik (KAP) Wilayah Bali). *e-Journal S1 AK Universitas Pendidikan Ganesha, Volume 2 No.1*.
- Anggriawan, Eko Ferry. 2014. Pengaruh Pengalaman Kerja, Skeptisme Profesional dan Tekanan Waktu terhadap Kemampuan Auditor dalam Mendeteksi *Fraud* (Studi Empiris pada Kantor Akuntan Publik di DIY). *Jurnal Nominal Volume III Nomor 2 Tahun 2014*.
- Anisma, Yuneita, Abidin, Zainal, dan Cristina. 2011. Faktor yang Mempengaruhi Sikap Skeptisme Profesional Seorang Auditor pada Kantor Akuntan Publik di Sumatera. *Pekbis Jurnal, Volume 3, Nomor 2(Juli), 490-497*.
- Beasley, Mark S., Carcello, Joseph V., dan Hermanson, Dana R. 2001. Lesson from fraud-related SEC caes, Top 10 Audit Deficiencies. *Journal of Accountancy*.
- Carpenter, Tina, Durtschi, Cindy, dan Gaynor, Lisa Milici. 2002. *The Role of Experience in Professional Skepticism, Knowledge Acquisition, and Fraud Detection*. Florida State University, Tallahassee.
- Festinger, L. (1957). *A theory of cognitive dissonance*, Evanston, IL: Row & Peterson.
- Fullerton, Rosemary R., dan Durtschi, Cindy. 2004. The Effect of Profesional Skepticism on the Fraud Detection Skills of Internal Auditors. *Working Paper Series*.
- Hair, J, Ringle, C, dan Mena, J. 2011. An Assessment of the Use of Partial Least Square in Marketing Research *Journal of Academy of Marketing Science, Vol. 40 : 414-413*.
- Handayani, Komang Ayu Tri, dan Merkusiwati, Lely Aryani. 2015. Pengaruh Independensi Auditor dan Kompetensi Auditor pada Skeptisme Profesional Auditor dan Implikasinya terhadap Kualitas Audit. *e-Jurnal Akuntansi Universitas Udayana, ISSN: 2302-8556*.
- Hurtt, Kathy, Eining, Martha, dan Plumlee, R. David. 2008. An Experimental Examination of Professional Skepticism. <http://ssrn.com/abstract=1140267>.

- Jaffar, Nahariah, Haron, Hasnah, Iskandar, Takiah Mohd, dan Salleh, Arfah. 2011. Fraud Risk Assessment and Detection of Fraud: The Moderating Effect of Personality. *International Journal of Business and Management, Volume 6, Nomor 7*.
- Kartikarini, Nurrahmah, dan Sugiarto. 2016. Pengaruh Gender, Keahlian, dan Skeptisisme Profesional terhadap Kemampuan Auditor Mendeteksi Kecurangan (Studi pada Badan Pemeriksa Keuangan Republik Indonesia). *Simposium Nasional Akuntansi XIX, Lampung*.
- Kushasyandita, Rr. Sabhrina. 2012. *Pengaruh Pengalaman, Keahlian, Situasi Audit, Etika dan Gender terhadap Ketepatan Pemberian Opini Auditor melalui Skeptisme Profesional Auditor*. (S1), Universitas Diponegoro, Semarang.
- Kusumastuti, Rika Dewi. 2008. *Pengaruh Pengalaman, Komitmen Profesional, Etika Organisasi dan Gender terhadap Pengambilan Keputusan Etis Auditor*. (S1), Universitas Islam Negeri Syarifhidayatullah Jakarta.
- Marbun, Meinar Elisabet. 2016. Pengaruh Gender dan Persepsi Auditor tentang Pengalaman Audit dan Pengetahuan Audit terhadap Kemampuan Auditor dalam Mendeteksi Kecurangan melalui Skeptisme Profesional (Studi Inspektorat Kabupaten/Kota di Provinsi Bengkulu). *Tesis Program S2 Universitas Andalas, Padang*.
- Nasution, Hafifah, dan Fitriany. 2012. Pengaruh Beban Kerja, Pengalaman Audit dan Tipe Kepribadian terhadap Skeptisme Profesional dan Kemampuan Auditor dalam Mendeteksi Kecurangan. *Disertasi, Universitas Indonesia*.
- Oktaviani, Nonna Ferlina. 2015. Faktor-Faktor yang Mempengaruhi Sikap Skeptisme Profesional Auditor di KAP Kota Semarang. *Skripsi Universitas Negeri Semarang, Semarang*.
- PCAOB. 2007. Observations on Auditors' Implementation of PCAOB Standards Relating to Auditors' Responsibilities with Respect to Fraud: Public Company Accounting Oversight Board.
- Pramana, Andy Chandra, Irianto, Gugus, dan Nurkholis. 2016. The Influence Of Professional Skepticism, Experience And Auditors Independence On The Ability To Detect Fraud. *Imperial Journal of Interdisciplinary Research (IJIR), Volume 2(Issue-11), ISSN: 2454-1362*.
- Pramudyastuti, Octavia Lhaksmi. 2014. *Pengaruh Skeptisme Profesional, Pelatihan Audit Kecurangan dan Independensi terhadap Kemampuan Auditor dalam Mendeteksi Kecurangan (Studi di Inspektorat Kabupaten Sleman)*. (S2), Universitas Gajah Mada Yogyakarta.
- Rahayu, Siti, dan Gudono. 2016. Faktor-Faktor yang Mempengaruhi Kemampuan Auditor dalam Pendeteksian Kecurangan: Sebuah Riset Campuran dengan Pendekatan Sekuensial Eksplanatif. *Simposium Nasional Akuntansi XIX Lampung*.
- Robbins, S. P., & Judge, T. (2008). *Organizational behavior* (13<sup>th</sup> ed.). Boston: Pearson.
- Sholihin, Mahfud, dan Ratmono, Dwi. 2013. *Analisis SEM-PLS dengan WarpPLS 3.00*. Yogyakarta: ANDI
- Silalahi, Sem Paulus. 2013. Pengaruh Etika, Kompetensi, Pengalaman Audit dan Situasi Audit terhadap Skeptisme Profesional Auditor. *Jurnal Ekonomi Volume 21, Nomor 3 September*
- Winardi, Rijadh Djatu, dan Permana, Yoga. 2015. Pengaruh Skeptisme Profesional dan Narsisme Klien Terhadap Penilaian Auditor Eksternal atas Risiko Kecurangan. *Simposium Nasional Akuntansi XVIII Medan*.

# **Relevance of Spiritual Leadership for the Organizations in the Digital Age: An Evaluation**

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## **Abstract**

Spiritual leadership is one area where very limited work has been done and most of this work is also confined to selected topics. In this article, we propose that Spiritual Leadership is an important aspect of leadership, which will further gain grounds during digital age. To understand it more holistically, we have analyzed four key factors i.e. Spirituality, Leadership, Organization and Importance of Spiritual Leadership in Digital Age. We studied various papers presented in these fields and our observations are supporting positive relationship between above mentioned four factors.

## **Introduction**

In this digital age, technology is helping us in analyzing data and organizing the same in a systematic way to understand and predict consumer behavior, but at the same time it is also putting a lot of pressure to individuals as well as organizations to outperform in this competitive market scenario. Our work is demanding much more time and focus than early years, we can say that work has become the centerpiece of our lives. This process is not only promoting extending working hours culture but also creating alarming situations in various developed as well as developing countries. In his study “Spiritual Leadership as a Paradigm for Organizational Transformation and recovery from Extended work Hours Cultures” Mr. Louis W. Fry and Melanie P Cohen proposed Spiritual Leadership as a worldview for authoritative change and recuperation from negative parts of Extended work Hours Cultures.

Profound Leadership center around singular prosperity and corporate social duty without yielding benefit, income development and other marker of monetary exhibitions. Fry and Cohen (2003) mentioned that this proceeds notwithstanding confirmation of the damaging outcomes and absence of morals in the association's conduct and averts consideration regarding the broken effect on the association's execution, its representatives, and society. According to this theory we can categorize our employees in three broad categories i.e. Enthusiastic Workaholic, Non-addictive enthusiastic Workaholic and Non-enthusiastic Workaholic – Compulsive Workaholic.

The hypothesis of Spiritual Leadership (Fry, 2003) is grounded in an inherent inspiration demonstrate that joins vision, trust/confidence, and philanthropic love, speculations of work environment deep sense of being, and otherworldly prosperity.

Spirituality and its relationship to organization Leadership is a verifiable issue for business experts and analysts.

Numerous authors and researchers interlinked spirituality with Organization objectives as well as leadership (Fairholm, 1998; Fry, 2003; Strack, Fottler, Wheatley, and Sodomka, 2002) this has also been evaluated that Spiritual leadership is also impacting various other important organization parameters like long term association, ethicality, non-attendance, productivity, execution, business targets and revenues, and other wellbeing related issues (Giacalone and Jurkiewicz, 2003). Authors characterized spirituality as inspirational, motivational, transformational and moral and suggest that spirituality helps is developing trustworthiness, genuineness, goodness, knowing, wholeness, congruency, interconnectedness, teamwork, collaboration, and so forth. The way that spirituality has been kept away from for so long in the field of organizational science as a genuine subject for experimental and precise studies is damning verification of the Spirituality impoverishment of the scholarly community too.

A noteworthy change is occurring in the individual and expert existences of pioneers the same number of them all the more profoundly coordinate their deep sense of being and their work. Most would concur that this combination is prompting exceptionally positive changes in their connections and their adequacy. There is additionally prove that work environment deep sense of being programs not just prompt useful individual results, for example, expanded bliss, peace, peacefulness, work fulfillment and responsibility however that they likewise convey enhanced profitability and decrease non-appearance and turnover (Fry, 2003, p. 703).

### **Literature Review**

According to the studies so far results are showing positive relationship between spiritual leadership on employee's efficiency, commitment towards organization and overall effectiveness (Fry and Matherly, 2006a; Fry and Slocum, 2008; Fry et al., 2005, 2007a, b; Malone and Fry, 2003). Authors Dushon and Plowman's (2005) explained that employees have spiritual wants (i.e., an internal life) which are similar to their bodily, psychological, and emotional wants, and none of these requirements are abandoned when they are coming at the workplace.

Mitroff and Denton (1999a), Spirituality is characterized as being "universal and timeless," "a key source and contributor of meaning and objectives," "the holiness of everything," and "the profound sentiment interconnectedness of everything," among different depictions (pp. 23– 25). Fry (2003) characterizes Spirituality Leadership as the qualities, states of mind, and practices important to characteristically propel one's self as well as other people with the goal that they have a feeling of profound survival through calling and enrollment (p. 694– 695).

Judith Neal, one of the main researchers in organizational Spirituality, records Stephen Covey's Seven Habits of Highly Effective People (Covey, 1989) as the primary proposal on her rundown of "means that assistance employees to assimilate work and Spirituality." Covey's work "is proposed to move individuals from dependence to independence to interdependence." Neal takes note of that in Seven Habits and in his authored book, First Things First (Covey, Merrill, and Merrill, 1994), Covey adds to understanding work and Spirituality on account of his writings

"center around the more profound needs throughout everyday life" (Neal, 1997, p. 129) are the understandings that Covey offers to the individuals working on management and its relationship with Spiritual leadership.

Spiritual leadership concept encourages foundational hierarchical change from the bureaucratic to the learning authoritative worldview that is by all accounts required for associations to be effective in the present disorderly, worldwide, in today's Internet age work environment. Researches conducted in past demonstrated that expanded hierarchical responsibility reinforces inspiration and diminishes non-attendance and turnover (Meyer and Allen, 1997; Mowday, Porter, and Steers, 1982) and that consistent development, which is at the core of the Total Quality Movement (TQM), is connected to organization efficiency, consumer loyalty, and revenues (Baldrige National Quality Program, 2004; Matherly et al., 2005; Kaplan and Norton, 2004).

According to Gilbert W. Fairholm, (1996) " Spiritual leadership: Fulfilling whole self needs at work" in 1994 only twenty five percent present employee were extremely satisfied with their assignment in comparison to forty percent in 1973. As indicated by Renesch (1995) in excess of Forty million individuals in the US are looking for an all the more "intrinsically valued" way of life and the numbers are increasing. While work is basic to financial prosperity, these numbers recommend that it isn't addressing our necessities as human beings.

In numerous examinations, a leader establishes Spiritual qualities, for example, respectability, trustworthiness, and integrity have been observed to be plainly identified with leadership achievement. A few other Spiritual qualities, for example, empathy and appreciation have likewise been all around underlined in the fields of work environment deep sense of being, motivation, character and morals instruction, and positive emotional intelligence (Fry, 2005).

Moxley (1999), Fairholm (1997, 1998, 2001), Judge (1999), Kouzes and Posner (1988, 1993, 2003), Ferguson (2000), Fry (2003, 2004), and Sanders, Hopkins, and Geroy (2002), Barrett, 1998; Batstone, 2003; Boldt, 1992; Bolman and Deal, 1995; Greenleaf, 1977; Hawley, 1993; Jaworski, 1996, contend that Spiritual leadership structures the foundation of the Spiritual organization.

### **What is Spirituality?**

Spirituality is a method for driving once life profoundly associated with nature and more profound laws. We can state that we have two wide laws, one encircled by society to make frameworks for better administration of regions, social orders for states, nations and so on and second is surrounded by nature which offers square with open doors for all. As indicated by this second law all demonstrations are all around associated and affecting every one of us in a few or different structures anyway level of effect can change. Illustration if some demonstration occurred in one nation "A" it won't just effect individuals or society in nation "A" yet it will affect every one of us in one or other frame however we are not occupant of nation "A". This hypothesis can be clarified deductively, a solitary water drop in enormous water body will make effect to the entire water however level of effect will be unique in relation to one place to another.

Spirituality is internal sciences, which help us in understanding our self, and once we know our internal identity it drives us to comprehend the whole mankind in better routes as every one of us are interconnected. Science has additionally affirmed that in center all living and non-living things are made of three components neutron, electron and positron the main contrast is level of mix. Nuclear hypothesis says that nothing is static at center anyway it gives off an impression of being static from outside. We can state knowing profound science causes us in understanding people better will assist the pioneer with designing his authoritative methodologies which will make a WIN-WIN circumstance for all. Spirituality hints the substance of our identity, our internal identities, isolate from the absolutely physical, yet including the physical. It depicts those basic human qualities all inclusive and crosswise over time, that show us that humankind has a place inside the more prominent plan of things and how agreement can be acknowledged throughout everyday life and work (Heerman, 1995).

### **What is Leadership?**

To start with lets attempt to comprehend what leadership isn't, which will help us in characterizing the part of pioneer in better way. A leader isn't a manager; the leaders objective isn't just to create benefit creating frameworks and groups. In the event that these are not the key target of a leader than what are the center goals of a leader? As we would like to think the center target of a leader is to create self and carry on in such a path, to the point that other will get roused to tail him. Leader needs to comprehend "Law of Reverse Effect" that each activity is bound with inverse activity of same extent. This hypothesis isn't constraining pioneers limit yet opening the whole skyline for him to comprehend the profound and inner rules and how he would first be able to soak up in himself and which will naturally persuade others to tail him.

Leaders demonstrations regard for others, exhibit fair-minded direct, communicating minding and concern, listening responsively, perceiving the commitments of others, and taking part in reflective practice. Ordinarily, in associations we have seen that chiefs are bad leaders as they are rising with guidelines and approaches for others though they themselves are not some portion of these standards. This makes a profound disappointment among colleagues that prompts negative effect on individual performance in addition to gathering and whole association execution.

Leaders play pivotal role in forming as well as sustaining an organization's philosophy. A humble leader motivates more people than an aggressive leader. Leaders are the wellspring of convictions and qualities that corporate individuals use to manage issues identifying with outside adjustment and inward incorporation. Organization performance is identified with profound Leaders play pivotal role in forming as well as sustaining an organization's philosophy. Leadership (Berrone et al., 2007; Collins, 2001; Fry and Matherly, 2006a, b). Berrone et al. (2007) found that a sturdy corporate moral personality was decidedly identified with abnormal amounts of partner fulfillment, which, thus, impacted firm monetary execution. Fry and Matherly (2006) discovered Spiritual leadership as a colossal and imperative driver of Organizational assurance, and profitability, and in addition overall business development.

As indicated by Jim Collins' Good to Great (2001), an investigation of eleven business associations and their leaders to find what make incredible and efficient

organizations. Collins characterizes Level Five leadership as leadership that rises above self-interest through a blend of humility and modesty. These leaders show convincing humility, are self-effacing and understated. However they are overenthusiastically headed to create supported execution brilliance. They set up their association's way of life by making a domain of consideration, moral duty and transparent correspondence among workers, with the goal that they feel enabled to raise issues and decide. They put more noteworthy weight on moral reasoning, trustworthiness, the nature of a man's character and qualities and his or her fit with the center social estimations of the association than on a man's instructive foundation, administrative skills, ability or work involvement. Jacobson (1994), categorically recommends that established leaders and other important employees in any business house are looking for more than just monetary rewards for their work. They are rethinking work to incorporate fulfillment of their inward requirements for profound character and fulfillment.

Individuals are striving to assimilate their Spiritual identities with their career or work lives (Kantrowitz, 1994). In a recent study approx. eighty-five present respondents approves a "meaningful association" between their leader's approaches to Spirituality and his or her effect on their performance. What is vital isn't so much words but instead activities: the level of morals illustrated, the regard and empathy appeared to others.

Leadership adequacy has been estimated from multiple points of view: by subjective assessments from adherents, companions, and seniors; on the basis of impact reflecting by adherents; or by accomplishment of business objectives, for example, revenues and efficiency. An all encompassing perspective of leadership takes a gander at both the leaders impact on supporters and accomplishment of objectives, since every point of view gives only one bit of the confound. This meta-examination of leadership inquires about spiritual abilities and exercises that have been measured in relationship to measures of leadership achievement.

Numerous specialists expect approach, intellect, even hardheartedness to be signs of an effective leader, however a survey demonstrates that these are not the defining components. Rather, spiritual qualities, for example, Self-awareness, Integrity, Intrinsic motivation, Wisdom, Interconnectedness, Cooperation and Teamwork have been observed as key components of effective leadership. Individual trustworthiness, for instance, has been appeared to be the most essential component causing respect, regard and trust from team members.

A true leader will develop an environment where work will be assigned to teams or individuals and performance flows from trust and not from monitoring. One of the key assignments of a true leader is to keep meeting individuals, listen to their ideas, develop those ideas in the form of a collaborative approach with due credits and recognition to individual or team. A biggest mistake a leader can make by putting forward their self-interest ahead of organization interest, whereas they are having deep responsibility towards organization. Leaders are somebody who can take people where others think they cannot reach themselves. A leader can create reality who others can dream about it, they can inspired people, they can see in others what they can not see themselves. They empowered team members and develop so that opportunities come to them. They create trust in organization so that employees work

together without any apprehensions. A true leader is a servant who train people skill and develop them in the organization culture.

### **What is an Organization and Organization Culture?**

The organizations culture is profoundly steered in its Mission and Vision articulations. One can make out obviously the organization objectives by concentrate the Mission and Vision articulations of an organization. The leaders one of the key objectives is to understand them and develop entire organization framework keeping the Mission and Vision statements in core. If these statements are not matching with organizations actual culture and behavior it demonstrations lack of leadership. An organization is not bounded to have limited leaders and all his employees can be act as leaders. If an organization is looking for single leader it shows that they are treating leader as manager, which will leads to multiple issues in the long times. A leader can be a good manager but the same is not true vices versa. A learning organization designs a vision of what may be conceivable, though, it may not be achieved essentially via training individuals; this objective is achievable only if we will develop this learning curve at all organization levels. An organization can be considered as a learning organization provided it encourages the learning of every one of its individuals and ready to make due changes leads to organization transformation (Senge, 1994).

With new period of relational connections and need-fulfillment utilizing the work environment as the prime site, an organization must manage various issues that characterize corporate societal life. Mitroff and Denton (1999a, 1999b) contend that individuals ought to be permitted to express their own personality into the work environment, including their spiritual thoughts and articulations. Organization transformation (OT), an ongoing augmentation of organizational advancement, looks to make enormous changes in an organization's introduction to its condition, vision, objectives and techniques, structures, forms, and organizational culture. An organizational change as a rule brings about new standards or models for arranging and performing work. The general objective of OT is to at the same time enhance organizational adequacy and individual prosperity (French, Bell, and Zawacki, 2000, p. vii).

### **Digital Age isn't thumping the entryway its as of now "IN"**

With all new technologies and deep data analysis the role of human beings has been confined in certain areas and increased in other areas. During last ten years we have noticed the positive as well as negative impacts this digital age. What hundred individuals could do in earlier years now one individual can do with the help of technology. Any idea or information can be communicated across the globe is faction of seconds which empowered organizations and impacting decision making. Individuals are more focused and spending much more time at work place for better performance and monitory benefits, which is leading towards issues like lack of intra personal skills, health related issues like obesity, hyper tension, emotional insecurity, physiological problems, tension, anxiety etc. Technology is changing rapidly and if we need to maintain our relevance in the system we need to align ourselves with latest technology developments.

### **Role of Spiritual leadership in the Digital Age**

Fry (2005) expanded spiritual leadership hypothesis by investigating the idea of positive human wellbeing and prosperity through ongoing improvements in work environment spirituality, character morals, positive thinking and spiritual leadership. In the present situation the role of leader is not to police the group however to trust and persuade them. This trust will enable the group to exceed expectations in their assignments and bring the best of them. All individuals are special and the role of a leader is to listen, evaluate dispassionately and assign responsibilities as per their core competencies. Basics of any business or technology is the wellness of human being which is also the core of spirituality.

In digital age when work weight is progressively and we are anticipating that people should carry out the occupations which machines can not do put them under gigantic mental weight. This is one of the key reason that developed nations are experiencing more mental medical problems than physical. Some of the key traits of Digital Age leader can be like

An excellent listener and psychologist

Dispassionate about opinions

Respect each individual with integrity

Remove personal ambition from leadership for larger vision

Offer suggestions and provide space to perform

Leadership is not about power but empowerment others

Leadership is not about manipulation but inspiration

Leadership is about becoming more than doing

Get involve in individuals work as integrated team

Motivate individuals for teamwork as well as individual performance

Have courage to accept his mistakes in front of team and change his approach

Spirituality opens wide space for people to comprehend and react to circumstances in proper ways. The assortment of terms as often as possible offered in meanings of spirituality resemble Self-completion, Self-satisfaction, Self-mindfulness, Self-awareness, Self-disclosure, Integration, Integrity, Balance, Intrinsic inspiration, Wisdom, Interconnectedness, Interdependence, Interrelationship, Cooperation, Teamwork. Spirituality at working environment can live without converting or compelling people, be that as it may. On account of effective leadership, we might find that spirituality conveys what needs be not such a great amount in words or lecturing, but rather in the form of spiritual qualities like thoughtful conduct and concern. The motivation behind spiritual leadership is to make vision and esteem coinciding over the key, enabled group and individual levels and, at last, to cultivate larger amounts of organizational responsibility and profitability.

Use of spiritual leadership at work is an honest to goodness question may now be asked: How may we apply spirituality in our lives including business and team management? Supporting the spirituality at work expects leaders to consider and react to yet another measurement of human life past those normally related to leaders employee relationships. We can explain effective meaning of spiritual leadership as a way which should incorporate thoughts like leading our employees with positive and moral standards and the utilization of procedures that empower self-administration. It is making conditions in which team can work wholeheartedly with the leader and produce flawless outcomes in their respective responsibilities. From the developing

examination on soul in the work environment we can extract a skeletal model of spiritual leadership that epitomizes those qualities and practices demonstrated viable in different sorts of organization. The model is comprehensive, with the individual parts giving synergistic help to the entirety. These model qualities include:

- A judiciously planned company philosophy or vision entrenched in its corporate culture
- Value have individual and different types of improvement to developed one's best self;
- Commitment to serving others;
- Mutual trust and collaborating
- Realistic apprehension for individuals and organizational objectives;
- Environment that supports receptiveness, sincerity, impartiality, independence and originality
- Pledge to group harmony, collaboration and involvement;
- Truthfulness in all social interactions and associations;
- Effortlessness and elasticity of arrangement and frameworks;
- Process that underlines proceeding with assessment of advance.

We can say that Emotional Intelligence leads to social Intelligence and the next step is Spiritual intelligence. In Emotional Intelligence we learn how to handle ourselves, our feelings, passion and emotions as an individual. Emotions turn individual capabilities on or off and how we handle our emotions, interrupt our ability to focus to work done effectively or not makes the difference. The level of leaders emotional Intelligence effect organizational performance, there is a direct relationship between EI and leadership at every level and how that organization performs. Emotional Intelligence develops empathy and listening capabilities which leads into leadership qualities and the beginning point for Social Intelligence. Social Intelligence helps us in understanding individuals and how they are thinking about things and their blaming and complaining modes. Knowing others thinking with the help of social Intelligence a leader communicate with them more effectively. Leadership success depends on others performance, a leader's job is to influence, develop, persuade, inspire and motivate other in order to achieve its objectives. Spirituality is the greatest richness can be happen to mankind. It offers Self-awareness, Integrity, Intrinsic motivation, wisdom, interconnectedness, cooperation and teamwork that have been observed as key components of effective leadership and positive approach.

Positivity is contagious and that is why it not only enhances the effectiveness of the leader but also improve the organization culture and productivity. The

## **Conclusion**

There is nothing amiss with coming to spirituality since following a spiritual way will improve one's life. King and Nicol (1999), among different writers, attach spiritual advancement to a foreordained arrangement of phases of individual improvement normal to all individuals. We can state that the leaders, who can motivate team members, make a positive moral atmosphere, rouse trust, advance positive work connections, and accomplish organizational objectives. These spiritual qualities and practices additionally enable leaders to accomplish organizational objectives, for example, expanded efficiency, brought down rates of turnover, more prominent supportability, and enhanced representative wellbeing. The question is how to achieve and maintain a renewing balance between work and family and between personal and professional areas of life. According to new scientific researches all living and non-living things comprise of same basic elements and the difference is only degree of association. This concept offers a very deep association and inters connectivity between all matters, which is the core concept of spirituality. If we combined or compare both approaches it projects a unified approach or framework, which is required in today's technology driven environment. In each organization individuals need more of psychological support than ever before and a spiritual leadership is the way forward. The importance of spiritual leader is immense as works as catalyst. The "doing flows from non doing", which not only motivate, create positive environment, sharing and trusting culture within organization but also leads towards better performance and revenues.

The spiritual values of integrity, honesty, and humility, and the spiritual practices of treating others with respect and fairness, expressing caring and concern, listening responsively, appreciating others, and taking time for personal reflection have all been linked to quantifiable positive effects for organizations and individuals. They cause leaders to be judged as more effective by both their peers and their subordinates, and they lead to enhanced performance. They have been proven to be associated with increased worker satisfaction and motivation, greater productivity, greater sustainability, and enhanced corporation reputation, which in turn have all been linked to increases in the bottom line of profits.

## **References**

# Louis W. Fry, Melanie P. Cohen , Spiritual Leadership as a Paradigm for Organizational Transformation and Recovery from Extended Work Hours Cultures, *Journal of Business Ethics* (2009) 84:265–278 \_ Springer 2008 DOI 10.1007/s10551-008-9695-2

# Gilbert W. Fairholm, (1996) "Spiritual leadership: fulfilling whole□ self needs at work", *Leadership & Organization Development, Journal*, Vol. 17 Issue: 5, pp.11-17, <https://doi.org/10.1108/01437739610127469>

# Douglas A. Hicks, *The Leadership Quarterly* 13 (2002) 379–396 Spiritual and religious diversity in the workplace. Implications for leadership, Jepson School of Leadership Studies, University of Richmond, Richmond, VA 23173,

USA Accepted 9 May 2002

# Louis W. Fry T, Steve Vitucci, Marie Cedillo, *The Leadership Quarterly* 16 (2005) 835–862, Spiritual leadership and army transformation: Theory, measurement, and establishing a baseline Tarleton State University, Central Texas, 1901 South Clear Creek Rd., Killeen, TX 76549, United States

# Sangeeta Parameshwar, *The Leadership Quarterly* 16 (2005) 689–722, Spiritual leadership through ego-transcendence: Exceptional responses to challenging circumstances, University of Illinois at Springfield, Department of Management, Springfield, IL 62703-5407, United States

# Laura Reave, University of Western Ontario, Canada, Spiritual values and practices related to leadership effectiveness, *The Leadership Quarterly* 16 (2005) 655–687

# Eric B. Dent, T. M. Eileen Higgins, Deborah M. Wharff, *The Leadership Quarterly* 16 (2005) 625–653, University of North Carolina, Pembroke, United States, Spirituality and leadership: An empirical review of definitions, distinctions, and embedded assumptions, Frostburg State University, United States

# Martha M. Geaney and Felician College, A Spirituality Leadership Competency Model: What Does It Take To Be A Spiritual Leader In Business? Author Note : Martha M. Geaney, Division of Business and Management Sciences, Felician College Correspondence concerning this article should be addressed to Martha Geaney, [geaneym@felician.edu](mailto:geaneym@felician.edu)

# Margaret Benefiel T, *The Leadership Quarterly* 16 (2005) 723–747, The second half of the journey: Spiritual leadership for organizational transformation, Andover Newton Theological School, MA 02459, United States

# Fry, L. W.: 2005a, 'Toward a Theory of Ethical and Spiritual Well-Being, and Corporate Social Responsibility Through Spiritual Leadership', in R. A. Giacalone and C. L. Jurkiewicz (eds.), *Positive Psychology in Business Ethics and Corporate Responsibility* (Information Age Publishing, Greenwich, CT), pp. 47–83 (forthcoming).

# Fry, L. W.: 2005b, 'Introduction to The Leadership Quarterly Special Issue: Toward a Paradigm of Spiritual Leadership', *The Leadership Quarterly* 16, 5.

# **Entrepreneurship Education, Personal Attitude, and Demographic Variables as Determinant of Entrepreneurial Intentions: A Study in Indonesia Higher Education Context**

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## ***Abstract***

The purpose of the study is to investigate the effect of entrepreneurship education, personal attitude and demographic characteristic (i.e. age and gender) on entrepreneurial intentions of the students in higher education context. The data was obtained through self-report questionnaire to predict entrepreneurial intention of the students. The samples were drawn from 240 students of both private and state universities in West Sumatra Province, Indonesia. The questionnaire contains four parts to capture information about demographic variable, entrepreneurship education, personal attitudes, and entrepreneurial intentions. The respondents were asked to state their opinion with Likert scales 5 points. Testing of hypotheses was conducted using multiple regression analysis. The finding of the study supported that entrepreneurship education and personal attitude positively significant influenced entrepreneurial intention. The study also found that demographic characteristics significantly influenced entrepreneurial intentions. The students with older of group age demonstrated more intentions to be entrepreneur. The finding noted that the male students have higher intention to be entrepreneur than female students. Implication of the research suggested the need to modify educational system to be more practical by designing programs to increase entrepreneurial skill and attitudes. The limitation of the research lies on sample frame from university students and methodology to obtain data. Further research is suggested to take larger sample from more universities and mix methods to capture more information regarding to entrepreneurial intention. Originality of the research while personal variables (e.g. attitude, age, gender) as determinants entrepreneurial intention, it is necessary taking into account the role of contextual variable (e.g. entrepreneurial education) to nurturing entrepreneurship.

**Keywords:** entrepreneurship education, personal attitude, demographic variables, entrepreneurial intentions

## **Introduction**

The role of higher education institutions is essential to nurturing entrepreneurship in a country. The challenges of higher education institutions are changing the students' mind-set from job seekers to job creators once they graduated from universities. The reasons to look for jobs after graduated from universities included lack of practical skill, lack of source of

capital, lack of self-confidence, and lack of experiences to start a business. It is due to majority of students and lecturers in higher education institution tend to focus on issue the students to have a high grade rather than understanding and mastering skills to start a business and nurturing spirit as an entrepreneur. More recently, educational system seems too focus on theoretical and conceptual rather than problem solving skill. The higher education institutions should direct educational system to cultivate students to be a strong innovator or inventor.

University could be a starting point for choosing the next career option for graduates. University students with job seekers orientation expect that the universities provide job opportunities through campus hiring, on campus recruitment, or job placement center in the universities. However, it is not all graduates have opportunities to find jobs due to total number of graduates increase from year to year with limited number of job vacant. In a country with lower economic growth, the number of job opportunities became more limited. This condition will be aggravate during the economics crisis. Countries with large number of entrepreneurs have power to shape the nations by growing great deal of profitable business which in turn increasing economics growth. Therefore, the role of higher education institutions becomes more crucial to create students with high intention to be entrepreneur. Entrepreneurship intention is important as how the willing of people particularly the university graduates to be self employed. Entrepreneurial intention as the state of mind directing a person's attention and action towards self-employment rather organizational employment (Bird 1988). The universities might equip students with practical knowledge and skills that would increase their motivation to be entrepreneurs.

Intention is an individual's specific propensity to perform an action or a series of actions and it is stemmed from conscious thinking that directs behavior (Parker 2004). There is something needed before which is a thought that directs one to act called as intention. Individual's attitudes might affect their intention towards an object. The attitudes can predict the intentions and the intentions can predict behavior (Kim & Hunter 1993). Entrepreneurial intentions refer to intentions of setting up one's own business in the future (Rivai 2012). The action or behavior of entrepreneurs can be predicted through their intentions. Theory of planned behavior supported that the intentions are best predictor of behaviors or actions (Ajzen 1991). The theory have been applied in various context included research related to entrepreneurship in higher education institutions.

The different stories of success entrepreneurs have been long debated among scholars to prove whether entrepreneurs are educated or born (Rivai 2012). Some researchers argued that entrepreneurship was built from individual personality traits. Entrepreneurs have innate distinct traits. Others said that the success of entrepreneurs can not be ignored from role of education to build entrepreneurial mind-set (Turker & Selcuk 2009). Education has impacts to the life aspects of people, changing attitudes, and behavioral intentions. Entrepreneurship education impact people intention to be self employed. Lorz (2011). Therefore, role of education is important to influence individuals' mind-set and gain new insight that it is unlikely to have in family life (Taylor, 2008). The current research attempts to investigate effect of entrepreneurial education, personal attitude, and demography variables on students' entrepreneurial intentions.

Entrepreneurial intentions have been paid attention by scholars, mainly studies investigating how institutional (i.e. educational) and personal variables (i.e. personality traits) contribute on intentions to be entrepreneur in higher educational context. The study of Gorman, Hanlon, and King (1997) showed that entrepreneurial attributes can be positively influenced by educational programs. It means the relationship entrepreneur intention and

perceived educational support is exist. The role of education is likely to contribute in building entrepreneurial mind-set (Turker & Selcuk 2008). The educational system can directly affect the likelihood that students identify and exploit opportunities, thus affect their entrepreneurial intention. Impact of personal attitude might not be ignored in explaining entrepreneurial intentions. Among the review of the literature on entrepreneurship in higher education context noted that personality characteristics, such as self-confidence, risk-taking ability, need to achievement and locus of control, has effect on entrepreneurial intention (e.g. Ang & Hong 2000; Henderson & Robertson 2000; Lee, Chang, & Lim 2005; Wang & Wong, 2004).

Individual propensity to choose entrepreneur as career option might also be affected by demographic variables, such as age, gender, and family background (e.g. Chowdhury & Endres (2005), Lin<sup>˜</sup>án & Chen (2009) and Pruett, et al., (2009), Peterman & Kennedy (2003), Pruett (2012), Chang, Liu, & Chiang (2014) Ferreira, et al. (2012)). Those variables were found closely linked to entrepreneurial intention. The current research attempts to investigate entrepreneurship education, personal attitude and demographic characteristic (i.e. age and gender) on entrepreneurial intentions of the students in higher education context. This research was conducted in a single industry (i.e. universities) in the same city with majority have similarity in terms of culture and ethnicity. Although demographic characteristics is formed from several demographic factors, the current research limits discussion on age and gender perspectives which are regarded to affect entrepreneurial intention.

Personal attitude is a measure of commitment towards the new business and willingness to sacrifice towards entrepreneurial initiatives (Díaz-García & Jiménez-Moreno, 2010). This study will focus on the following personal attitude that appeared by Bygrave (1989); need for achievement, risk taking propensity and locus of control. First reason, the reason why the students do not have big propensity to become entrepreneur is caused by big fear of failure that impacted by the fear of taking risk and do not have high will to get achievement of life (Cacciotti, et al. 2016). Second, added by Asmara et al (2016), the biggest obstacles of becoming entrepreneur in students are low of need for achievement and low of propensity to take risk. And the third one is base on what stated by Brandstatter (2011) locus of control is a key factor influencing entrepreneurship and that an internal locus of control influences positively on the development of entrepreneurship. Therefore this research sought to examine if personal attitudes really influenced entrepreneurial intentions among students.

## **Review of the Literature**

### **Entrepreneurial Intention**

Intentions represent "a person`s motivation to make an effort to act upon a conscious plan or decisions" (Conner & Armitage, 1998, p. 1430). Entrepreneurial intention is hence a person`s motivation to make a conscious plan to perform the behaviour of setting up a business. It reflects "self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future" (Thompson, 2009: 676). Those intentions can predict future behavior or action someone to set up a business with range from not at all, very low, to a very high level (Thompson, 2009). The idea of prediction behavior through intention have been developed since work of Fishbein and Ajzen (1975). They argued that intentions reflect an evolutionary transition from beliefs to attitudes, from attention to intention and finally from intention to behavior. It can be concluded that the development of behavior can be understood as somehow determined or planned. The higher level of intention, the more likely the behavior exist (Ajzen 1991). The

entrepreneurial intentions function as a mediator or catalyst for actions (Fayolle et al. 2006). Research findings supported that intentions are strong predictors of actual behaviour, it can be applied in various settings (Armitage & Conner 2001; van Gelderen et al. 2008; Sutton 1998). Decision to choose entrepreneur career by doing business involves careful planning and a thinking process which is highly intentional (Autio, et al 2001; Bird 1988; Krueger 1993; Tkachev & Kolvereid 1999). Entrepreneurship is seen as a good model of planned intentional behaviour and therefore applicable for intentional models (Autio et al. 2001; Bird, 1988; Davidsson, 1995; Fayolle et al 2006; Krueger, 1993; Shapero & Sokol, 1982; Tkachev et al., 1999).

## **Entrepreneurship Education**

Entrepreneurship education is the imparting of knowledge and skills either “about” or “for the purpose of” entrepreneurship generally, as part of accepted education programs at either the primary, secondary or tertiary-level educational institutions (Global Entrepreneurship Monitor, 2010).

Entrepreneurship education attempts to develop in the participants the intention to perform entrepreneurial behaviors, knowledge and desirability of the entrepreneurial activity (Liñán, 2004). Entrepreneurship education has become a thoughtful matter for university administrators, course developers, government (public) servants, and researchers (Kuratko, 2005). One reason for the increasing interest in entrepreneurship education being the impact of entrepreneurship on economic growth and employment (Audretsch, Grilo, & Thurik, 2011).

Entrepreneurship education can be categorized into four levels of education. First, entrepreneurial awareness education focused on increasing the number of people having enough knowledge about small enterprises, self-employment and entrepreneurship, so that they consider if that alternative is a rational and viable option. This level of education does not directly accentuate on the number of business created by students after completing the entrepreneurship program or course. Second, the education for start-up which is aims at training students to start own business. Four, education for entrepreneurial dynamism which is more advanced than previous start-up education. This education for entrepreneurial dynamism level of education is to basically encourage entrepreneurial behaviors after setting up a new venture. Lastly, education for entrepreneurs, same as general adult education, but more specialized to entrepreneurship. This level of education aims at improving the entrepreneurial and management skills of the already established entrepreneurs .

Entrepreneurial education is often categorized into three approaches (Heinonen & Hytti, 2010; O’Connor, 2013). The teaching “about” entrepreneurship which aims at giving a general understanding of the phenomenon. It is the most common approach in higher education institutions (Mwasalwiba, 2010). Teaching “for” entrepreneurship approach which is occupationally oriented approach aiming at giving budding entrepreneurs the requisite knowledge and skills. Teaching “through” means a process based and often experiential approach where students go through an actual entrepreneurial learning process (Kyrö, 2005).

According to Henry (2004), some researchers have measured entrepreneurship education effects in terms of how entrepreneurship programs or courses benefit the society, such as technology transfer, new jobs opportunity, or assistance to local entrepreneurs, while others measured the impact through participants’ satisfaction with the entrepreneurial programs or courses regarding innovation and their business performance. Focusing on new venture creation, many researchers have argued that there is a positive relationship between

entrepreneurship education and starting up ventures (Chrisman 1999; Henry, 2004; Kuratko 2005).

Noel (2001) studied different groups of students who completed entrepreneurship education program. The groups consisted of graduates in entrepreneurship, graduates in management, and graduates in other disciplines. The author found that entrepreneurship graduates had higher level of propensity to act as an entrepreneur, entrepreneurial intention and entrepreneurial “self-efficacy” than those of the other two groups.

Effectiveness the entrepreneurship education might be measured in terms of the predictors entrepreneurship action, such as entrepreneurial attitudes and entrepreneurial intentions. (Fayolle et al., 2006; Noel, 2001; Peterman & Kennedy, 2003)

### **Entrepreneurship Education and Entrepreneurial Intentions**

Linking between entrepreneurship education and entrepreneurial intentions can be viewed from two perspectives (Bae, Qian, Miao, & Fiet 2014): human capital theory (Becker 1975) and entrepreneurial self-efficacy (Chen, Greene, & Crick, 1998). Entrepreneurship scholars have regarded human capital as a determining factor of entrepreneurial intentions (Davidsson & Honig 2003). Human capital is “the skills and knowledge that individuals acquire through investments in schooling, on the job training and other types of experience” (Becker 1975; Unger, Rauch, Frese, & Rosenbusch 2011). Entrepreneurship education may foster a student’s attitudes and intentions, as well as the founding of a new firm (Liñán, 2008). Martin, McNally & Kay (2013) established a statistically significant relationship between entrepreneurship education and human capital outcomes, for example entrepreneurship-related knowledge and skills having a positive perception of entrepreneurship and intentions.

Entrepreneurship education is similarly linked with entrepreneurial self-efficacy, which may increase entrepreneurial intentions (Wilson, Kickul, & Marlino, 2007; Zhao, Seibert, & Hills, 2005). Entrepreneurial self-efficacy is termed as the certainty in one’s ability to successfully execute the various roles and tasks of entrepreneurship (McGee, Peterson, Mueller., & Sequeira (2009). Entrepreneurial self-efficacy is well known as one of the triggers of entrepreneurial intentions (Douglas, 2013; Fitzsimmons & Douglas, 2011; Krueger, Reilly, Carsrud (2000); Segal, Schoenfeld, & Borgia, 2005). Recently, Chen (2010) noted entrepreneurial self-efficacy as a positive mediator in the relationship between entrepreneurship education and entrepreneurial intentions, however mediation testing is beyond the scope of this study.

Developing body of thee literature noted that entrepreneurship education significantly affects on participants’ decision on engaging in entrepreneurship and their future business performance. Nevertheless, simply measuring the effectiveness of entrepreneurship programs/courses with the number of business created by students may not appropriate. Being limited to the venture creation measure may exclude the measure of entrepreneurial skills, attitudes, and intentions that may be developed throughout the learning process. The entrepreneurship programs/courses do not necessarily aim at new venture creation for all students. There are programs for nurturing entrepreneurial spirits and interest of students.

The idea of the entrepreneurship course is to introduce the concept and knowledge of entrepreneurship to students, not directly pursuing the creation of more entrepreneurs immediately. Therefore, the students are expected to develop their knowledge and skills and to improve their attitudes and intention to toward entrepreneurship. Entrepreneurship education has been found to have positive effect on entrepreneurial attitudes and intentions

(Fayolle et al., 2006; Peterman & Kennedy, 2003). Thus, the focus of entrepreneurship education model will be on how entrepreneurship education helps nurture the entrepreneurial attitudes and intentions of students. There is empirically evidenced which argued entrepreneurship education is an valuable means in inspiring student's intention towards entrepreneurial career, turning into entrepreneurial actions and increasing venturing rate of students (Fayolle & Gailly, 2004; Lee, Chang & Lim, 2005; Izedonmi & Okafor, 2010; Keat, Selvarajah.& Meyer (2011). A survey conducted by Matlay (2008) demonstrated that over ten years period under scrutiny with 64 graduates in the research sample, all of the graduates who have already taken entrepreneurship education became entrepreneurs. On the basis of review the literature, it can be proposed the following hypothesis:

*H1 : Entrepreneurship education significantly affects on entrepreneurial intention*

### **Personal Attitude**

A personal attitude is a measure of commitment towards a new business and the will to expense towards entrepreneurial initiatives (Díaz-García & Jiménez-Moreno, 2010). In the entrepreneurship context, personal attitudes, is the degree to which individuals hold either a positive or negative valuation towards entrepreneurial behavior (Miralles, Riverola & Giones, 2012). Personal attitude towards entrepreneurship has been linked to the theory of Planned Behavior (Ajzen, 1991). The theory noted that there are three key factors that influence an individual's intention to perform a given behavior: 1) the attitude towards the act, 2) subjective norms and 3) perceived behavioral control. Individual develops attitudes from the beliefs they hold about the consequences of performing the behavior (Ajzen 2005). Attitude of individual to get involved in the field of entrepreneurship is driven by push and pull factors. Push factors include frustration resulted from limited opportunities, economic down turn and dissatisfaction. Pull factors incorporate psychology and profit resulting from limited job opportunities and social mobility (Shariff & Saud 2009).

### **Personal Attitudes and Entrepreneurial Intentions**

Individuals choose to become entrepreneurs because of the greater psychic utility derived from entrepreneurship activity (Fitzsimmons & Douglas, 2011), and when attractiveness of self-employment is greater than the desirability obtained when working for others (Segal, Borgia, & Schoenfeld., 2005). Individuals can experience the potential benefits or hardships of being an entrepreneur by observing the outcomes of the actions of other people who are in entrepreneurship ventures. This can result in either a positive or negative impact on the attitude towards becoming an entrepreneur and also entrepreneurial intentions (Uygun & Kasimoglu, 2013; Zhang, Duysters & Clodt, 2013; Marques, Ferreira, Gomes & Rodrigues, 2012).

A study conducted by Vanevenhoven & Liguori (2013), noted that expected outcomes of entrepreneurial activities, include financial rewards, independence/autonomy, personal rewards and family security, are considerably related to entrepreneurial intentions and self-efficacy. This strengthen the argument that individuals are more likely to have strong intentions of starting a business and belief that they are personally capable of doing so when the engaging into entrepreneurship would result in the achievement of these entrepreneurial outcomes. Individuals' are more likely to view the entrepreneurial behavior more favorably when it is accepted and positively valued by those close to them and when they strongly believe that they possess the necessary skills to carry out the behavior (Liñánet Nabi, & Krueger, 2013). Other study conducted by Pihie (2009), support there is relationship between

determining university students' perceptions on entrepreneurial self-efficacy and entrepreneurial intention. The students had a fair score on all constructs related to entrepreneurial intention and entrepreneurial self-efficacy in the aspects of management, financial and marketing. Furthermore, students with positive entrepreneurial aspiration scored higher in entrepreneurship intention and self-efficacy which is significantly differed from those who didn't have positive aspiration. The students also scored moderately on attitudes towards entrepreneurial career and perceived behavioral control. Also the findings indicated that those who perceived entrepreneurship need to be learned at university have significantly higher mean score on attitudes towards entrepreneurial career as well as perceived behavioral control.

The current study will focus on the following personal attitude towards entrepreneurship as noted by Bygrave (1989) which consists of need for achievement, risk taking propensity and locus of control. Cacciotti (2015) explained that student does not have a high propensity to be entrepreneur is caused by feeling fear of failure for doing business. Students with lower level need for achievement will demonstrate higher level of fear. Level of need for achievement and risk-taking behavior will be determinant intentions to set up a business (Asmara 2016). Need for achievement for years now has been termed as the most important part of achievement motivation theory which was developed by McClelland (1961). The need for achievement is defined as a self-motivation to higher levels of personal accomplishment through a person's own effort (McClelland, 1961). The needs can be learned and therefore be culturally, not biologically determined; and therefore some cultures produce more entrepreneurs as a result of socialization and networking process that creates a high need for achievement. McClelland (1965), in his longitudinal analysis of the need for achievement scores of college freshmen, he revealed that a high need for achievement is a predictor of entrepreneurship and it basis on the influences of childhood and adult training and experiences. Several studies suggest that need for achievement is highly portrayed in company founders, as compared to the company managers (e.g. Begley & Boyd 1987; Miner, Smith & Bracker 1989). The relationship between the level of entrepreneurial mindset the individuals portray result in to the level of need for achievement of the founders and the financial growth of the organization.

The risk-taking personality trait plays a vital role in the decision to be an entrepreneur (Cramer, Hartog, Jonker, & Praag 2002; Caliendo Fossen, & Kritikos, 2006). Entrepreneurship researchers argued that it is precisely this risk taking character which separates the entrepreneur from non-entrepreneurs (Elston & Audretsch, 2007). It is logic that without the risk and uncertainty, there would be no entrepreneurship and it is implied that risk, as well as uncertainty, is at the heart of the entrepreneurial process. Thus, risk-taking is regarded substantial entrepreneurial characteristic.

Individuals with an internal locus of control will believe that success and failure, it depends on the effort invested and that they control their own fate.(Rotter 1986). On the other hand, people with an external locus of control will believe that their fate is not within their control but it is determined by chance or luck and not (Lii & Wong, 2008). Luthans Avey, Avolio, Norman, & Combs (2006) argued that individuals with an internal locus of control are likely to positively face challenges and hindrances, and they resolve those setbacks by seeking constructive solutions. In comparison to people with an external locus of control, internal locus of control individuals tend exhibit higher achievement motivation, consequently, they are more willing to learn to enhance their capabilities and knowledge when encountering challenges.

Elfring & Hulsink (2003) claimed that people with an internal locus of control effectively develop entrepreneurial processes because of their capability to recognize, develop and assess external opportunities and are more emotionally stable and reliable in comparison to people with an external locus of control. Tsai, Lu, Lin, & Ni (2008) emphasized that people with an internal locus of control normally believe that they can actually control their fate and that success depends on the amount of personal effort they make. Internal locus of control as personality trait might influence behavioral intentions of individual. The study conducted by Brandstatter (2011) supported that locus of control is a key factor influencing entrepreneurship. Internal locus of control influence positively on entrepreneurial intentions. The students with high internal locus of control more concern in developing of entrepreneurship.

Intention to start a business is influenced by students' attitudes towards entrepreneurship, change, money and their perceptions regarding the university support for entrepreneurship (Schwarz et al. 2009). Conversely, Douglas & Shepherd (2002) examined individuals who are in the course of choosing between career alternatives and they observed that, the attitudes those individuals had were attitudes towards independence, financial risk, hard work and income. However, while 'positive' attitudes towards all four of these objects (independence, financial risk, hard work and income) should be expected to generate an intention to undertake entrepreneurial activity, they argue that such positive attitudes are neither required nor adequate conditions for entrepreneurial intentions or behavior. The individuals will intend to become entrepreneurs only when the total satisfaction expected from the combination of independence, risk, hard work and income is higher for the entrepreneurial opportunity than it is for the best non-entrepreneurial option (Douglas & Shepherd 1997). Thus, the personal attitudes are focused on affects to entrepreneurial intention.

*H2 : Personal attitudes significantly affects on entrepreneurial intentions*

### **Age and Gender as Demographic Characteristics**

According to Wagner (2007), demographic characteristics are characteristics of the population and the commonly used demographics include race, age, income, education attainment, employment status, and location.

However, out of many components demographic characteristics few studies seem to have been done on these two variables; gender and age influencing entrepreneurial behavior (Welmilla., Weerakkody., & Ediriweera 2011); Minns & Rizov, 2005). Some others studies suggested further research regarding to age in different contexts (Ahmad, 2007). Relationship between age and entrepreneurial intentions has been examined in the prior studies (e.g. Welmilla., Weerakkody., & Ediriweera 2011 and Chaudhary. (2017) . Welmilla., Weerakkody., & Ediriweera (2011) supported that age as a demographic characteristic that associated with entrepreneurial intentions. The more mature the age, the higher intentions to be entrepreneurs. Impact of age on entrepreneurial intentions demonstrated positive relationship (Singh,2014). Age is a time of life and particular power or qualification arises as the age increases (Sajilan, Hadi, &Tehseen, 2015). The most active entrepreneurship is over the age of 25 (Lévesque & Minniti, 2006). Researchers has expressed different views on age as a demographic factor triggering entrepreneurship intentions.

### **Age and Entrepreneurial Intentions**

Age as determinant entrepreneurial intentions still demonstrates intellectual debate among scholars of entrepreneurship. As noted by Tanveer, Akbar, Gill & Ahmed (2013) that age is a controversial factor. They argued that there are limited chances to become an entrepreneur as the age increases, but age is positively related to a firm's success. Consistent with similar view, Raposo, Ferreira, Paço, & Rodrigues (2008) stated that individuals up to the age of 24 do not feel like starting their own business as entrepreneurs. They argued that entrepreneurs get more opportunities as their age's increases, but their willingness to become an entrepreneur decrease as they become old.

Although older people are more capable of exhibiting behaviors that deviate from the customary way of doing business as they have greater means and opportunity for doing so (Curran and Blackburn, 2001; Weber and Schaper, 2004), they are much less likely as younger people to take steps toward acting entrepreneurially (Hart, Anyadike-Danes, Blackburn (2004)) or to actually establish a company (Kautonen, 2008). Lévesque and Minniti (2006) explain the age-related effect on entrepreneurial intention as a result of the opportunity costs of time. They argued that older people are less willing to invest time in activities that have a long and uncertain payback period, such as starting a venture or developing new business activities for their employer. Base on the several studies done by some researchers, this study appears hypothesis as follow:

*H3a : Age negatively influences on entrepreneurial intentions*

According to a survey by the World Bank in the latest data 2015, the percentage of firms with majority female ownership in Indonesia is 18.2% of total enterprise base on survey. At a global level, the World Bank estimates 25% to 33% of all private businesses to be owned or operated by females. Therefore, it has been suggested that the identification of ways to empower women's participation and success in entrepreneurship may be critical for successful and sustainable development across countries (Allen, Elam, Langowitz, & Dean, 2008).

Another empirical study conducted by Leroy, Maes, Sels., & Debrulle (2009) on gender effects on entrepreneurial intention among Belgian undergraduates in Europe. They revealed that important gender differences in the factors that shape entrepreneurial intentions. The distinctions in the defining features of entrepreneurship of men versus women seemed important. Men seem to prefer entrepreneurship as a way of getting ahead and see financial restraints and creativity. Women on the other hand, seem to prefer entrepreneurship as a means of getting organized and see personal capabilities and know-how as important practical consideration in their decision to become an entrepreneur.

Notably, this masculine stereotype of entrepreneurship has impacted greatly on women's intentions and experiences. For instance, when women are exposed to the masculine stereotype about entrepreneurs, they are much less likely to express interests on entrepreneurial intentions (Gupta & Bhawe 2007). Women entrepreneurs in the US and Europe also report that they often observe that they are not credible because of their gender in their effort to seek funding (Smallbone, David, Johnson, Virk, & Hotchkiss. 2000).

In addition, lack of business contacts and connections to other entrepreneurs may put women at a general disadvantage in identifying business opportunities; others have focused on the mechanisms that lead men and women toward entrepreneurship. For example, women are much more likely than men to be "pushed" into entrepreneurship as a result of work/family conflict and gender discrimination in traditional work environments (Budig 2006; Heilman & Chen 2003). Discrimination in the labor market can also have an indirect effect on self-employment outcomes, as people who seek refuge from discriminatory

experiences via self-employment may also be disadvantaged in terms of managerial experience and network diversity.

Research in entrepreneurship has indicated gender differences (e.g. Brush, de Bruin, & Welter (2009) and DeTienne & Chandler (2007)) and similarities (Ahl & Nelson (2010) and Gatewood et al., (2003) in the post-venture stage of entrepreneurship. In a cross-national assessment of entrepreneurship, which included Turkey. Bosma and Harding (2006) found that males are more likely than females to initiate a venture without respect to their country's level of development. Özalp Türetgen et al. (2008) argued that gender inequalities exist in many different forms in many cultures.

Among the few studies in the pre-venture stage of entrepreneurship, Kolvereid (1997) found a significant positive correlation between entrepreneurial intentions and gender in a study of 143 first-year undergraduate business-administration students in Sweden. The finding supported that males having more such intentions than females. Similarly, Crant (1996) also found relationship between gender and entrepreneurial intentions among undergraduate and MBA students in a USA university. Male students more likely to have entrepreneurial intentions than females. Wilson, Kickul, & Marlino (2007) revealed that adolescent boys and men with MBAs are more likely to have entrepreneurial intentions than did their female counterparts. Davidsson (1995) demonstrated gender to be a direct predictor of entrepreneurial intention. Based on this discussion, this study therefore have hypothesis as follow :

*H3b : Males to be more likely to express entrepreneurial intentions than females*

## **Research Method**

A structure questionnaire was design to obtain data from field survey. Data were obtained from university students in West Sumatra Province Indonesia. There are four universities participated in the current study. A total of 300 questionnaires were distributed to the universities. Participants were involved in voluntarily basis and responses were treated with confidentiality. In total, 240 were returned, comprising a response rate 80%. The questionnaires were distributed by surveyor which was hired during data collection period. The data have been collected for one month period. All variables, except gender, were measured using items which have been utilized in previous studies with 5 point Likert scale. The Entrepreneurial Intentions questionnaire was adopted from Linan and Chen (2009). Personal Attitudes were measured by using questionnaires taken from Yurtkoru, Kuscu, and Doganay (2014). Entrepreneurial education was measured by using questionnaires which were developed from Izedonmi & Okafor (2010).

The demographic variables which consists of age and gender were measured by ratio scale and categorical scales. Checking for data entry was conducted before entering data into regression analysis. Data analysis was conducted by using multiple regression. The reliability of each construct was assessed using cronbach alpha. Hair et al. (1998) suggested that usual lower limit for Cronbach alpha is .70, but in exploratory research this limit may decrease to .60. ). Cronbach alpha for constructs of entrepreneurial intentions, entrepreneurship education, and personal attitudes is 0.813, 0.776, and 0.741. The larger reliability of the construct, will indicate the smaller error. All constructs demonstrated good reliability. The psychometric properties of scales are reported in Table 1. The estimated correlation matrix for the construct can be seen in Table 1. The estimated correlation among construct demonstrate all values lower than 0.7, it does not indicate multicollinearity problem of lack of discriminant validity.

Table 1. Mean, Standard Deviation, Cronbach Alpha, and Correlations (N=240)

Variable	Mean	SD	Cronbach Alpha	SD	EI	EE	PA	Age
EI	3.86	.46	0.813	.46	1.000			
EE	3.96	.55	0.776	.55	0.566*	1.000		
PA	4.03	.61	0.741	.61	0.668*	0.431*	1.000	
Age	3.42	.54	0.662	.54	0.243*	0.025	0.186*	1.000

Note: significant at \*  $p < 0.05$ ; SD=standard deviation; EI=entrepreneurial intention; EE=entrepreneurial education; PA=personal attitude

### Results

The respondents consisted of 186 bachelor students (77.5%) and 54 diploma students (22.5%). The majority of respondent were between 21-25 years of age (80%) and the average of their age 21.6 years. The survey results found that approximately half of the respondents were female (47.1 percent), and the remaining 52.9 percent was male students. The survey was conducted during odd semester. Majority of respondents registered in 7<sup>th</sup> semester (43.8 percent) and the rest registered in 9<sup>th</sup>, 5<sup>th</sup>, and 3<sup>rd</sup> semester is 18.3 percent, 14.8 percent, and 8.3 percent respectively. All of them have taken the courses of entrepreneurship due to entrepreneurship as compulsory subject in the universities. A large number of respondents spent their time as full time students without working or running a business (73.1 percent) and working part time job (9.9 percent), then running a business (20.0 percent). ). The survey found that approximately 37.3 percent of the students intended to be entrepreneur once they graduated, and the rest will continue study to master degree and looking for job.

Table 2. Regression Analysis

Model	R	R square	Adjusted R square	S.E of the Estimate
1	0.720 (a)	0.514	0.355	0.388

a. Predictors:(constant), Personal attitude, Family background, Contextual elements

Model	Unstandardized Coefficient		Standardized Coefficient	t	sig
	B	Std error	B		
1.constant	1.423	0.162		6.584	0.000
Entrepreneurs hip Educational	0.268	0.042	0.206	4.552	0.000
Personal attitude	0.442	0.076	0.354	3.104	0.001
Age	-0.153	-0.038	0.163	3.233	0.001

Table 3. Differences in Entrepreneurial Intention by Gender

Variable	Male	Female	t-value	Sig
Entrepreneurial Intention	4.49	4.15	2.175*	0.002

Note: Significant at \*  $p < 0.05$

H1 proposed that entrepreneurial education positively influences entrepreneurial intention of the university students in Indonesia. As noted in Table 2 that the research found significant impact of entrepreneurial education on intentions to be entrepreneur of the university students. Testing of hypotheses using regression analysis found the significance value lower than 0.05 with unstandardize  $B = 0.268$ . Therefore hypotheses 1 was supported. It can be noted that the more students get entrepreneurial education in the university, the higher intention of the student to entrepreneur.

H2 proposed that personal attitude significantly affects on entrepreneurial intention of the university student in Indonesia. The result of testing hypothesis as noted Table 2 found that significance value lower than 0.05 with unstandardize  $B = 0.442$ , therefore H2 is supported. The result concludes personal attitude of the students will determine entrepreneurial intentions.

H3a and H3b proposed the relationship between demographic variable and entrepreneurial intentions of the university students. The demographic variable was testing using age and gender. The results of statistical analysis can be seen in Table 2. The findings noted that the significant value lower than 0.05 with unstandardize  $B = 0.153$ , therefore H3a was supported. It can be said that age significantly affects on entrepreneurial intentions of the students. The findings concluded that the older students, the more likely students to be entrepreneur. In terms of gender, the result of statistical analysis of mean differences between two groups (i.e. male and female), as shown in Table 3 noted that the male students have higher entrepreneurial intentions than the female students. Therefore, both hypotheses H3a and H3b were supported.

## Discussion

### The Influence of Entrepreneurship Education on Entrepreneurial Intention

The result of the current research found that there is positive and significant effect of entrepreneurship education on entrepreneurial intentions. It can be argued that the entrepreneurship education impacts greatly to the students willing and propensity to be self employed. On the basis of this empirical finding, it can be concluded that education is necessary to be held in university in order to create more job creator. It is also about how important is to concern on the curriculum, the pedagogy, the teaching methods and also the environment to support entrepreneurship education in the university.

Entrepreneurial education in higher education institutions might strengthen students in terms of business competency and strengthening students personality traits regarding to entrepreneurship personality. Educational process during taking bachelor or diploma in the universities result in improving personal capacity and self-confidence through learning. Entrepreneurship subjects offered to higher education students began from introductory courses that are intended to teach students about the nature and importance of entrepreneurship, the courses included business plan development skills, the legal aspects of establishing a business, business start-up and managing small business. Offering students with entrepreneurship related courses will inspire students to think about a business. Entrepreneurship education may foster a student's attitudes and intentions, as well as the founding of a new firm (Linan 2008). Learning process in higher education might change students orientation, seeking entrepreneurship as career option for the future. The current

research finding is consistent with the works of Pruett et al., 2009; Souitaris et al., 2007; Wilson et al., 2007; Hollenbeck and Hall, 2004; and Noel, 2001. Other research also support this result, according to Martin, McNally & Kay (2013) established a statistically significant relationship between entrepreneurship education and human capital outcomes, for example entrepreneurship-related knowledge and skills having a positive perception of entrepreneurship and intentions.

### **The Influence of Personal Attitude on Entrepreneurial Intention**

The current study found that the personal attitude significantly effects on entrepreneurial intention of university students. The study limits discussion on three dimension personal attitudes which are need for achievement, risk taking propensity and locus of control. The result found that composite dimensions of personal attitude contribute on intention of the students to be entrepreneur, specifically in higher education institution context. Practically, the personal attitudes are closely related on the mentality of the person. The mentality itself is also impacted by the education. In line with study conducted by Schwarz et al. (2009), they found the intention to start a business was influenced by students' attitudes. Those attitudes include need for achievement and self-confidence affect entrepreneurial intention among students (Ferreira et al. 2012 and Rivai 2012). Risk taking propensity as a dimension of personal attitude closely related to behavioral tendencies (i.e. risk taker) (Triawan & Sumaryono 2012). In general, entrepreneurs demonstrate this kind of trait that supports for success in her/her business. It can be argued that risk taker behavior of the university students associates with entrepreneurial intentions. Locus of control as dimension of personal attitude has been found linking with entrepreneurial intentions. Locus of control refers to degree of control of a person to determine success or unsuccess of his/her life. A person with high internal locus of control will believe that his/her decisions can control the life. Meanwhile, external locus of control reflects there is believe on external factors as determinant success or unsuccess in the life (e.g. destiny or luck). "Successful entrepreneurs distinguish themselves from unsuccessful ones by the interaction of their internal locus of control and external locus of control" (Gaddam, 2008: 39) The same results were also shown by Hsiao et al (2015) who supported that internal locus of control had a positive, considerable influence on entrepreneurship among managers of all levels. Motivation to be entrepreneur have to be began from self-willingness of the students. It will result in decision of the students whether he/she choose a self-employment career in the future. The students with high Need for Achievement (nAch) will demonstrate more eager to set-up a business. Need for Achievement can drive the students' intentions to lead to a successful entrepreneur. Therefore student's nAch will affect entrepreneurial intentions. Students who have high need for achievement are likely to prove that they are struggling on challenging tasks and this process proceed themselves as successful entrepreneurs. The recent findings of the research consistent with results of previous studies (e.g. Johnson, 1990; Sagie and Elizur, 1999; . Muller 2011; Rauch and Frese (2007) which concludes there is significant relationship between nAch and entrepreneurial intentions.

### **The Influence of Age and Gender on Entrepreneurial Intentions**

The result of current research found that the age significantly effects on entrepreneurial intention. It can be said that students with having higher of age, they more willing to be entrepreneur. The conditional factors are becoming the main points for this. As having older age, the surrounding, the peers and the family condition are becoming more complicated which impacts on the intentions to be self employed. Getting older reflects maturity in which they can be wise and tough mentality to face the problems and better for overcoming the obstacles faced. It implies that young people are less likely to engage in

enterprising behavior, whereas older people have more engagement and propensity to see self employed as something better for future. The current finding is supported by Agyemang, Deh and Asuamah (2013) and Boyd (1990) also found that there is significant and positive effect of age on intention of start new business in higher education institution context (i.e. university students). Our research result supports finding from Bates (1995) and Levesque & Minniti (2006) that the probability of an individual becoming an entrepreneur increases with age to a certain point, and decreases thereafter after getting old or the third age point.

Impact of gender differences on entrepreneurial intentions was also found in the current research. This research found that male students has higher intention to be entrepreneur rather than female students. The finding can be explained by reasons, firstly, that female students tend to be more interested enjoying having salaried job rather than choosing self-employed job as entrepreneurs. Secondly, the male students seem to be more likely struggling to challenging tasks rather than female students. Therefore, the females were less likely to be founders of new business (Mazzarol et al. 1999). Our finding also noted that the females have higher propensity to continue the study and get the stable job. It is consistent with the study conducted by Lo, Sun, and Law (2012) who argued that males perceive much more encouragement to perform entrepreneurship, their intentions to do business are likely to be higher compared to females. It is happened since there is such stereotype that business is man area. Additionally, male is also considered as have better capability in doing business. Ozymalz (2011) also supported that students those are having economic and business background in general shows that male students have higher intention to start business than female students.

## **Conclusion**

Entrepreneurial intentions demonstrate the intentions of a person to be an entrepreneur. This research was conducting in higher education institutions context in Indonesia. Entrepreneurial intentions of the university students are good predictor of behavior or action of the students' decision to choose future career as entrepreneurs. The recent studies focused on determinant entrepreneurial intentions. Developing body of the literature supported among determinant of entrepreneurial intentions can viewed from variables entrepreneurial education, personal attitude, and demographic (i.e age and gender). Students who have entrepreneurial intentions are likely to be more successful when they establish new business. The finding of the study supported that entrepreneurship education and personal attitude positively significant influenced entrepreneurial intention. The study also found that demographic characteristics significantly influenced entrepreneurial intentions. The students with older of group age demonstrated more intentions to be entrepreneur. The finding noted that the male students have higher intention to be entrepreneur than female students. The research provides several implications regarding to increase number of graduates to be entrepreneurs. The research supported that entrepreneurial education able to increase the entrepreneurial intentions of the students in higher education institution context (i.e. universities) in Indonesia. Accordingly, the efforts to increase number of entrepreneurs can be conducted through improving educational system which supports to nurturing entrepreneurship hard skills and soft skills. Higher education institutions should encourage supporting environment which support to growth young entrepreneurs since they start study in university. The finding is expected to give contributions to both scholars and potential entrepreneurs. The scholars can develop personality traits which support entrepreneurial intention by reviewing the recent curricula for entrepreneurship. The students might have strong personal attitude and tough in competitive environment.

The research noted several limitations regarding variables, samples, and data collecting methods. First, examining factors influencing entrepreneurial intentions can be

viewed from various determinants, however the recent study limited merely on three dependent variables: entrepreneurial education, personal attitude, and demographic. Second, in terms samples, this study conducted in a single industry (i.e. universities) with limited number of samples. Third, the data was obtained using self-reported questionnaire which filled by respondents therefore, there is potential impact of self-reported respond bias. Future studies are expected to taking into account our research limitation by considering more determinant factor, extending sample size and object in different industry, and using mix-method analysis to explain predictor of entrepreneurial intentions.

## REFERENCES

- Ahmad, N. H. (2007). A cross cultural study of entrepreneurial competencies and Entrepreneurial success in SMEs in Australia and Malaysia. *Doctorial theses. University of Adelaide, Adelaide School of Business, Australia.*
- Agyemang, I. K., Deh, I. Y., & Asuamah, S. Y. (2013). Socio-Demographics effect in Factors that Shape Decision to Start Own Business. *Journal of Small Business and Entrepreneurship Development* , 1(1), pp. 34-41.
- Ahl, H. J., & Nelson, T. (2010). Moving forward: Institutional perspectives on gender and entrepreneurship. *International Journal of Gender and Entrepreneurship*, 2(1),pp. 5-9.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), pp.179-211.
- Ajzen, I. (2005). *Attitudes, Personality, and Behavior*. New York: Open University Press.
- Audretsch, D. B., Grilo, I., & Thurik, A. R. (2011). Globalization, entrepreneurship, and the region. In M. Fritsch (Eds.) *Handbook of research on entrepreneurship* (pp. 11-32). Cheltenham: Edward Elgar.
- Ang, S.H., & Hong, D. G. P. (2000). Entrepreneurial spirit among East Asian Chinese. *Thunderbird International Business Review*, Vol. 42, No. 3, pp. 285-309
- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. C., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2, 145-160
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Begley, T. M. & Boyd, D. P. (1987). Psychological characteristics of associated with performance in entrepreneurial firms and small businesses. *Journal of Business Venturing*, 2, pp. 79-83.

- Bygrave, W.D., The Entrepreneurship Paradigm (I): A Philosophical Look at its Research Methodologies (1989). *Entrepreneurship Theory and Practice*, Vol. 14, Issue 1, pp. 7-26
- Bird, B. (1988). Implementing entrepreneurial ideas: the case for intentions. *Academy of Management Review*, Vol. 13 No. 3, pp. 442-54.
- Allen, E.I. A., Elam, N. L., & Dean, M. (2008). Global Entrepreneurship Monitor –2007. *Report on Women and Entrepreneurship*. Available at [www.babson.edu/cwl](http://www.babson.edu/cwl), accessed February 2012.
- Asmara, H. W., Djatmika, E. T., & Indrawati, A. (2016). The Effect of Need for Achievement and Risk Taking Propensity on Entrepreneurial Intention through Entrepreneurial Attitude. *Journal of Business and Management*, 18(6),pp. 117-126.
- Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The Relationship Between Entrepreneurship Education and Entrepreneurial Intentions: A Meta-Analytic Review. *Entrepreneurship Theory and Practice*, 38(2), pp. 217–254.
- Becker, G. (1975). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, Second Edition, National Bureau of Economic Research, Inc.
- Budig, M. J. (2006). Intersections on the Road to Self-Employment: Gender, Family, and Occupational Class. *Social Forces*, 84(4), pp.2223-2239.
- Unger, J.M, Rauch, A., Frese, M., Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26,pp. 341–358.
- Brandstatter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51, pp. 222–230.
- Brush, C.G., de Bruin, A. , & Welter, F. (2009). A gender-aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship*, Vol. 1 No. 1, pp. 8-24.
- Buttner, E. H., & Benson R. (1988). Bank Loan Officers' Perceptions of the Characteristics of Men, Women, and Successful Entrepreneurs. *Journal of Business Venturing* 3, pp. 249-58.

- Caliendo, M., Fossen, F., & Kritikos, A. (2006). Risk attitudes of nascent entrepreneurs: New evidence from an experimentally-validated survey. *Discussion Paper* No. 2168.
- Cacciotti, G., Hayton, J.C., Mitchell, J.R., & Giazitzoglu, A. (2016). A reconceptualization of fear of failure in entrepreneurship, *Journal of Business Venturing*, **31**, 3, p. 302.
- Chaudhary, A. (2017). Demographic factors, personality and entrepreneurial inclination: A study among Indian university students. *Education + Training*, Vol. 59 Issue: 2, pp.171-187.
- Chen, C.C., Greene, P.G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?. *Journal of Business Venturing*,13(4),pp. 295–316.
- Chen, Y. (2010). *Does entrepreneurship education matter to students' entrepreneurial intention?* A Chinese perspective. Paper presented at second International Conference on Information Science and Engineering. China, December 4–6 .
- Chowdhury, S., & Endres, M. (2005). *Gender difference and the formation of entrepreneurial self-efficacy*. Paper presented at the United States of Association of Small Business (USASBE) Annual Conference, Indian Wells, CA.
- Chrisman, J. J. (1999). The influence of outsider-generated knowledge resources on venture creation. *Journal of Small Business Management*, 37 (4), pp. 42–58
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28, pp.1429-1464.
- Cramer, J. J., Hartog, N. J., & Praag, C.V. (2002). Low risk aversion encourages the Choice for entrepreneurship: an empirical test of a truism. *Journal of Economic Behavior and Organization* 48, pp.29–36.
- Curran, J.. & Blackburn, R.A. (2001). Older people and the enterprise society: Age and self-employment propensities. *Work, Employment and Society* 15 (4), pp. 889-902.

- Crant, J.M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions, *Journal of Small Business Management*, 34, 3, pp. 42-49.
- Davidsson, P. (1995). *Determinants of entrepreneurial intentions. Paper Presented at the RENT IX Workshop. 23–24 November, Piacenza, Italy.*
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), pp.301–331.
- DeTienne, D.R. & Chandler, G. N. (2007). The Role of Gender in Opportunity Identification. *Entrepreneurship Theory and Practice*. Vol. 31, No. 3, pp. 365-386.
- Diaz-Garcia, M.C., & Jiménez-Moreno, J. (2010). Entrepreneurial intention: the role of Gender. *International Entrepreneurship Management Journal*, 6 (3), pp. 261-283.
- Douglas, E., & Shepherd, D. (2002) Self-employment as a Career Choice: Attitudes, Entrepreneurial Intentions, and Utility Maximization. *Entrepreneurial Theory and Practice*, 26 (3): pp. 81-90
- Douglas (2013). Reconstructing entrepreneurial intentions to identify predisposition for growth. *Journal Business. Venture*, 28 (2013), pp. 633-651
- Douglas, E.J. & Shepherd, D.A. (1997) Why entrepreneurs create businesses: a utility maximizing response. *Frontiers of Entrepreneurship Research*, 17 (1997), pp. 185-186
- Elfring, T., & Hulsink, W. (2003). Networks in entrepreneurship: The case of high-Technology firms. *Small Business Economics*, 21, pp.409–422.
- Elston, J.A., & Audretsch, D.B. (2007). The role of risk in entrepreneurial behavior. *Entrepreneurship: The Engine of Growth*, 1-3 Edited by Maria Minniti, Praeger, London.
- Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Effect and Counter-effect of Entrepreneurship Education and Social Context on Student's Intentions. *Estudios De Economia Aplicada*, Vol. 24 (2), pp.509-523.

- Ferreira, J., Raposo, M.L., Rodrigues, R.G., Dinis, A., & do Paço, A. (2012). A model of entrepreneurial intentions: An application of the psychological and behavioral approaches. *Journal of Small Business*
- Fayolle, A., & Gailly, B. (2004). *Using the Theory of Planned Behaviour to Assess Entrepreneurship Teaching Program: A First Experimentation.* Paper presented at 14th Annual Int. Ent. Conference, University of Napoli Federico II, Italy.
- Fitzsimmons, J.R., & Douglas, E.J. (2011). Interaction between feasibility and desirability in the formation of entrepreneurial intentions. *Journal of Business Venturing*, 26(4), pp.431-440.
- Fitzsimmons, J. R. and Douglas, E.J. (2011). Interaction between feasibility and desirability in the formation of entrepreneurial intentions. *Journal of Business Venturing*, 26 (4) (2011), pp. 431-440.
- Gatewood, E., G., Carter, N. M., Brush, C. G., Greene, P. G., & Hart, M. M. (2003). *Women Entrepreneurs, Their Ventures, and the Venture Capital Industry: An Annotated Bibliography.* Stockholm: ESBRI.
- Gaddam, S. (2008). Identifying the Relationship Between Behavioral Motives and Entrepreneurial Intentions: An Empirical Study Based Participation of Business Management Students. *The Icfai Journal of Management Research*. 7, pp. 35-5.
- Gorman, G., Hanlon, D., & King, W. (1997). Some research perspectives on Entrepreneurship education, enterprise education, and education for small business management: A ten year literature review, *International Small Business Journal*, 15, (3), pp.56-77.
- Gupta, V. K., & Bhawe, N. M. (2007). The Influence of Proactive Personality and Stereotype Threat on Women's Entrepreneurial Intentions." *Journal of Leadership and Organization Studies* 13(4):73-85.
- Hair et al., (1998), *Multivariate Data Analysis*, Fifth Edition, Prentice Hall, Upper Saddle River : New Jersey.
- Heilman, M. E., & Chen, J. (2003). Entrepreneurship as a Solution: The Allure of Self-employment for Women and Minorities. *Human Resource Management Review* 13(2):347-64.

- Hart, M., Anyadike-Danes, M., Blackburn, R. (2004). *Spatial Differences in Entrepreneurship: A Comparison of Prime Age and Third Age Cohorts*. Paper presented at The Institute for Small Business Affairs 27th National Conference, Newcastle, Gateshead, UK. Belfast: Economic Research Institute of Northern Ireland.
- Heinonen, J., & Hytti, U. (2010). Back to basics: the role of teaching in developing the Entrepreneurial University. *The International Journal of Entrepreneurship and Innovation*, 11 ,pp. 283-292.
- Henderson, R., & Robertson, M. (2000). Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career. *Career Development International*, Vol. 5 No. 6, pp. 279-87.
- Henry. (2004). The Effectiveness of Training for New Business Creation: A Longitudinal Study. *International Small Business Journal*, 22 (3), pp.249-271.
- Hollenbeck, G. P. & D. T. Hall, D.T. (2004). Self-Confidence and Leader Performance. *Organizational Dynamics*, Vol. 33, No. 3, pp. 254-269.
- Izedonmi, P.F. & Okafor, C. (2010). The Effect of Entrepreneurship Education on Students' Entrepreneurial Intentions. *Global Journal of Management and Business Research*, 10(1), pp.49-56.
- Johnson, B. R. (1990). Toward a multidimensional model of entrepreneurship: the case of achievement motivation and the entrepreneur. *Entrepreneurship Theory and Practice*, 14, pp.39-54.
- Kautonen, T. (2008). Understanding the older entrepreneur: Comparing Third Age and Prime Age entrepreneurs in Finland. *International Journal of Business Science and Applied Management*, Vol 3, Issue 3,pp. 3-13.
- Keat,O.Y., Selvarajah,C.,& Meyer,D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science*, Vol. 2 No. 4,pp. 206-220
- Kim, M. S., & Hunter, J. E. (1993). Relationships among attitudes, behavioral intentions, and behavior: A meta-analysis of past research, Part 2.*Communication Research*, 20, pp.331-64.

- Kyrö, P. (2005). *Entrepreneurial learning in a cross-cultural context challenges previous learning paradigms*. In: Kyrö, P. & Carrier, C. (eds.) *The Dynamics of Learning Entrepreneurship in a Cross-Cultural University Context*. Hämeenlinna: University of Tampere.
- Kolvereid, L. (1997). Entrepreneurship among business graduates: does a major in entrepreneurship make a difference? *Journal of European industrial training*, 21 (4), pp. 154-160.
- Krueger, N. F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice*, 18, pp.5–21.
- Kuratko, D. (2005) .The emergence of entrepreneurship education: Development, trends, and challenges, *Entrepreneurship Theory and Practice*, September.
- Lee, S., Chang, D., & Lim, S. (2005), Impact of entrepreneurship education: A comparative study of the U.S. and Korea. *International Entrepreneurship & Management Journal*, 1(1), pp. 27-43
- Linan, F. & Chen, Y.W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory & Practice*, Vol. 33 No. 3, pp. 593-617.
- Levesque, M., & Minniti, M. (2006).The effect of aging on entrepreneurial behavior *Journal of Business Venturing*, 21, (2).pp.177-194.
- Leroy, H., Maes, J., Sels, L., & Debrulle, J. (2009). *Gender effects on entrepreneurial intentions: a TPB multi-group analysis at factor and indicator level*. Working Paper Steunpunt STOIO. Paper presented at the Academy of Management Annual Meeting, 7-11 August 2009, Chicago (Illinois, USA).
- Linan, F. (2004). Intention-Based Models of Entrepreneurship Education. *Piccola Impresa /Small Business*, 3, (1)pp.1-35.
- Linan, F., Nabi, G., & Krueger, N. (2013). ‘British and Spanish entrepreneurial intentions: A comparative study’, *Revista de Economia Mundial*, 33: pp.73–103.
- Lii, S. Y., & Wong, S. Y. (2008). The antecedents of overseas adjustment and commitment of expatriates. *The International Journal of Human Resource Management*, 19, pp.296–313.

- Lo, C., Sun, H., & Law, K. (2012). Comparing the Entrepreneurial Intention between Female and Male Engineering Students. *Journal of Women's Entrepreneurship and Education*, No. 1-2, pp.28-51.
- Luthans, F., Avey, J.B., Avolio, B., Norman, S.M. and Combs, G. (2006) Psychological Capital Development: Toward a Micro-Intervention. *Journal of Organizational Behavior*, 27, 387-393.
- Matlay, H. (2008). The Impact of Entrepreneurship Education on Entrepreneurial Outcomes. *Journal of Small Business and Enterprise Development*, 15(2), pp.382-396.
- Mazzarol, T., Volery, T., Doss, N., & Thein, V. (1999). Factors influencing small business start-ups. *International Journal of Entrepreneurial Behavior and Research*, 5(2), pp. 48-63.
- Martin, B.C., McNally, J.J., & Kay, M.J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28, pp. 211–224.
- Miralles, F., Riverola, C. & Giones, F. (2012). *Analysing nascent entrepreneurs' behaviour through intentionbased models*. Paper presented at the ISPIM Conference, La Salle University, Barcelona, Spain.
- Marques, C.S., Ferreira, J.J., Gomes, D.N., Rodrigues, R.G. (2012). Entrepreneurship education: How psychological, demographic and behavioural factors predict the entrepreneurial intention, *Education + Training*, Vol. 54 Iss: 8 pp. 657 - 672.
- McClelland, D. C. (1965). Achievement and entrepreneurship: A longitudinal study. *Journal of personality and Social Psychology*, 1, pp. 389-392.
- McClelland, D. C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand .
- Miner, J. B., Smith, N. K. & Bracker, J. S. (1989). Role of entrepreneurial task motivation in the growth of technologically innovative firms. *Journal of Applied Psychology*, 74(4), pp.554-560.
- Mwasalwiba, E.S. (2010). Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators", *Education + Training*, Vol. 52 Issue: 1, pp.20-47.

- Mueller, S. (2011). Increasing entrepreneurial intention: effective entrepreneurship course characteristics. *International Journal of Entrepreneurship and Small Business*, Vol. 13, No. 1.
- Minns, C and Rizov, M, (2005) *The spirit of capitalism? Ethnicity, religion, and self-employment in early 20th century Canada*. Explorations in Economic History, 42 (2). pp. 259-281.
- Noel, T.W. (2001). *Effects of entrepreneurial education on student to open a business*. *Frontiers of Entrepreneurship Research*, Babson, Conference Proceedings. Babson College, [www.babson.edu/entrep/fer](http://www.babson.edu/entrep/fer).
- Souitaris, V., Zerbinati, S. & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22, pp.566–591.
- Peterman, N.E., & Kennedy, J. (2003). Enterprise education: influencing students' perception of entrepreneurship, *Entrepreneurship Theory & Practice*, Vol. 28 No. 2, pp. 129-45.
- Pihie, Z. A. L. (2009). Entrepreneurship as a career choice: An analysis of entrepreneurial self efficacy and intention of university students. *European Journal of Social Sciences*, 9(2), pp. 338-349.
- Pruett, M., Shinnar, R., Toney, B., Llopis, F., & Fox, J. (2009). Explaining entrepreneurial intentions of university students: a cross-cultural study. *International Journal of Entrepreneurial Behavior & Research*, Vol. 15 No. 6, pp. 571-94.
- Pruett, M. (2012), Entrepreneurship education: Workshops and entrepreneurial intentions, *Journal of Education for Business*, Vol. 87, pp.94-101. DOI: 10.1080/08832323.2011.573594.
- O'Connor, A. (2013). A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. *Journal of Business Venturing*, vol. 28, issue 4, 546-563.

- Özalp Türetgen, I., Unsal, P., & Erdem, I. (2008). The Effects of Sex, Gender Role, and Personality Traits on Leader Emergence. Does Culture Make a Difference? *Small Group Research*, 39 (5), pp. 295-307.
- Raposo, M., Ferreira, J., Paço, A., & Rodrigues, R. (2008). Propensity to firm creation: Empirical research using structural equations. *International Entrepreneurship Management Journal*, 4(4), pp.485-504.
- Rauch, A., & Frese, M. (2007) . Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success, *European Journal of Work and Organizational Psychology*, 16:4, pp.353 - 385.
- Rivai, H.A. (2012). Factors Influencing Students' intentions to be Entrepreneurs: Evidence from Indonesian Higher Education. *ASEAN Entrepreneurship Journal*, 1(1), 67-80.
- Sagie, A & Elizur, D. (1999) Achievement Motive and Entrepreneurial Orientation: A Structural Analysis *Journal of Organizational Behavior*. Vol. 20, No. 3 (May, 1999), pp. 375-387.
- Sajilan, S., Hadi, N.U., & Tehseen, S. (2015). Impact of Entrepreneur's Demographic Characteristics and Personal Characteristics on Firm's Performance under the Mediating Role of Entrepreneur Orientation. *Review of Integrative Business and Economic Research*, 4(2)
- .
- Smallbone, David, Johnson, S.,Virk, B., & Hotchkiss., G. (2000). *Young Entrepreneurs, Women Entrepreneurs, Co-Entrepreneurs and Ethnic Minority Entrepreneurs in the European Union and Central and Eastern Europe (Study)*. Report commissioned by the European Union. Centre for Enterprise and Economic Development Research (CEEDR). Middlesex University Business School, UK.
- Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International Journal of Entrepreneurial Behaviour & Research*, 11(1), pp. 42–57.
- Shariff, M. N. M., & Saud, M. B. (2009). An Attitude Approach to the Prediction of Entrepreneurship on Students at Institution of Higher Learning in Malaysia. *International Journal of Business and Management*, 4(4), pp.129–13 .
- .

- Singh, I. (2014). Role of Demographic Variables in the Formation of Entrepreneurial Intention. *IOSR Journal of Business and Management (IOSR-JBM)*, Vol 16, Issue 12, pp. 20-25.
- Schwartz, S.J., Mason, C.A., Pantin, H., & Szapocznik, J. (2009). Longitudinal relationships between family functioning and identity development in Hispanic immigrant adolescents: Continuity and change. *Journal of Early Adolescence*, 29, 177-211.
- Sutton, S. (1998). Predicting and explaining intentions and behavior: How well are daing? *Journal of Applied Social Psychology*, 28, pp. 1317-1338
- Tanveer, M.A., Akbar, A., Gill, H., & Ahmed, I. (2013). Role of Personal Level Determinants in Entrepreneurial Firm's Success. *Journal of Basic and Applied Scientific Research*. 3(1), 449-458.
- Triawan dan Sumaryono. (2008). Kecenderungan Perilaku Pengambilan Resiko Dengan Minat Wirausaha. *Psikologika*, Edisi 26 Volume 13.
- Taylor, D.W. (2008.) The Entrepreneur in Youth: An Untapped Resource for Economic Growth, Social Entrepreneurship, and Education. *International Journal of Entrepreneurial Behavior & Research*, Vol. 14 Issue: 5, pp.367-369, <https://doi.org/10.1108/13552550810897713>.
- Thomson, E.R. (2009). Individual Entrepreneurial Intent: Construct Clarification and Development of an Internationally Reliable Metric. *Entrepreneurship Theory and Practice*. May 2009, 669-694.
- Turker, D., and Selcuk, S. S. (2008). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial training*, Vol. 33, No. 2, pp. 142-159.
- Tkachev, A., & Kolvereid, L. (1999). Self-employment intentions among Russian students. *Entrepreneurship & Regional Development*, 11, pp.269-281.
- Tsai, H. C., Lu, C. T., Lin, L. H., & Ni, F. Y. (2008). The effect of locus of control on the relationships among product innovation, management accounting systems, and organizational performance. *Journal of Humanities and Social Sciences*, 4, pp. 61-70.

- Uygun, R., & Kasimoglu, M. (2013). The emergence of entrepreneurial intentions in indigenous entrepreneurs: the role of personal background on the antecedents of intentions, *International Journal of Business Management*, 8(5), pp. 24–40.
- van Gelderen, M., Brand, M., van Praag, M., Bodewes, W., Poutsma., & van Gils. (2008). Explaining entrepreneurial intentions by means of the theory of planned behavior. *Career Development International*, 13 (6), pp 538-559.
- Vanevenhoven, J. & Liguori, E. (2013). The impact of entrepreneurship education: Introducing the entrepreneurship education project. *Journal of small business management*, 51 (3), pp. 315-328.
- Wang, C., & Wong, P. K. (2004). Entrepreneurial interests of university students in Singapore. *Technovation*, 24(2), pp.163-172. [http://dx.doi.org/10.1016/so166-4972\(02\)00016-0](http://dx.doi.org/10.1016/so166-4972(02)00016-0).
- Wagner, J. (2007). What a Difference a Y makes—Female and Male Nascent Entrepreneurs in Germany, *Small Business Economics*, 28, pp.1–21.
- Weber, P., & Schaper, M. (2004). Understanding the grey entrepreneur. *Journal of Enterprising Culture*, 12, pp. 147-164.
- Wilson, F., Kickul, J. & Marlino, D. (2007). Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education. *Entrepreneurial Theory and Practice*, 31, pp. 387-406.
- Welmilla, I., Weerakkody, W. A. S., & Ediriweera, A. N. (2011). *The Impact of Demographic Factors of Entrepreneurs on Development of SMEs in Tourism Industry in Sri Lanka*. Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.
- Yurtkoru, E.S., Kuscu, K.Z., & Doganay, A. (2014). Exploring the antecedents of entrepreneurial intention on Turkish University Students. *Social and Behavioral Science* 150, pp. 841-850.
- Zhang, Y., Duysters, G., & Cloudt, M. (2013). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal*, pp. 1–19.

Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The Relationship of Personality to Entrepreneurial intentions and Performance: A Meta-Analytic Review. *Journal of Management*, 36(2), pp. 381-404.

Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions. *Journal of Applied Psychology*, 90(6), pp. 1265-1272.

# INTEGRATION OF SUPPLY CHAIN AND INFORMATION TECHNOLOGY TOWARD SUPPLY CHAIN PERFORMANCE OF THE SMALL-MEDIUM ENTERPRISES

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## ABSTRACT

The purpose of this study is to discuss the performance of SME supply chain as the development of operational management and supply chain influenced the integration of supply chain and information technology in Malang. Analysis method using Structural Equation Model (SEM) through Analysis of Moment Structures (AMOS) version 6. Respondent owner of UKM 113 years 2017.

The findings of this study prove that improved supply chain performance is significantly influenced by supply chain integration on the financial and physical flows. Information technology empirically supports the improvement of business efficiency due to the exchange of information more quickly and low cost.

The results explain the increase in profits, sales growth, market share expansion, and product innovation development affect supply chain performance.

The uniqueness of this paper that information technology has the opportunity to be used optimally in increasing demand.

*Keywords: Integration and performance of Supply Chain of SMEs, Information Technology.*

## 1. INTRODUCTION

The establishment of the ASEAN Economic Community (MEA) resulted in a free flow of goods, services, factors of production, investment and capital, as well as the elimination of tariffs for trade between ASEAN countries (kemenperin.go.id, 2015). Small and Medium Enterprises (SMEs) as the driving force and savior of the Indonesian economy in the crisis. The results of research by Ozgulbas, Koyuncugil and Yimaz (2006), explain that SMEs contribute to the economy and create new jobs, product differentiation, enhancing entrepreneurship and innovation. The study was conducted on Small and Medium Enterprises which was built by the Department of Cooperatives, Small and Medium Enterprises Malang, which is engaged in convection unit, food / chips, bags / shoes, sanitair / ceramics, handicrafts.

In general supply chain integration involves a variety of stages involving suppliers, manufacturers, distributors, retailers and consumers (Chopra and Meindl, 2004; Vivek Sehgal, 2009). The development of supply chain management encourages business competition to no longer compete between firms, but competition takes place between collaborative business groups, known as supply chains (Heizer and Render, 2008; Lotfi et al., 2013). Supply chain integration that works together to take advantage of strategic positions and to improve operational efficiency (Chopra and Meindl, 2004; Pujawan, 2010, Krawjeski, Malhotra and Ritzman, 2016 p.581). Measuring the performance of the supply chain at the company to monitor and control, communicating the company's objectives to functions within the internal environment and the company in the supply chain, knowing the company's position against competitors and company goals and making improvements to create competitive advantage. In the face of an increasingly competitive business environment, buyers need to work more closely with their suppliers to optimize supply chain performance (Lawrence, 2004), as

well as for companies in the supply chain. The relationships between suppliers and buyers can affect product development costs, inventory levels, product delivery schedules and on-time delivery. In addition, a good relationship with suppliers can also affect the financial performance and profitability of buyers (Meena *et al.*, 2012). Maloni and Benton (2005), also explained that most buyers depend on suppliers to be more responsive

The importance of supply chain integration within the enterprise, it is necessary to look for what exactly affects supply chain integration. Based on research conducted by Li *et al.* (2009), explains that information technology is influenced by supply chain integration. Further research results from McLeod and Schell, 2000, explained that the development of information technology, followed by the ease in accessing knowledge related to information technology and its implementation.

Implementation of information technology and supply chain management on SMEs is expected to improve the performance of SMEs in Indonesia. Limitations of capital, the limitations of reliable human resources on SMEs, make implementation of supply chain management highly adapted to the presence of SMEs. Alomar and Pasek (2014), describe the limitations of SMEs, in addition to finance and human resources, are also limited to access to markets. Usually SMEs experience sales that are expected only in certain seasons. This study aims to identify and analyze supply chain integration, information technology and supply chain performance in creative industries of Small and Medium Enterprises Unit in Malang Indonesia.

## **2. LITERATURE REVIEWS AND HYPOTHESES**

Supply chain management is needed to build a supply chain that focuses on maximizing value for customers, so competition is no longer between companies, but between supply chains (Simchi-Levi *et al.*, 2003, Heizer and Render, 2008, Pujawan, 2010). Effective supply chain management regards suppliers as corporate partners in determining an ever-changing market strategy, (Krajewsky, Malhotra, Ritzman, 2016 p 566).

The results explain that lean supply chains aim to achieve cost, quality, and delivery objectives (Koskinen, 2009, Yinan, *et al.*, 2017). Manufacturers focusing on low-cost direct competition should apply lean supply chains, while competitive focus needs to create unique designs on fast supply chains (Stavroulaki and Davis, 2010). Thus, manufacturers with low-cost strategic operations should increase the use of lean supply chains, but not agile supply chains.

Supply chain management, information technology is part of information integration, as well as information sharing, known as supply chain information integration (Prajogo and Olhager, 2012; Frohlich and Westbrook, 2001). There are two-way supply chains, among which material can run from upstream to downstream or vice versa, while information can run from downstream to upstream or vice versa. Supply chain activity is the main activity and supporting activity within Porter's value chain. Among each member of the partnership run the value system to be able to coordinate each other (McLeod and Schell, 2007).

Information technology as a competitive advantage, risk and cost of coordination between organizations has decreased with the existence of information technology (Bagheri *et al.*, 2014). Furthermore, information technology facilitates coordination between the company and its partner companies in forecasting and scheduling operations (Paulraj and Chen, 2007; Prajogo and Olhager, 2012).

Decisions in the supply chain are the impact of supply chain integration, can result in good supply chain performance (Li *et al.*, 2009). Research on supply chain integration to supply chain performance has been done by Anatan (2010), Koçuglu *et al.* (2011), Ariani and Dwiyanto (2013), and supply chain integration studies on positive information sharing have been conducted by Koçuglu *et al.* (2011).

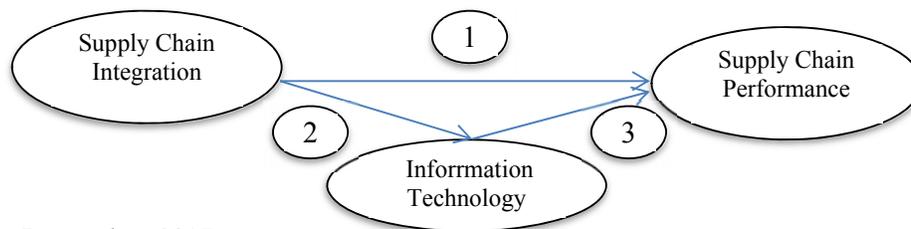
Based on the above explanation, the research hypothesis is raised:

H1: Increasing supply chain integration will have a positive effect on supply chain performance improvement

H2: Increasing supply chain integration will improve technology information

H3: Increasing supply chain integration will have a positive effect on improving supply chain performance mediated by information technology.

The relationship between these variables can be seen in Figure 1 below:



Source: Researcher, 2017

**Figure.1. Conceptual Research Framework**

Explanation :

1. Fawcett *et al.* (2007), Anatan (2010), Koçuglu *et al.* (2011), Ariani dan Dwiyanto (2013), Wu *et al.* (2014)
2. Sheu *et al.* (2006), Paulraj *et al.* (2008), Prajogo dan Olhager (2012)
3. Li *et al.* (2009), Bagheri *et al.* (2014)

### **3. DATA AND RESEARCH METHODS**

This study uses a quantitative description approach to develop knowledge through testing of proposed hypotheses, making measurements and observations, and testing a theory (Creswell, 2003). The population criteria of Small and Medium Enterprises used are Small and Medium Enterprises of convection centers and handicrafts that have business license and can be identified by the Ministry of Industry, Trade and Cooperatives in Malang in the last 3 years, the processing field, has two or more permanent employees, means that can be observed by researchers. Based on population criteria, SMEs in Malang that meet the criteria of 113 SME samples are scattered in all districts in Malang. Sample determination is called a saturated or census sample.

The scores on the Likert Scale graded from very positive to very negative. This score is based on the assessed construct. Likert scale shows interpretation: strongly agree with score 5, agree with value 4, quite agree with score 3, disagree with score 2 and strongly disagree score 1.

The two concepts of measurement are Validity and Reliability (Augusty, 2014). The instrument of this study is a questionnaire that will be given to SME respondents Malang. The formula used to test instrument validity is Product Moment from Karl Pearson. Data

analysis used to complete this research are: Structural Equation Modeling (SEM) with AMOS program

#### 4. RESEARCH RESULT AND DISCUSSION

Characteristics of SME respondents in Malang, which were sampled by sex, age, business experience, product type, job status, annual sales result, and marketing area. The results of the description of respondent characteristics are presented in Table 3 below.

Table 1. Characteristics of Respondents Research

Characteristics of Respondents		Frequency (Person)	Percentage (%)
1. Sex	a. Man	53	50,48
	b. Women	52	49,52
	Amount	105	100
2. Age	a. 20 – 29 years	11	10,48
	b. 30 – 39 years	31	29,52
	c. 40 – 49 years	27	25,71
	d. ≥ 50 years	36	34,29
	Amount	105	100
3. bBusiness experience	a. < 5 years	18	17,14
	b. 5 – 10 years	41	39,05
	c. 11 – 15 years	16	15,24
	d. 16 – 20 years	15	14,29
	e. > 20 years	15	14,29
	Amount	105	100
4. Type of product produced	a. Foods and Beverages	59	56,19
	b. Crafts	38	36,19
	c. Garment	8	7,62
	Amount	105	100
5. Position of respondent	a. Owner	99	94,29
	b. Manager	6	5,71
	Amount	105	100
6. Annual sales results (Rp. 000)	a. < 75.000	35	33,33
	b. 75.000 – 149.000	14	13,33
	c. 150.000 – 250.000	16	15,24
	d. > 250.000	40	38,10
	Amount	105	100
7. Marketing area	a. Local/Intercity	75	71,43
	b. Between provinces	25	23,81
	c. Between countries	5	4,76

Source: Primary Data processed, 2017

Analysis of the description of research variables aimed at explaining each variable, item and indicator of research statement based on frequency distribution, percentage, and average are summarized based on statement or answer from research respondents.

##### 4.1. Description of Supply Chain Integration

Supply chain integration is focused on SMEs' efforts to manage the integration of business management flows well and optimally. The analysis of the description of supply chain integration

variables divided into three indicators above indicated by the percentage of answers and the mean values of each indicator can be seen in Table 2 below.

Table 2. Description of Supply Chain Integration (SCI)

Variable Indicators	Item	Percentage of Respondents Answer (%)					Average
		1	2	3	4	5	
1. Integration of the Information Flow (IIF)	IIF 1	0	3,81	7,62	67,62	20,95	4,06
	IIF 2	0	3,81	5,71	67,62	22,86	4,10
	IIF 3	0	0,95	1,90	62,86	34,29	4,30
	Average of Integration of the Information Flow (IIF)						<b>4,15</b>
2. Integration of Physical Flow (IPF)	IPF 1	0	5,71	2,86	40,95	50,48	4,36
	IPF 2	0	5,71	3,81	40,00	50,48	4,35
	IPF 3	0,95	12,38	14,29	48,57	23,81	3,82
	Average of Integration of Physical Flow (IPF)						<b>4,18</b>
3. Integration of Financial Flow (IFF)	IFF 1	2,86	21,90	14,29	40,95	20,00	3,53
	IFF 2	0	7,62	2,86	50,48	39,05	4,21
	IFF 3	0	2,86	2,86	40,00	54,29	4,46
	Average of Integration of Financial Flow (IFF)						<b>4,07</b>
<b>Average of Percentage</b>		<b>0,42</b>	<b>7,20</b>	<b>6,24</b>	<b>51,01</b>	<b>35,13</b>	
<b>Average of Supply Chain Integration (SCI)</b>						<b>4,13</b>	

Source: Primary Data processed, 2017

#### 4.2. Description of Information Technology

Variable information technology aims to describe the utilization of information technology as a medium of communication with supply partners (suppliers and consumers) is shown by Table 3. below.

Table 3. Variable Information Technology (IT)

Variable Indicators	Percentage of Respondents Answer (%)					Average
	1	2	3	4	5	
1. The correspondence between SMEs and suppliers using e mail (IT <sub>1</sub> )	2,86	67,62	7,62	14,29	7,62	2,56
2. Letters between SMEs with consumers using e mail (IT <sub>2</sub> )	0,95	57,14	2,86	21,90	17,14	2,97
3. Coordination between SMEs and suppliers is done between internet (IT <sub>3</sub> )	2,86	58,10	8,57	18,10	12,38	2,79
4. SMEs use websites to market products (IT <sub>4</sub> )	2,86	48,57	7,62	23,81	17,14	3,04
5. SMEs have information systems linked to their supply chain partners (IT <sub>5</sub> )	0	43,81	7,62	38,10	10,48	3,15

<b>Average of Percentage</b>	<b>1,90</b>	<b>55,05</b>	<b>6,86</b>	<b>23,24</b>	<b>12,95</b>	
<b>Average of Information Technology (IT)</b>						<b>2,90</b>

Source: Primary Data processed, 2017

SMEs have the view that the use of information technology is simple, the scale of business and the resulting performance is good enough, so that SMEs feel not enough urgent to use information technology more developed. This is due to the limitations of human resources and capital to develop information technology into complementary information.

#### 4.3. Description of Supply Chain Performance Variables

The variables of supply chain performance are focused on measuring SMEs performance through two sub-variables, the first of which is financial aspect and second on the non financial aspect. The essence of the supply chain performance variables in the short term to determine the size of SMEs performance development in competing in the middle of the market and in the long run able to encourage the improvement of SMEs performance both from the financial and non financial aspects.

The result of analysis of description of supply chain performance variable shown by percentage of answer and mean value on each indicator can be seen in Table 4. below.

Table 4. Description of Supply Chain Performance (SCP)

Variable Indicators	Item	Percentage of Respondents Answer (%)					Average
		1	2	3	4	5	
Financial (F)	F 1	0	16,19	3,81	60,00	20,00	3,84
	F 2	0	15,24	3,81	50,48	30,48	3,96
	F 3	0	16,19	2,86	43,81	37,14	4,02
	F 4	0	13,33	3,81	43,81	39,05	4,09
	F 5	0,95	18,10	14,29	50,48	39,05	3,63
	<b>Average Financial Indicators (F)</b>						<b>3,91</b>
Non Financial (NF)	NK 1	0	1,90	4,76	46,67	46,67	4,38
	NK 2	0,95	7,62	2,86	35,24	53,33	4,32
	NK 3	0	13,33	5,71	30,48	50,48	4,18
	NK 4	0	5,71	1,90	42,86	49,52	4,36
	NK 5	0	3,81	7,62	57,14	31,43	4,16
	<b>Average Non Financial Indicators (NF)</b>						<b>4,28</b>
<b>Average of Percentage</b>		<b>0,19</b>	<b>11,14</b>	<b>5,14</b>	<b>46,10</b>	<b>37,43</b>	
<b>Average of Supply Chain Performance (SCP)</b>						<b>4,09</b>	

Source: Primary Data processed, 2017

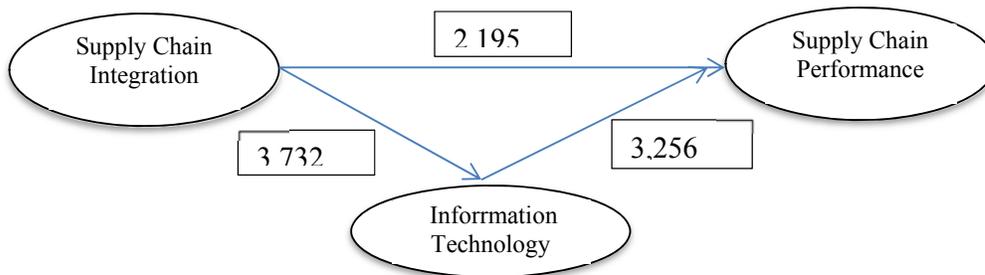
The result of the description analysis presented in Table 6 shows that the mean value of supply chain performance is 4,09 means that most of the respondents stated that supply chain

performance which consist of two indicators, namely financial and non financial, has a high chance to support the improvement of business performance and SME management.

### 5. Testing Research Hypotheses

Hypothetical test is conducted to determine the direct influence of independent variable to the dependent variable. The test results as shown in Figure 2. show from the three hypotheses tested influence significantly. Information technology positively affects supply chain performance; information technology has a positive effect on supply chain integration and supply chain integration has a positive effect on supply chain performance.

The relationship between these variables can be seen in Figure 2 below:



Source: Processed Data Results, 2017

Figure 2. Direct Effect Testing Diagram

Tabel 5  
Hypothesis Testing Results

Relationship Between Variables		Original Sample	T-statistic	Information
Exogenous	Endogenous			
Supply Chain Integration	→ Information Technology	0,325131	3,732614	Positive, Significant
Information Technology	→ Supply Chain Performance	0,257895	3,256737	Positive, Significant
Supply Chain Integration	→ Supply Chain Performance	0,211541	2,195317	Positive, Significant

Source: Processed Data Results, 2017

### 6. Discussion of Research Results

This study shows that supply chain integration activities have a positive effect on information technology and supply chain performance. These results support the research of Anatan (2010) conducting studies on large-scale manufacturing firms in Indonesia, and Li et al. (2006), which explains that supply chain integration (in the study using the term supply chain management) provides an increasing effect of competitive advantage formed from price, quality, delivery, product innovation and time to market variables.

The results of this study explain that the integration of physical flow is one of the fundamental weaknesses in SMEs because of limited production capacity. Efforts to develop information technology can be followed by the development of production capacity, which there is a

choice through the development of internal capacity of SMEs and improve collaboration, especially with SMEs which produce similar products as those applied to SMEs groups or cluster systems. The purpose of collaborative development is to maintain cooperative relationships with suppliers and consumers, SMEs need to work with similar SMEs to meet production capacity (production linkage). This pattern also aims to improve the standardization of SME products to be able to compete with other SMEs, especially with SMEs coming from outside the region / abroad.

Information technology has a positive and significant impact on supply chain performance. This suggests that adequate information technology such as the Internet will be able to encourage improved system integration and performance of the supply chain. Information technology supports the integration of the supply chain on the collaboration of activities and merging in the supply chain, in a balanced and two-way walk. The use of information technology facilitates the integration and coordination related to planning on demand and production schedule so that there is no shortage or excess production. This effort can also avoid the environmental uncertainty because the flow of information that is run can be more effective, accurate, and fast.

Integration of supply chain supported by information technology affecting supply chain performance. Differences in product characteristics produced by SMEs are influenced by marketing areas and SME technology needs. Garments and handicraft products that have endurance and export potential that is better than food and beverage products. This then encourages different levels of information technology needs in each SME. McLeod and Schell, 2007 ;, Honggeng Zhou and Benton, 2007 explain that information technology is important in the development of information systems. A good information system will increase the competitiveness of a company. Information technology also encourages supply chain integration practices to be more effective in sharing information, thereby enhancing initiatives from supply chain partners including in managing inventories, continuous programming, forecasting and filling, and responses efficient customers.

Supply chain performance, showing most respondents SMEs with middle age between 35-55 years have higher value, because experience, has increased market share; and responsive to the desires of consumers and SMEs to innovate, product development. This condition also increases the ability of SMEs in terms of competition and business efficiency.

This study provides theoretical contributions to the development of operational management science, particularly information technology, supply chain integration and supply chain performance in improving performance based on the conceptual framework model designed by Chen and Paulraj (2004); Shue et al. (2006); Paulraj et al. (2008); Li et al. (2009); Kocuglu et al. (2011); Prajogo and Olhager (2012); Ariani and Dwiyanto (2013); Bagheri et al. (2014). The theoretical contributions of this research to supply chain integration as proposed (Tan et al., 1998; Frohlich and Westbrook, 2001) that partnerships in the supply chain, require integration in the supply chain. Theoretically, supply chain integration is in the value chain of Porter (1980, 1985), where firms in a partnership relate to one company to another and are managed in one unit or one system. This supply chain integration activity describes internal integration, external integration, integration with suppliers and consumers (Lotfi *et al.*, 2013). Increased integration across all corporate functions will have an impact on cost, delivery, profitability and flexibility (Li *et al.*, 2009).

Explanation of the practical contribution that optimal utilization of information technology, government and university institutions need to provide assistance, improve facilities, and provide incentives in the form of information technology equipment for SMEs to adapt to the development of information technology.

## **7. Research Implications**

The decision of SMEs to maintain cooperative relationships only with suppliers and potential customers has proven to have the greatest contribution in reflecting long term relationship variables.

This relationship lasts for a relatively long time based on trust (social capital) without formal contracting system.

## 8. Research Findings

Provide empirical evidence that supply chain integration, especially sourced from the integration of financial flows and physical flow integration, positively affects supply chain performance. This is evidenced by an increase in return on investment, return on assets, sales growth, market share expansion, and product innovation development recorded from the results of supply chain performance.

## 9. Conclusion

Based on the results of data analysis and discussion that has been described previously, then the originality of the results of this study are as follows:

1. Supply chain integration, especially sourced from the integration of financial flows and the integration of physical flow positively affect supply chain performance. This is evidenced by an increase in return on investment, return on assets, sales growth, market share expansion, and product innovation development recorded from the results of supply chain performance.
2. Information technology empirically supports business efficiency improvement because information exchange is able to run faster and lower cost. However, in its application, SMEs still do not perform optimally because of limited capital investment, human resources that have not been able to operationalize, and limited production capacity that has not been able to balance if there is a spike in demand as a result of the use of information technology
3. Integration of supply chain supported by information technology affecting supply chain performance. Differences in product characteristics produced by SMEs are influenced by marketing areas and SME technology needs.

## REFERENCE

- , 2014. What is Understanding SMEs / SMEs? <http://www.pustakadunia.com/artikel-pustaka-umum/apa-sih-pengertian-ukm-umkm-itu-2/2014>
- Anatan, Lina. 2010. Effect of Implementation of Supply Chain Management Practices on Supply Chain Performance and Competitive Advantage, *Karisma*. Vol 4 (2), pp 106 – 117.
- Ariani, Desi. Bambang Munas Dwiyanto. 2013. Effect Analysis of Supply Chain Management on Corporate Performance (Study on Small and Medium Industries of Precious Foods of Padang West Sumatra. *Diponegoro Journal of Management*.
- Benton, W.C. and Maloni, M. 2005. The influence of power driven buyer/seller relationships on supply chain satisfaction. *Journal of Operations Management*. Vol. 23, pp. 1-22.
- Bharadwaj, A. S. 2000. A resource-based perspective on information technology capability and firm performance: An empirical investigation. *MIS Quarterly*, 24(1), 169 – 196.
- Bowersox, Donald J., David J. Closs, M. Bixby Cooper. 2007. *Supply Chain Logistics Management*. McGraw-Hill/Irwin. New York.
- Candra, Sevenpri., Linda. 2014. QSPM and 7C's Strategy for e-SCM Implementation Strategy (Case Study: XYZ Plastic Corporation). *International Journal of Multimedia and Ubiquitous Engineering* Vol.9, No.1 (2014), pp.11-18
- Chen, I.J., Paulraj, A. 2004. Towards a theory of supply chain management : the constructs and measurements. *Journal of Operations Management*.
- Chin, Thoo Ai, Abu Bakar Abdul Hamid, Amran Raslica, Low Hock Henga. 2014. The impact of supply chain integration on operational capability in Malaysian Manufacturer. *Procedia Social and Behavioral Sciences*.
- Choi, T., and T. Linton. Don't Let your Supply Chain Control Your Business. *Harvard Business Review*, vol. 89, no. 12 (2011), pp. 112–117.

- Chopra, S., Meindl, P. 2001. *Supply Chain Management : Strategy, Planning and Operation*, third edition, Prentice Hall, New Jersey, USA.
- Fawcett, S., Magnan, G. 2002. The rhetoric and reality of supply chain integration. *Int. J. Phys. Distrib. Logist. Manag.* Volume 32(5), pp. 339–36
- Ferdinand, Agusty. 2006. *Metode Penelitian Manajemen*. Badan Penerbit Universitas Diponegoro. Semarang.
- Handfield, R.B. and Bechtel, C. 2002. The role of trust and relationship structure in improving supply chain responsiveness. *Industrial Marketing Management*. Vol. 31, pp. 367-82.
- Handfield, Robert B., and Kevin McCormack. What you Need to Know about Sourcing from China. *Supply Chain anagement Review* (September 2005), pp. 28–33.
- Heizer, Jay and Barry Render. 2008. *Operations Management*. 9nd.
- Heriyanto. 2014. Application of Supply Chain on Small and Medium Enterprises in Palembang City. *Proceedings: National Seminar and Call for paper Economic Globalization : Trend and Risk for Developing Country*, 22 – 24 Mei 2014, Bandung.
- Honggeng Zhou, W.C. Benton Jr., 2007, Supply Chain Practice and Information Sharing, *Journal of Operations Management*..
- Hwang, D. Y., Lin, Y. C., & Lyu, J. 2008. The Performance Evaluation of SCOR Sourcing Process The Case Study of Taiwan’s TFT LCD Industry. *International Journal of Production Economics*. 115, pp 411 – 423.
- Ipek Koçoglu, Salih Zeki Imamoglu, Hüseyin Ince, Halit Keskin, 2011, The Effect Of Supply Chain Integration On Information Sharing: Enhancing The Supply Chain Performance, *Procedia Social And Behavioral Sciences* 24 (2011) 1630–1649
- Jin, B. 2006. Performance implications of information technology implementation in an apparel supply chain. *Supply Chain Management : An International Journal*. 11 (4), pp 309 – 316.
- Koçuglu, Ipek., Salih Zeki Imamoglu, Hüseyin Incea, Halit Keskina. 2011. The effect of supply chain integration on information sharing: Enhancing the supply chain performance. *Procedia Social and Behavioral Sciences* 24 (2011) 1630–1649.
- Kearns, G. S., Lederer, A. L., 2003. A resource-based view of strategic IT alignment : How knowledge sharing creates competitive advantage. *Decision Sciences*. 34 (1), pp 1 – 29.
- Krawjewski, Lee J., dan Larry P. Ritzman. 2016. *Operations Management Processes and Supply Chains*, Eleventh Edition, Global Edition, Printice Hall, New Jersey.-pp. 565-585
- Krause, Daniel R., Robert B. Handfield, Thomas V. Scannel. 1998. An empirical investigation of supplier development : Reactive and strategic process. *Journal of Operations Management*. Vo. 17, pp. 39-58.
- Kuncoro, M. 2008. The role of SMEs in the Indonesian Economy. *Bisnis Indonesia Daily*
- Kurniaprass. 2011. Supply Chain Management, *Kurnia on WordPress.com*.
- Lawrence, J. 2004. The case for measuring supplier satisfaction. *Academy of Information and Management Sciences Journal*. Vol. 7, No. 2, pp.115.–125.
- Lee, H.L., So, K.C., Tang, C.S., 2000. The value of information sharing in a two –level supply chain. *Management Science* 54 (8), 1467 – 1481.
- Lee, W. C.; Kwon, G. W.; Severance, D. 2007. Relationship between supply chain performance and degree of linkage among supplier, internal integration and customer. *Supply Chain Management: An International Journal*. 12(6): 444–452.
- Li, Gang, Hongjiao Yang, Linyan Sun, Amrik S. Sohal. 2009. The impact of IT impelemntation on supply chain integration and performance. *International J. Production Economics*.
- Li, Suhong., Bhanu Ragu-Nathan., T.S. Ragu-Nathan., S. Subba Rao.2006. The impact of supply chain management practices on competitive advantage and organizational performance. *Omega The International Journal of Management Science*.
- McLeod, Raymond Jr and George P. Schell. 2007. *Management Information System*. Pearson Prentice Hall. New Jersey.
- Meena, P.L., S.P. Sarmah. 2012. Development Of a Supplier Satisfaction Index Model. *Industrial Management & Data Systems*. Vol. 112 No. 8, pp. 1236-1254.

- Miguel, P.L.S., dan Ledur Brito, L.A. 2011. Supply Chain Management measurement and its influence on Operational Performance. *Journal of Operations and Supply Chain Management* . Vol 4, No.2
- Ogden, J.A. 2006. Supply base reduction : an empirical study of critical success factors. *Journal of Supply Chain Management*. Volume 42 (4), pp 29 – 39.
- Paisson, Ann-Christin, Johan Widheden, Johan Tivander, Ulrika Palme. 2012. Working with your upstream supply chain. *Tosca Sustainability Framework*.
- Partomo, Tiktik Sartika. 2004. Small and Medium Enterprises and Cooperatives. *Center for Industry and SME Studies Faculty of Economics University of Trisakti*.
- Paulraj, A., Lado, A., Chen, I.J., 2008. Inter-organizational communication as a relational competency: Antecedents and performance outcomes in collaborative buyer-supplier relationships. *Journal of Operations Management*, 26 (1), pp. 45-64.
- Pujawan, I Nyoman. 2010. *Supply Chain Management*. Institut Teknologi Sepuluh Nopember, Surabaya.
- Plambeck, Erica L, H. Lee, and P. Yatsko. Improving Environmental Performance in Your Chinese Supply Chain., *MIT Sloan Management Review*, vol. 53, no. 2 (2012), pp. 43–51.
- Sanders, N. A., and Premus, R. 2002. IT Application in Supply Chain Organizations: A Link Between Competitive Priorities and Organizational Benefits. *Journal of Business Logistics* . (23:1), pp. 65-83.
- Sanjaya, Ridwan. 2010. *Blog untuk Usaha Kecil dan Menengah*. Elex Media Komputindo. Jakarta.
- Sekaran, Uma. 2003. *Research Methods For Business*. 4 th Edition, Kwan Men Yon (penerjemah). Metodologi Penelitian Untuk Bisnis, Salemba Empat. Jakarta.
- The Global Upstream Supply Initiative. 2010. *Upstream Supply Chain Integration : Bringing efficiency to the upstream supply chain between manufacturers and suppliers*. Orlando, Florida.
- Wong, A. 2000. Integrating supplier satisfaction with customer satisfaction. *Total Quality Management*. Vol. 11 : 4-6, pp. 427-32.
- Wong, Christina W.Y., Chee Yew Wong, Sakun Boon-itt. 2013. The combined effects of internal and external supply chain integration on product innovation. *Int. J. Production Economics*. Vol. 146, pp 566 – 574.
- Wu, F., Yenyiyurt, S., Kim, D., Cavusgil, S. T., 2006. The Impact of information technology on supply chain capabilities and firm performance : A resource –based view. *Industrial Marketing Management*. 35 (4), pp 493 – 504.
- Ye, Fei., Zhiqiang Wang. 2013. Effects of Information technology alignment and information sharing on supply chain operational performance. *Computers & Industrial Engineering*. Vol. 65, pp 370 – 377.

# ISO CERTIFICATION, TYPE OF INDUSTRY, PROFITABILITY, FIRM SIZE AND CARBON EMISSION DISCLOSURE: EMPIRICAL EVIDENCE FORM NORDIC COUNTRIES

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## **ABSTRACT**

*Companies' activities have contributed to the increase in carbon emissions, which lead to the negative impact on the environment. This phenomenon has motivated companies to voluntarily disclose carbon emission disclosure. Considering this disclosure issues, our study aims to investigate the effect of ISO certification, type of industry, profitability, and firm size on carbon emission disclosure. The population consists of companies listed in the Carbon Disclosure Project (CDP) of Nordic 2015 with total sample of 131 companies. Data were then analyzed using a multiple linear regression. The findings showed that profitability and firm size positive effect on carbon emission disclosure. Meanwhile, ISO certification and type of industry had no effect on carbon emission disclosure. This implied that ISO certification is seen as a symbolic strategy of carbon emission management.*

*Keywords: carbon emission disclosure, ISO certification, type of industry, profitability, firm size*

## **INTRODUCTION**

Business activities cannot be separated from the environment in which they take place, and consequently, they have also contributed to the negative impact on the environment, including the phenomena of global warming. Indeed, the concentrations of greenhouse gases in the atmosphere have increased dramatically, resulting in the possibility of costly disruption from rapid climate change (Ratnatunga and Balachandran, 2009). The main sources of year-on-year Green House Gas (GHG) emissions are the “burning of fossil fuels (coal, oil, and gas), with important contributions from the clearing of forests, agricultural practices, and other activities (Henderson *et al.*, 2016). Choi, Lee, & Psaros (2013) argue that the business, political and environmental sectors are beginning to realize to respond to the threat posed by climate change.

The phenomena have caused a shift in the business paradigm from profit orientation to profit, people, and planet one. This means that to the pursuit of profit, companies must also

pay attention to the welfare of the people and contribute to preserve the environment (the planet) (Elkington, 2013). Governments, business entities and consumers would be affected by the extent to which such precautionary measures are incorporated in their decision-making process (Ratnatunga and Balachandran, 2009).

As global warming continues to attract growing levels of attention, “business entities need to consider such issues as trading in carbon allowances (or permits), investing in low-carbon dioxide (CO<sub>2</sub>) emission technologies, counting the costs of carbon regularity compliance, and passing on the increased cost of carbon regulation to consumers through higher prices” (Ratnatunga and Balachandran, 2009). The seriousness of companies in dealing with GHG emission can be seen from how they disclose information on the emission, as called as carbon emission disclosure. In fact, various stakeholders (states, general public, investors, and lobbyists) have put climate change on corporate agendas and expect firms to disclose relevant greenhouse gas (GHG) information (Depoers, Jeanjean and Jérôme, 2016). Thus, carbon emission disclosure can be seen as a medium to manage the negative impact of business. For companies emitting greenhouse gases, the consequences can be even more numerous, including increased operating costs, reduced demand, reputational risk, legal proceedings, and fines and penalties (Berthelot and Robert, 2011)

A number of studies have been conducted to investigate a number of issues on GHG emission disclosure. However, the previous studies have been focused on the relation between the carbon emissions and corporate value (Aggarwal and Dow, 2011; Matsumura, Prakash and Vera-Muñoz, 2014), the relationship of GHG emissions, environmental performance, social performance and financial performance (Rokhmawati, Sathye and Sathye, 2015), the role of internal audit in GHG reporting (Trotman and Trotman, 2015), Quality of GHG emission disclosure (Hollindale, 2012), GHG voluntary disclosure, firm size and corporate governance (Borghei-Ghomi and Leung, 2013), the relevance of information on corporate climate change disclosure and performance (Liesen *et al.*, 2016), the impact of the economic development on GHG emissions in Russia (Yang *et al.*, 2017), usefulness of GHG emissions reporting (Southworth, 2009; Andrew and Cortese, 2011), corporate board's characteristics and disclosure of GHG emissions (Liao, Luo and Tang, 2015; Haque, 2017), and voluntary disclosure of GHG emissions and corporate governance quality (Rankin, Windsor and Wahyuni, 2011).

Previous studies have contributed to the current findings on GHG emission disclosure, but it is easy to find studies focusing on the relationship of ISO certification, characteristics of firms and carbon emission disclosure. Consequently, this study aims to investigate the effect of ISO certification, types of industries, firm size, and profitability on carbon emission disclosure.

## **HYPOTHESIS DEVELOPMENT**

### **ISO Certifications and Carbon Emission Disclosure**

Legitimacy theory claims that company activities are seen as legitimate as long as their activities are in accordance with norms, values and beliefs of the society (Suchman, 1995). Consequently, to gain legitimacy from the society, companies must show that they care for the social and the environment issues. Companies may use carbon emission disclosure as an important strategy that they are concerned with environmental issues, especially the impact of GHG emissions. The level of carbon emission disclosure is perceived to increase when companies implement environmental management systems. ISO certifications in the field of environment, especially ISO 14001 can be viewed as a crucial indicator that the companies have implemented environmental management systems. This implies that companies with ISO 14001 certifications will disclose more information about GHG emissions than those without ISO certification. Indeed, failure of handling

environmental impact can lead to increased operating costs, reduced demand, reputational risk, legal proceedings, and fines and penalties (Berthelot and Robert, 2011). Thus, companies that are committed to reduce the environmental impact of its products and operations, continue to monitor and seek to identify ways to further reduce the impact (Fei-baffoe *et al.*, 2013). Borrowing the previous studies on environmental issues, it is claimed that ISO 14001 certifications can be employed as an image-building or public relations effort of the companies (Rondinelli and Vastag, 2000). Furthermore, companies that integrate ISO 14001 standards into their daily operations are more likely to report improvements in environmental performance (Yin and Schmeidler, 2009; Fei-baffoe *et al.*, 2013) and financial performance (Ferron *et al.*, 2012). Hence we propose the following hypothesis:

*H1: ISO certification positively affects carbon emission disclosure*

### **Types of Industry and Carbon emission disclosure**

Types of Industry are perceived as an important factor that may influence carbon emission disclosure depending on how sensitive is the companies concerning the issues on green house gas emissions. Borrowing the concept of industry types by Choi, Lee and Psaros (2013), carbon-sensitive companies are companies whose operational activities are related to transportation, energy, utilities and materials, while non-carbon-sensitive companies are those whose operational activities are related to other than transportation, energy, utility and materials. Reid and Toffel (2009) states that the intensive emission industry will be closely monitored by the government and sensitive to political issues so that the intensive emission industry will voluntarily disclose more information (McKinnon and Dalimunthe, 1993) and may include carbon emission information. Borghei-Ghomi and Leung (2013) found that industrial types affected carbon emissions. Other studies also showed that industries engaged in natural resources, processing steel, paper and pulp, power plants, water and chemicals show more responses on environmental issues (Bowen, 2000; Brammer and Pavelin, 2006). Based on legitimacy theory, Patten (1991) reveals that companies in the polluting industry will have greater disclosure to legitimize their activities. Based on these assumptions, then the second hypothesis can be formulated as follows.

*H2: Industry type positively affects carbon emission disclosure*

### **Profitability and Carbon emission disclosure**

According to the theory of legitimacy, it is easier for companies with high profitability to deal with the community demands. In addition, companies tend to spend more on voluntary environmental disclosure in order to gain legitimacy from the public. Therefore, a company with better financial performance reflected by high profitability is seen as provide more information on their voluntary disclosure, including carbon emission disclosure. Indeed, for companies with poor financial performance, voluntary disclosure of the environment issues may mean incurring additional costs by (Choi, Lee and Psaros, 2013). Companies with good financial performance will pay more attention to the legitimacy issues, and carbon emission disclosure can be utilized to maintain their legitimacy. Previous study shows that companies with good financial performance have financial capabilities to make better environmental decisions (Luo, Tang and Lan, 2013). While for companies with poor financial performance will be more focused to improve performance and achieve their financial goals so that the ability to provide carbon emission is very limited. Companies with high profitability tend to disclose more information on mandatory and voluntary issues (Uyar, Kilic and Bayyurt, 2013), and may include carbon emission disclosure. Luo et al (2013) found that profitability had a positive effect on carbon emission disclosure. Based on these assumptions, then the hypothesis can be formulated as follows.

*H3: Profitability positively affects carbon emission disclosure*

### **Firm Size and Carbon emission disclosure**

Firm size reflects the number of assets and resources owned by companies to achieve their business objectives. As large companies have more opportunities to invest than that of smaller companies, shareholders are more concerned with large companies as such investment may influence their interests (Nawaiseh, 2015; Youn, Hua and Lee, 2015; Yu *et al.*, 2016). Previous studies on environmental issues showed that large companies are more transparent in implementing and reporting their environmental and social policies (Cho, Freedman and Patten, 2012; Frias-Aceituno, Rodríguez-Ariza and Garcia-Sánchez, 2014; Tan *et al.*, 2014; Chang, Li and Lu, 2015). Moreover, for social and environmental interests, government puts more attention on larger companies than smaller ones. Consequently the larger the company, the greater the ability of the company to implement green management (Cho, Freedman and Patten, 2012; Borghei-Ghomi and Leung, 2013; Hrovatin, Dolšak and Zorić, 2016; Nath and Ramanathan, 2016; Yunus, Elijido-Ten and Abhayawansa, 2016). Other studies also indicated that larger firms provide more carbon information disclosure than smaller ones (Prado-Lorenzo *et al.*, 2009; Borghei-Ghomi and Leung, 2013; Choi, Lee and Psaros, 2013; Luo, Tang and Lan, 2013). Thus, this study proposes the following hypothesis:

*H4: Firm size positively affects carbon emission disclosure*

### **RESEARCH METHOD**

This study employed five variables consisting of ISO certification, types of industry, profitability, firm size as independent variables and carbon emission disclosure as a dependent variable. ISO Certification is a dummy variable where the ISO 14001 certified companies are scored by one (1), otherwise zero (0). Types of industry are measured by groups of industries proposed Choi et al (2013), to which companies whose their operational activities are energy, transportation, materials, and utilities are classified as carbon sensitive industries and are scored by one (1), otherwise zero (0). Profitability is measured by ROA (Return on Assets) calculated by comparing net income to total assets (Gonzalez-Gonzalez and Zamora Ramírez, 2016), whereas firm size is measured by the natural logarithm (ln) of total assets (Choi et al., 2013). The dependent variable (carbon emissions disclosure) is based on scores provided by the 2015 Carbon Disclosure Projects (CDP) of the Nordic countries. The given scores range from 0-100 where 0 is the lowest disclosure, and 100 are the highest disclosure.

The population consists of all companies listed on the 2015 Carbon Disclosure Projects (CDP) of the Nordic countries, and samples were chosen based on the availability of the required data for this study. Data were collected from Carbon Disclosure Projects ([www.cdp.net](http://www.cdp.net)) and annual report of the companies available on their websites. Data were then analysed using the following regression model:

$$CED = \alpha + \beta_1 ISO + \beta_2 IND + \beta_3 PRO + \beta_4 SIZ + e$$

CED denotes carbon emission disclosure. ISO is ISO certification. IND shows types of industry. PRO denotes profitability, and SIZ represents firm size whereas  $\alpha$ ,  $\beta$  and  $e$  denote intercept, regression coefficient, and error respectively.

### **RESEARCH FINDINGS AND DISCUSSION**

This study was conducted investigate the effect of ISO certification, types of industry, profitability and firm size on carbon emission disclosure of the Nordic companies registered on the 2015 Carbon Disclosure project. The description of sample used for this study can be seen from Table 1

Table 1  
Population and Sample

Criteria	Number of companies
Companies registered on the 2015 CDP	174
Companies without annual reports on websites	(5)
Companies without the CDP numerical scores (A, B, C) and without any scores	(38)
<b>Total Sample</b>	<b>131</b>

Based on the availability of data, 174 companies have joined CDP in 2015. However, only 131 companies meet all criteria of the required sample. Indeed, five companies in the CDP list whose annual reports are unavailable on websites, and 38 companies were awarded alphabetical scores (not numerical scores) and were not assigned any scores. The descriptive statistics of empirical data can be seen in Table 2.

Table 2  
Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
CED	131	28.00	100.00	89.45	15.56
PRO	131	-.21	.38	0.04	0.08
SIZ	131	18.88	28.82	23.43	2.02

Variable	N	Category	Number	Percentage
ISO	131	ISO certified	62	47.33%
		Non-ISO Certified	69	52.67%
IND	131	Carbon Sensitive	27	20.61%
		Non-Carbon Sensitive	104	79.39%

Table 2 indicated that carbon emission disclosures of the Nordic companies are high with an average score of 89.45 (minimum score 28 and maximum score 100). This means that the companies employed excellent carbon accounting policies beyond minimum requirement as assessed by the CDP. In terms of profitability, the companies have average ROA of 4.62% but total of 73 companies have profitability above 4.62%. This reveals that the level of profitability of sample companies is high enough. Meanwhile, in line with the description of firm size, it can be seen that the average of firm size (Ln Assets) was 23.43. From the perspective of ISO 14001 certifications, Table 2 described that samples are dominated by Non-ISO certified companies (52.67%), and the remaining is ISO certified ones (47.33%). Meanwhile, the majority of samples (79.39%) consisted of non-carbon sensitive companies with high sensitivity to GHG emission issues. The research data were then tested using a multiple regression, and the results can be seen in Table 3.

Table 3 described that the F-value is equal to 6.309 (= 2, Sig. = 0.000), which means that the model can be used to explain the determinants of carbon emission disclosure. Table 3 also showed that the predicted variables that significantly influenced carbon emission disclosure were firm size (SIZ) and Profitability (PRO). However, ISO certification (ISO) and Types of industry (IND) did not significantly affect carbon emission disclosure. Coefficient of determination (Adj. R<sup>2</sup>) has a value of 0.14, which indicated that the degree to which firm size and profitability influenced carbon emission disclosure was only 14%.

Table 3  
Results of Regression: (Dependent= Carbon Emission Disclosure)

Variables	Stand. Coeff	t	p-value (sig)	Results (Ha)
(Constant)	-8.959	-1.170	0.002	
ISO	0.134	1.888	0.451	Not supported
IND	0.381	-0.232	0.085	Not Supported
PRO	9.392	1.322	0.002	Supported
SIZ	1.101	0.729	0.001	Supported

F value: 6.309; Sig. 0.000  
Coefficient of determination (Adj. R<sup>2</sup>) = 0.140

The finding showed that ISO certification did not affect carbon emission disclosure. The ISO certifications used in this study are focused on the ISO 14001 certifications. The reasons for the rejected hypothesis can be referred to the descriptive statistics of the sample data. Indeed, it can be seen from the data that most of the companies used as samples are dominated by 69 non-certified companies (52.67%). The high numbers of non-ISO certified companies disclosing carbon emission information imply that it is not necessary to have ISO certification to disclose carbon emissions. Therefore, ISO certification has no effect on carbon emissions disclosure. This study is consistent with research conducted by Pradini (2013) which shows that ISO certification has no effect on the wide range of greenhouse gas-emission disclosure. This is because companies that have ISO certification are considered to have a good environmental management system and provide a positive image to the public. However, the positive image tends to decrease the motivation of management to increase the disclosure of the company's carbon emissions.

It could be happened that companies get ISO certification because to build “improved corporate image” or for being seen as “responsible citizens” (Rondinelli and Vastag, 2000). This finding is similar to study by (Chariri, Br Bukit, *et al.*, 2018). Indeed, previous studies showed that the implementation of ISO14001 standards varies among companies and consequently, the standard is not effective in terms of environmental performance improvements (Fei-baffoe *et al.*, 2013). Thus this study did not support previous study claiming that companies integrating ISO 14001 standards into their daily operations tend report improvements in environmental performance (Yin and Schmeidler, 2009; Fei-baffoe *et al.*, 2013). The finding implied that ISO certification is seen as a symbolic strategy of carbon emission management.

The second hypothesis proposed argument that types of industry positively influence carbon emission disclosure. The finding also showed that this hypothesis was not supported by empirical data. This means that types of industry both carbon-sensitive companies and carbon-non sensitive ones have no relationship to carbon emission disclosure. The reason for the rejected hypothesis can be seen from descriptive statistics of th data. In fact, companies that disclose carbon emissions are dominated by carbon non-sensitive companies (104 companies or 79.39%). Meanwhile, the carbon-sensitive companies were only 27 companies (20.61%). Therefore, the type of industry has no effect on carbon emission disclosure. This study is similar to research conducted by Aggarwal & Dow (2011) that industrial types have no effect on carbon emission disclosure. However, this finding did not support legitimacy theory claiming that to gain legitimacy and public supports, companies must be able to identify any activities, which are consistent with stakeholders or public expectations, including activities related to carbon emission disclosure. Considering the other environmental studies, this finding also did not support claims that the company policies on environmental issues will increase when their business activities are more sensitive to the

environmental issues (Cho, Freedman and Patten, 2012; Chen and Wu, 2015; Fuisz-Kehrbach, 2015; Xie *et al.*, 2016).

The third hypothesis claimed that profitability positively influences carbon emission disclosure to identify whether companies with higher profitability provide more information of carbon emission than those with lower one. The findings showed that profitability positively influenced carbon emission disclosure. The higher the profitability, the better the company discloses carbon emissions. The descriptive statistics indicated that most of the companies have high profitability (73 companies) and higher level of carbon emission disclosure with the average level of carbon emission disclosure of 89.5%. Therefore, profitability positively affects carbon emission disclosure. This finding is in line with the legitimacy theory claiming that the public always put pressure on companies to care about environmental issues and thus make companies provide the public with more information of carbon emission. Borrowing other studies on environmental issues, profitable companies are more likely to respond to the pressures because the firms have more resources, which can be used to disclose environmental issues (Zhang *et al.*, 2013) than firms with low profitability. This makes it easier for profitable companies to gain legitimacy from the public. This study is consistent with study by (Luo, Tang and Lan, 2013) that profitability has a positive effect on carbon disclosure.

The last hypothesis claimed that firm size positively affects carbon emission disclosure. The findings supported the hypothesis, and concluded that the larger the company the greater the level of carbon emission disclosure. Companies with large assets tend to have better carbon emission disclosure. The descriptive statistics (Table 2) also indicated that the asset size of the sample had a mean of 23.43 (with minimum value of 18.88, maximum value of 28.82 and standard deviation of 2.02). This implied that the sample consists of large companies. The results of this study are in line with the theory of legitimacy, that larger companies get more social and political pressures than small firms (Wang *et al.*, 2013). Such pressures encourage companies to build a positive image by disclosing more information of carbon emissions to gain legitimacy from the stakeholders. Such disclosure activities are believed to be a reflection of the company's attention to the community and environment (Nawaiseh, 2015; Youn, Hua and Lee, 2015; Yu *et al.*, 2016). This study is consistent with studies by (Prado-Lorenzo *et al.*, 2009) that company size influences carbon emission disclosure. Moreover, mirroring to the studies on environmental issues, the findings supported previous studies that relates firm size to transparent social and environmental issues (Barbu *et al.*, 2014; Frias-Aceituno, Rodríguez-Ariza and García-Sánchez, 2014; Gallego-Álvarez and Quina-Custodio, 2016; Chariri, Januarti and Yuyetta, 2017; Chariri, Bukit, *et al.*, 2018), including any policies concerning other environmental issues such as pollution and green management (Hrovatin, Dolšak and Zorić, 2016; Nath and Ramanathan, 2016; Yunus, Elijido-Ten and Abhayawansa, 2016)

## CONCLUSION

This study aims to examine the determinants of carbon emission disclosure of Nordic companies registered on Carbon Disclosure Project in 2015. The findings indicated that on average the carbon emission disclosure of the selected companies is high. Moreover, this study found that profitability and firm size are the determinants of carbon emission disclosure. The more profitable the company is and the bigger the size of the company the higher the carbon emission disclosure. However, this study was unable to prove the effect of ISO certification and types of industries on the carbon emission disclosure.

Findings of this study provide us with some contributions. Firstly, profitability and firm size are important determinants affecting carbon emission disclosure. Thus this study enhances previous studies, which focus on social and environmental disclosures and tend to ignore the impact of such variables on carbon emission disclosure. Secondly, the governments

can use this finding as reference in making policies related to the company's obligation in handling carbon emission, especially for large-scale and profitable companies. Finally, the results of this study can be utilized by academicians to take into account environmental issues as part of learning in the field of accounting.

Regardless its contributions to current studies on carbon emission disclosure, this study suffers from some limitations. Firstly, this research focused only on Nordic companies registered in the Carbon Disclosure Project. Thus, the findings of this study cannot be generalized to other Nordic companies and other markets. The future studies should consider more companies listed in other markets, especially emerging markets to investigate the consistency of the findings. Secondly, this study only revealed two main variables that affect carbon emission disclosure. The next research should include other variables such as the activity of independent board of directors, audit committee expertise/skills, and foreign ownership as determinants of carbon emission disclosure.

## REFERENCE

- Aggarwal, R. and Dow, S. (2011) 'Greenhouse Gas Emissions Mitigation and Firm Value: A Study of Large North-American and European Firms', *Midwest Finance Association 2012 Annual Meetings, SSRN Electronic Journal*, (September 2011), p. 38.
- Andrew, J. and Cortese, C. (2011) 'Carbon Disclosures: Comparability, the Carbon Disclosure Project and the Greenhouse Gas Protocol.', *Australian Accounting, Business and Finance Journal*, 5(4), pp. 6–18.
- Barbu, E. M. *et al.* (2014) 'Mandatory Environmental Disclosures by Companies Complying with IASs/IFRSs: The Cases of France, Germany, and the UK', *The International Journal of Accounting*, 49(2), pp. 231–247.
- Berthelot, S. and Robert, A.-M. (2011) 'Climate change disclosures: An examination of Canadian oil and gas firms', *Issues in Social and Environmental Accounting*, 5(12), pp. 106–123.
- Borghesi-Ghomi, Z. and Leung, P. (2013) 'An Empirical Analysis of the Determinants of Greenhouse Gas Voluntary Disclosure in Australia', *Accounting and Finance Research*, 2(1), pp. 110–127.
- Bowen, F. E. (2000) 'Environmental visibility: A trigger of green organizational response?', *Business Strategy and the Environment*, 9(2), pp. 92–107.
- Brammer, S. and Pavelin, S. (2006) 'Voluntary environmental disclosures by large UK companies', *Journal of Business Finance and Accounting*, 33(7–8), pp. 1168–1188.
- Chang, L. A., Li, W. B. and Lu, X. C. (2015) 'Government engagement, environmental policy, and environmental performance: Evidence from the most polluting chinese listed firms', *Business Strategy and the Environment*, 24(1), pp. 1–19.
- Chariri, A., Br Bukit, G. R. S., *et al.* (2018) 'Does Green Investment Increase Financial Performance? Empirical Evidence from Indonesian Companies', *E3S Web Conf.*, 31, p. 9001.
- Chariri, A., Januarti, I. and Yuyetta, E. N. A. (2017) 'Firm characteristics, audit committee, and environmental performance: Insights from Indonesian companies', *International Journal of Energy Economics and Policy*, 7(6).
- Chen, J. H. A. and Wu, S. I. B. (2015) 'A comparison of green business relationship models between industry types', *Total Quality Management and Business Excellence*, 26(7–8), pp. 778–792.
- Cho, C. H., Freedman, M. and Patten, D. M. (2012) 'Corporate disclosure of environmental capital expenditures: A test of alternative theories', *Accounting, Auditing & Accountability Journal*, 25(3), pp. 486–507.
- Choi, B. B., Lee, D. and Psaros, J. (2013) 'An analysis of Australian company carbon emission disclosures', *Pacific Accounting Review*, 25(1), pp. 58–79.
- Depoers, F., Jeanjean, T. and Jérôme, T. (2016) 'Voluntary Disclosure of Greenhouse Gas Emissions:

- Contrasting the Carbon Disclosure Project and Corporate Reports', *Journal of Business Ethics*, 134(3), pp. 445–461.
- Fei-baffoe, B. *et al.* (2013) 'Impact of ISO 14001 Environmental Management System on Key Environmental Performance Indicators of Selected Gold Mining Companies in Ghana', *Journal of Waste Management*, 2013(Article ID 935843).
- Ferron, R. T. *et al.* (2012) 'Is ISO 14001 certification effective? An experimental analysis of firm profitability', *Brazilian Administration Review*, 9(May).
- Frias-Aceituno, J. V. ., Rodríguez-Ariza, L. . and Garcia-Sánchez, I. M. . (2014) 'Explanatory Factors of Integrated Sustainability and Financial Reporting', *Business Strategy and the Environment*, 23(1), pp. 56–72.
- Fuisz-Kehrbach, S. K. (2015) 'A three-dimensional framework to explore corporate sustainability activities in the mining industry: Current status and challenges ahead', *Resources Policy*, 46, pp. 101–115.
- Gallego-Álvarez, I. and Quina-Custodio, I. A. (2016) 'Disclosure of corporate social responsibility information and explanatory factors', *Online Information Review*, 40(2), pp. 218–238.
- Gonzalez-Gonzalez, J. M. and Zamora Ramírez, C. (2016) 'Voluntary carbon disclosure by Spanish companies: an empirical analysis', *International Journal of Climate Change Strategies and Management*, 8(1), pp. 57–79.
- Haque, F. (2017) 'The effects of board characteristics and sustainable compensation policy on carbon performance of UK firms', *The British Accounting Review*, 49(3), pp. 347–364. doi:
- Henderson, R. *et al.* (2016) 'Climate Change in 2016: Implications for Business', *Harvard Business School*, (May).
- Hollindale, J. L. (2012) 'Voluntary disclosure of GHG emission information by Australian Companies', *Phd Thesis*, (June).
- Hrovatin, N., Dolšak, N. and Zorić, J. (2016) 'Factors impacting investments in energy efficiency and clean technologies: empirical evidence from Slovenian manufacturing firms', *Journal of Cleaner Production*, 127(July), pp. 475–486.
- Liao, L., Luo, L. and Tang, Q. (2015) 'Gender diversity, board independence, environmental committee and greenhouse gas disclosure', *The British Accounting Review*, 47(4), pp. 409–424.
- Liesen, A. *et al.* (2016) 'Climate Change and Asset Prices: Are Corporate Carbon Disclosure and Performance Priced Appropriately?', *Journal of Business Finance & Accounting*, 44(1-2), pp 35-62
- Luo, L., Tang, Q. and Lan, Y. (2013) 'Comparison of propensity for carbon disclosure between developing and developed countries', *Accounting Research Journal*, 26(1), pp. 6–34.
- Matsumura, E. M., Prakash, R. and Vera-Muñoz, S. C. (2014) 'Firm-value effects of carbon emissions and carbon disclosures', *Accounting Review*, 89(2), pp. 695–724.
- McKinnon, J. L. and Dalimunthe, L. (1993) 'Voluntary Disclosure of Segment Information by Australian Diversified Companies', *Accounting & Finance*, 33(1), pp. 33–50.
- Nath, P. A. and Ramanathan, R. B. (2016) 'Environmental management practices, environmental technology portfolio, and environmental commitment: A content analytic approach for UK manufacturing firms', *International Journal of Production Economics*, 171, pp. 427–437.
- Nawaiseh, M. E. (2015) 'Do firm size and financial performance affect corporate social responsibility disclosure: Employees' and environmental dimensions?', *American Journal of Applied Sciences*, 12(12), pp. 967–981.
- Patten, D. M. (1991) 'Exposure, legitimacy, and social disclosure', *Journal of Accounting and Public Policy*, 10(4), pp. 297–308.
- Prado-Lorenzo, J.-M. *et al.* (2009) 'Factors influencing the disclosure of greenhouse gas emissions in

- companies world-wide', *Management Decision*, 47(7), pp. 1133–1157.
- Rankin, M., Windsor, C. and Wahyuni, D. (2011) 'An investigation of voluntary corporate greenhouse gas emissions reporting in a market governance system', *Accounting, Auditing & Accountability Journal*, 24(8), pp. 1037–1070.
- Ratnatunga, J. T. D. and Balachandran, K. R. (2009) 'Carbon Business Accounting: The Impact of Global Warming on the Cost and Management Accounting Profession', *Journal of Accounting, Auditing & Finance*, 24(2), pp. 333–355.
- Reid, E. M. and Toffel, M. W. (2009) 'Responding to public and private politics: Corporate disclosure of climate change strategies', *Strategic Management Journal*, 30(11), pp. 1157–1178.
- Rokhmawati, A., Sathye, M. and Sathye, S. (2015) 'The Effect of GHG Emission, Environmental Performance, and Social Performance on Financial Performance of Listed Manufacturing Firms in Indonesia', *Procedia - Social and Behavioral Sciences*, 211, pp. 461–470.
- Rondinelli, D. and Vastag, G. (2000) 'Panacea, common sense, or just a label?', *European Management Journal*, 18(5), pp. 499–510.
- Southworth, K. (2009) 'Corporate voluntary action: A valuable but incomplete solution to climate change and energy security challenges', *Policy and Society*, 27(4), pp. 329–350.
- Suchman, M. C. (1995) 'Managing Legitimacy: Strategic and Institutional Approaches', *Academy of Management Review*, 20(3), pp. 571–610.
- Tan, Y. *et al.* (2014) 'Does external finance pressure affect corporate disclosure of Chinese non-state-owned enterprises?', *International Review of Financial Analysis*, 36, pp. 212–222.
- Trotman, A. J. . and Trotman, K. T. . (2015) 'Internal audit's role in GHG emissions and energy reporting: Evidence from audit committees, senior accountants, and internal auditors', *Auditing*, 34(1), pp. 199–230.
- Uyar, A., Kilic, M. and Bayyurt, N. (2013) 'Association between firm characteristics and corporate voluntary disclosure: Evidence from Turkish listed companies', *Intangible Capital*, 9(4), pp. 1080–1112.
- Xie, X. A. *et al.* (2016) 'Green Process Innovation and Financial Performance in Emerging Economies: Moderating Effects of Absorptive Capacity and Green Subsidies', *IEEE Transactions on Engineering Management*, 63(1), pp. 101–112.
- Yang, X. *et al.* (2017) 'Study of the relationship between greenhouse gas emissions and the economic growth of Russia based on the Environmental Kuznets Curve', *Applied Energy*, 193, pp. 162–173.
- Yin, H. and Schmeidler, P. J. (2009) 'Why do standardized ISO 14001 environmental management systems lead to heterogeneous environmental outcomes?', *Business Strategy and the Environment*. John Wiley & Sons, Ltd., 18(7), pp. 469–486.
- Youn, H., Hua, N. and Lee, S. (2015) 'Does size matter? Corporate social responsibility and firm performance in the restaurant industry', *International Journal of Hospitality Management*, 51, pp. 127–134.
- Yu, G. J. A. *et al.* (2016) 'Exploration and exploitation as antecedents of environmental performance: The moderating effect of technological dynamism and firm size', *Sustainability (Switzerland)*, 8(3). doi: 10.3390/su8030200.
- Yunus, S., Eljido-Ten, E. and Abhayawansa, S. (2016) 'Determinants of carbon management strategy adoption: Evidence from Australia's top 200 publicly listed firms', *Managerial Auditing Journal*, 31(2), pp. 156–179.
- Zhang, Z. *et al.* (2013) 'An empirical study on the institutional factors of energy conservation and emissions reduction: Evidence from listed companies in China', *Energy Policy*, 57, pp. 36–42.

# The Influence of Person-Organization Fit and Quality of Work Life Towards Employee Performance

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## Abstract

*This research aims to analyze: the direct and indirect influence of Person-Organization Fit on employee performance through job satisfaction; the influence of quality of work life on employee performance through job satisfaction. Data collection is done through questionnaire with 120 respondents. Data analysis technique used is Path Analysis. Person-Organization Fit has positive and significant effect on employee performance through job satisfaction; quality of work life has a positive and significant effect on employee performance through job satisfaction. The leader of PT.PLN should consider the suitability of individual competence with the competencies required by the job on each employee placement decision. Study of P-O fit and QWL are study a very important and relatively new on state enterprises like PT.PLN to know how well the implementation and how the implication on the job satisfaction and employee performance that the performance of state enterprises could be improved later.*

*Key words: Person-Organization Fit, quality of work life, job satisfaction, employee performance*

## I. INTRODUCTION

Every organization around the world uses the maximum potential of their human resources to survive in the midst of competition (Mohsan, 2004). In developing human resources especially employees, companies need to apply quality of work life. Cascio (2003) explained the quality of work life of employees is one of the important goals in accomplishing the needs and desires of employees.

When individual and organizational values are equal, it will increase job satisfaction and performance and will reduce employee stress (Silverthone, 2004). This is supported by research conducted by Nazir (2014); Tepeci (2001); Farooqui & Nagendra, (2014); Chadwell, Chatman and O'Reilly (1991) who examined congruency between individuals and organizations with performance, the results showed that Person-Organization Fit (P-O Fit) had a positive and significant effect on job satisfaction and performance. However, a study conducted by Aurthy &

Daugherty (2003) examined the relationship between Person-Organization Fit (PO Fit) and job satisfaction in warehouse employees in England and Spain and the results showed that Person-Organization Fit (PO Fit) had no effect on job satisfaction.

Based on the above research gap, this study attempts to analyze and test research conducted by Chadwell and O'Reilly (1991) and Aurty and Daugherty (2003) studies that job satisfaction is a strong predictor of Person-Organization Fit (PO Fit), quality of work life with the performance of stated-owned company employees in South Sulawesi.

## **II. LITERATURE REVIEW**

### ***2.1. Person-Organization Fit (P-O Fit)***

Person-Organization Fit (P-O Fit) is defined as the fit between organizational values and individual values (Kristof, 1996; Netemeyer et al., 1999). Value conformity (value congruence), is the suitability between the individual's intrinsic value and the organization (Chatman, 1989; Judge & Bretz, 1992). Kristof (1996) argues that Person-Organization Fit (PO Fit) can be interpreted in the concept that is, the value congruence, goal congruence, employee need fulfillment, and the suitability of characteristics of the personalities culture personality congruence).

### ***2.2. Quality of Work Life***

Walton (1973) argued that the quality of work life is how effective the organization in responding to the needs of employees. Organizations respond to the needs of employees by developing mechanisms such that these employees have the opportunity to make decisions to design their lives within the scope of work (Robbins, 2003). An important role of the quality of working life is to change the organizational climate to technically and humanly bring to the quality of a better working life (Luthans, 1995). The quality of work life construct consists of several interrelated factors and requires consideration to be conceptualized and measured (Rethinam, 2008).

### ***2.3. Job Satisfaction***

Job satisfaction is defined as the general attitude of the individual to his work (Robbins, 2003). One form of employee perceptions about the work the organization provides by giving significance of the importance of the work (Luthans, 2006). The first theory pioneered by Porter (1961), is the Intrapersonal Comparison Theory (Intrapersonal Comparison Proce) also known as Discrepancy Theory. The second theory proposed by Zalesnik (1958), and developed by Adams (1963), is Theory Interpersonal Comparison Process, also known as Theory of Equity or Equity Theory.

### ***2.4. Employee Performance***

Employee performance is a function of ability interaction, motivation, and opportunity to perform (Robbins, 2003). Quality of the employee performance is needed by the organization in order to improve the quality of work, so that the performance is achieved then employees should get satisfaction in working first Robbins (2007). The level of efficiency and performance of employees in work can determine the success of the organization (Jehanzeb, 2012).

### ***2.5. Person-Organization Fit (P-O Fit) and Job Satisfaction***

Several theoretical assessments and empirical evidence proving that Person-Organization Fit (P-O Fit) has a positive effect on job satisfaction (Kristoff, 1996). Job satisfaction tends to be influenced by employees' judgment of their tasks (Smith et al., 1969). Individuals who fit the organization are satisfied with their work (Chatman, 1991). This is reinforced by the findings of O'Reilly, (1977); Chatman et al, (1994); Nazir (2014); Silverthorne (2004); Tepeci (2001) who tested the influence of Person-Organization Fit (P-O Fit) on job satisfaction and found that Person-Organization Fit (P-O Fit) has a strong impact on job satisfaction.

### ***2.6. Quality of Work Life and Job Satisfaction***

Lawler (1984) suggests that quality of work life is associated with satisfaction of wages, hours and working conditions. Several studies have examined the effect of Quality of work life on job satisfaction as examined by Rubel et. al (2014); Abagi (1999); Selvaraj (2014); Sheel (2012) and the results showed that Quality of work life has a positive and significant impact on job satisfaction.

### ***2.7. Person-Organization Fit (P-O Fit) and Employee Performance***

Person-Organization Fit (P-O Fit) can be interpreted as a match or suitability between prospective employees with organizational attributes (Sekiguchi, 2007). When individual and organizational values are equal, this will increase job satisfaction and performance and will reduce employee stress (Silverthone, 2004). This is supported by research conducted by Farooqui & Nagendra, 2014, Chadwell, Chatman and O 'Reilly, 1991) who examined congruency between individuals and organizations with performance, the results showed that the Person-Organization Fit (PO Fit) have a positive and significant effect on job satisfaction and performance.

### ***2.8. Quality of Work Life and Employee Performance***

Cascio (2003) explained the quality of work life of employees is one of the important goals in meeting the needs and desires of employees. The relationship between quality of work life and Performance is controversial, although these results provide some clarification of Akeeth et. al, (2012); Sheel (2012); Rubel (2014); Brewer (2005), states that Quality of work life also has a significant effect on performance.

### ***2.9. Job Satisfaction and Employee Performance***

Job satisfaction plays an important factor in determining work performance. When employees are satisfied, they contribute to improving performance within the organization (Carmeli, 2004). The results of research conducted by (Reisel, 2007, Carmeli, 2004; Koesmono, 2014; Farooqui & Nagendra, 2014; Rose, 2009; Arifin, 2015; Funmilola, 2011) show that positive job satisfaction significantly affects employee performance.

## **III. CONCEPTUAL FRAMEWORK AND HYPOTHESES**

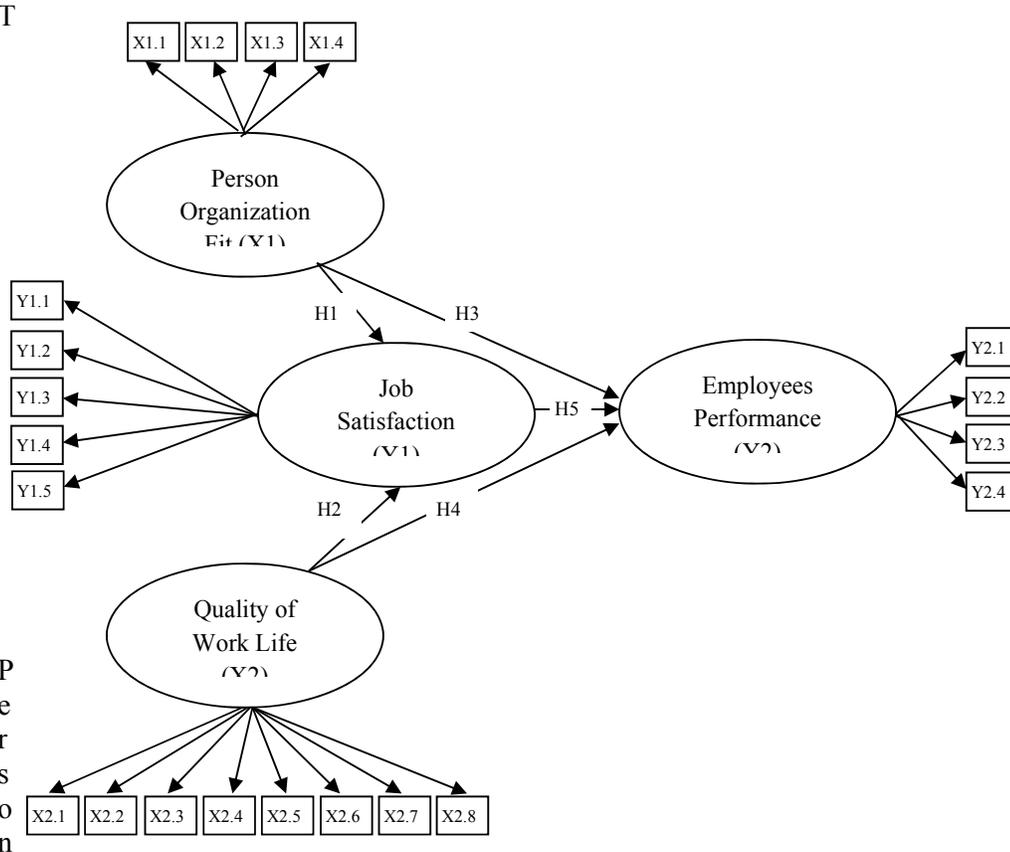
### ***3.1. Conceptual Framework***

Based on background, theoretical and empirical review, the conceptual framework of the study can be seen in the following figure:

Figure 3.1 Conceptual Framework

**3.2. Hypothesis**

This study has five hypotheses to be analyzed. The hypotheses can be described as follows: (H-1)



Person

- (H-1) Person-Organization Fit (P-O Fit) has a positive and significant impact on job satisfaction.
- (H-2) Quality of work life has a positive and significant impact on job satisfaction.
- (H-3) Person-Organization Fit (P-O Fit) has a positive and significant effect on employee performance through job satisfaction.
- (H-4) Quality of work life has a positive and significant effect on employee performance through job satisfaction.
- (H-5) Job satisfaction has a positive and significant impact on employee performance.

**IV. RESEARCH METHODS**

**4.1. Research Setting**

This research was conducted in several companies of the state-owned companies in South Sulawesi particularly with the employee as the research objects.

**4.2. Population and Sample**

Population includes all employees of PT. PLN (Persero) with a sample size of 120 people. The sampling technique used in this research is Cluster Random Sampling.

**4.3. Data Analysis Technique**

Data analysis in this research used Structural Equation Modelling (SEM) program which operated using AMOS program 5.00. It is also used Confirmatory Factor Analysis and Regression Weight techniques.

#### 4.4. Hypothesis Testing

Hypothesis testing using regression analysis run with AMOS software version 5.00. Based on the result of structural equation of AMOS will be obtained Critical Ratio and path coefficient so that can know relationship and influence between variables. The hypothesis is supported when the Critical Ration is greater than 2.0 or the significance level is less than 0.05.

### V. RESEARCH RESULT AND DISCUSSION

Confirmatory Factor Analysis (CFA) test results of the five variables on the overall model (overall). The test result of each variable is evaluated based on goodness of fit indices presented criteria model and its critical value:

#### 5.1. Person-Organization Fit (X1)

The results of CFA test of variable X1 on the overall model (overalls) are attached to the attachment. The result of X1 variable construct test is evaluated based on goodness of fit indices in the following table with presented criteria model and its critical value.

Table 5.1 Evaluation of Criteria of Goodness of Fit Indices (X1)

<i>Goodness of Fit Indices</i>	<i>Cut-off Value</i>	<b>Hasil Model</b>	<b>Ket</b>
X <sup>2</sup> Chi Square	$\alpha = 5\%$	0,668	Fit
Probabilitas	$\geq 0,05$	0,716	Fit
CMIN/DF	$\leq 2,00$	0,334	Fit
RMSEA	$\leq 0,08$	0,000	Fit
GFI	$\geq 0,90$	0,999	Fit
AGFI	$\geq 0,90$	0,994	Fit
TLI	$\geq 0,95$	1,015	Fit
CFI	$\geq 0,95$	1,000	Fit

Source: Calculated from the data collected

Based on the measurement of Person-Organization Fit (X1) variable, the highest indicator result is X1.2 of 0.807 which reflects that the value congruence between employees and the company has an important role to improve the performance of the employees. While the indicator X1.4 gives the lowest contribution of only 0.479. This illustrates the suitability of the characteristics personality culture (culture personality congruence) employees are still somewhat less.

Based on the value congruence between employees and the company, employees believe that they have a clear future in the state-owned companies because there is a suitability between individual values and employment. This is supported by the theory of Scheiner (1988) suggests that individuals are interested and feel comfortable in an organization due to the similarity of characteristics between both of them. Thus, state-owned companies need to pay attention to these findings that the suitability between employees and organizations is a powerful tool for improving employee job satisfaction.

#### 5.2. Quality of Work Life (X2)

The CFA test of the quality of work life (X2) variable on the overall model is evaluated based on the goodness of fit indices in the following table which presents the model criteria and its critical value.

Table 5.2 Evaluation of Goodness of Fit Indices Criteria X2

<i>Goodness of Fit Indices</i>	<i>Cut-off Value</i>	<b>Hasil Model</b>	<b>Ket</b>
X <sup>2</sup> Chi Square	$\alpha = 5\%$	116,620	Marginal

Probabilitas	$\geq 0,05$	0,000	Marginal
CMIN/DF	$\leq 2,00$	2,,200	Fit
RMSEA	$\leq 0,08$	0,069	Fit
GFI	$\geq 0,90$	0,923	Fit
AGFI	$\geq 0,90$	0,886	Marginal
TLI	$\geq 0,95$	0,957	Fit
CFI	$\geq 0,95$	0,966	Fit

Source: Calculated from the data collected

Based on the measurement of quality of work life (X2) variable, it shows the highest indicator result that is X2.2 equal to 0,793 which reflects that career development system through career and career level is appropriate that expected by employees in company where they are working. While the indicator X2.5 gives the lowest contribution of only 0.685. Career development indicator is an indicator that has the highest value, it is caused by state-owned company gives opportunity to employees to run job rotation system by moving employees to other departments so that employees' understanding to various jobs in the company environment can run well in carrying out the tasks given. This is in accordance with the theory of Cascio (2003) which states that the company provides an opportunity for employees to get job enrichment and a wider opportunity for self-development.

### 5.3. Job Satisfaction (Y1)

The result of CFA test of job satisfaction variable (Y1) on the overall model in the attachment. The result of test of variable of job satisfaction (Y1) is evaluated based on goodness of fit indices in the following table with presented model criteria and its critical value.

Table 5.3 Evaluation Criteria of Goodness of Fit Indices (Y1)

<b>Goodness of Fit Indices</b>	<b>Cut-off Value</b>	<b>Hasil Model</b>	<b>Ket</b>
X <sup>2</sup> Chi Square	$\alpha = 5\%$	37,716	Marginal
Probabilitas	$\geq 0,05$	0,000	Marginal
CMIN/DF	$\leq 2,00$	7,543	Marginal
RMSEA	$\leq 0,08$	0,161	Marginal
GFI	$\geq 0,90$	0,939	Fit
AGFI	$\geq 0,90$	0,817	Marginal
TLI	$\geq 0,95$	0,892	Marginal
CFI	$\geq 0,95$	0,946	Fit

Source: Calculated from the data collected

Evaluation of the criteria of Goodness of fit indices Y1 above shows that there are several fit model criteria that have not met the cut-off standard such as Chi Square, Probability CMIN / DF, RMSEA, AGFI, and TLI. Thus still needed modification of CFA model in order to achieve fit model on job satisfaction variable (Y1) presented in the following table:

Table 5.4 Evaluation Criteria of Goodness of Fit Indices (Y1) Modification

<b>Goodness of Fit Indices</b>	<b>Cut-off Value</b>	<b>Hasil Model</b>	<b>Ket</b>
X <sup>2</sup> Chi Square	$\alpha = 5\%$	2,769	Fit
Probabilitas	$\geq 0,05$	0,429	Fit
CMIN/DF	$\leq 2,00$	0,923	Fit

RMSEA	≤ 0,08	0,000	Fit
GFI	≥ 0,90	0,996	Fit
AGFI	≥ 0,90	0,978	Fit
TLI	≥ 0,95	1,001	Fit
CFI	≥ 0,95	1,000	Fit

Source: Calculated from the data collected

Job satisfaction variable (Y1) shows the highest result of job promotion indicator that is Y1.4 is 0,793 which indicate that employees get job security and prospect future higher, with responsibility and organizational level. Conversely Y1.1 indicator gives the lowest contribution of only 0.692. This condition indicates that the satisfaction indicator on payment is still low, the employee perceives the payment as fair and undoubtedly in accordance to the expectations. If the company carries out a career system and a fair remuneration, it will motivate employees to work well to show that the employee's performance is high. According to Robbins (2006) employees have the opportunity to develop themselves and expand work experience, with the opening of opportunities for promotion.

#### 5.4. Employee Performance (Y2)

The result of employee performance variable construct test (Y2) is evaluated based on goodness of fit indices in the following table with presented criteria model and its critical value.

Table 5.5 Evaluation of Criteria of Goodness of Fit Indices (Y2)

<i>Goodness of Fit Indices</i>	<i>Cut-off Value</i>	<i>Hasil Model</i>	<i>Ket</i>
X <sup>2</sup> Chi Square	α = 5%	1,074	Fit
Probabilitas	≥ 0,05	0,585	Fit
CMIN/DF	≤ 2,00	0,537	Fit
RMSEA	≤ 0,08	0,000	Fit
GFI	≥ 0,90	0,998	Fit
AGFI	≥ 0,90	0,989	Fit
TLI	≥ 0,95	1,006	Fit
CFI	≥ 0,95	1,000	Fit

Source: Calculated from the data collected

Employee performance variable (Y2) shows the result of the highest job knowledge indicator that is Y2.3 equal to 0.834 which reflects that the level of employee knowledge related to the tasks assigned to him is in accordance with the ability and skill of employees in improving their performance. On the other hand the Y2.4 indicator gives the lowest contribution of only 0.722.

#### 5.5. Hypothesis Testing Results

Testing the hypothesis by looking at the p value, if p value is smaller than 0.05 then the relationship between variables is significant. Test results are presented in the following table:

Table 5.6 Hypothesis Testing

<b>Variabel Independen</b>	<b>Variabel Dependen</b>	<b>Direct Effect</b>			
		Standaridize	C.R	p-value	Ket.
<i>Person-Organization Fit</i>	Job satisfaction	0,185	2.113	0,035	Sig.
<i>Quality of work life</i>	Job satisfaction	0,239	1.970	0,049	Sig.
Job satisfaction	Employee	0,181	2.090	0,037	Sig.

	Performance				
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Source: Calculated from the data collected

The functional relationship of exogenous and endogenous variables can be described as follows:

- a) The estimated value of the coefficient of  $0.185 > 0$  indicates the causal relationship between Person-Organization Fit (P-O Fit) on job satisfaction with positive sign. The critical ratio value (t-count) of 2.113 is greater than 1,960 for the 0.05 and 0.035 p-value  $0.05 < 0.05$ , which indicates a significant level of 5%. The coefficient explains that the suitability of values between individuals and companies will create high employee satisfaction for the employees. The existence of Person-Organization Fit (P-O Fit) on job satisfaction in accordance with the statement tends to be influenced by employees' judgment of their task (Smith et al., 1969). This finding is relevant to the empirical study of O'Reilly, (1977); Chatman et al, (1994); Nazir (2014); Silverthorne (2004); Tepeci (2001) that Person-Organization Fit (P-O Fit) has a strong impact on job satisfaction.
- b) The estimated value of coefficient of  $0.239 > 0$  this shows the causal relationship between quality of work life on job satisfaction marked positive. The value of the critical ratio (t-count) 1.970 is greater than 1,960 for the 0.05 level of 0.05 and p-value  $0.049 < 0.05$  which indicates a significant level of 5%. The coefficient explains that improvement of quality of work life will increase employee job satisfaction. Quality of work life has a positive and significant impact on job satisfaction in accordance with Lawler's theory (1984) which suggests that quality of work life is associated with satisfaction of wages, hours and working conditions. The results of this study are also supported by empirical evidence from Rubel et. al (2014); Abagi (1999); Selvaraj (2014); Sheel (2012) who found that Quality of work life has a positive and significant impact on job satisfaction.
- c) Estimation coefficient value of  $0.181 > 0$  this shows the causal relationship between job satisfaction on employee performance marked positive. The value of the critical ratio (t-count) 2.090 is greater than 1,960 for the 0.05 and  $0.037 > 0.05$  significance level of  $0.037 > 0.05$  which indicates a significant level of 5%. The coefficient indicated that with increased job satisfaction will improve employee performance.

The result of the research shows that job satisfaction has a positive and significant effect on employee performance reinforced by research conducted by (Reisel, 2007, Carmeli, 2004; Koesmono, 2014; Farooqui & Nagendra, 2014; Rose, 2009; Arifin, 2015; Funmilola, 2011) shows that positive job satisfaction significantly affects employee performance.

### 5.6. Evaluation of Indirect Effect

The standardized indirect effect variable table below shows the effect of indirect effect on the influence of variables. The standardized indirect effect value represents the strangeness of the relationship between the researches constructs that can be described as follows:

Table 5.7 Value of Standardized Indirect Effect Variable

Variabel Independen	Variabel Intervening	Variabel Dependen	Standar dized	Ket.
<i>Person-Organization Fit (P-O Fit)</i>	Job satisfaction	Employee performance	0,036	Sig.
<i>Quality of work life</i>	Job satisfaction	Employee performance	0,127	Sig.

Source: Calculated from the data collected

# Students' Attitudes towards Use of Cloud Computing in Lately Established State Universities in Sri Lanka

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## Abstract

Cloud computing is becoming a prominent technology among the individuals with its exclusive characteristics and usage of remote resources through the Internet. This study examined the factors affecting to the university students' attitudes towards the use of cloud computing in lately established universities in Sri Lanka. A Structured questionnaire was developed and collected data from 150 respondents following the purposive sampling technique. A research model was developed and five hypotheses were tested using Correlation analysis and Multiple Regression Analysis. The results of this study reveals that Perceived Usefulness is the most Important variable to improve the students' attitudes to use the cloud computing. Further, other factors Perceived Ease of Use, Perceived Security, Perceived Ease of Access and Social Influences also affect to the students' attitudes towards the use of cloud computing. Learning environment of lately established universities in Sri Lanka should be improved to access the cloud based resources of the students to improve students' attitude towards use of cloud computing.

**Keywords:** Ease of Access, Ease of use, Security, Social influences, Usefulness

## 1. Introduction

Learning takes place before and after the classroom environment of students irrespective of the location of the study and Wu (2013) observers that students were unable to participate the learning after classroom with the same materials. The learning at any time in anywhere has been addressed by the concept of cloud computing and it is a general term to access materials anywhere from any device which can be connected the Internet. This concept is very useful for education sector because students can practice their learning through Cloud based materials at anytime. They can get online courses, attend the online exams, get feedback from teachers, share their learning materials, complete assignments and send their documents online to their teachers. Changchit (2014) emphasizes that Cloud computing give many benefits to students focusing their interest to adopt the new technology.

Considering the significance of usage of cloud computing the educational institutes like universities should know which factors are to be affected and how they are affected for the students in teaching and learning process. Therefore, the purpose of this study is to find out what are the factors affecting to the student attitudes on use of Cloud Computing services for their education with special reference to lately established universities such as Rajarata University of Sri Lanka, Wayamba University of Sri Lanka and Sabaragamuwa University of Sri Lanka. The paper consists of five sections. The second section reviews the literature deals with the students' usage of cloud computing for their education and a conceptual framework was developed. Third section discusses the materials and methods used in the study. Fourth section presents the results and discussion of the study. Final section concludes the study with recommendations, limitations and future works of the study.

## 2. Literature Review

Research of Mell and Grance (2011) has defined the term Cloud computing as a model for convenient accessing of resources which are in servers in the Internet. Fishbein and Ajzen (1975, as cited in Davis (1989) defined attitude as an individual's positive or negative feeling about performing the target behavior.

Mingchang et al. (2011) has considered eight factors of relative advantage, complexity, compatibility, top management support, firm size, technology readiness, competitive pressure, and trading partner pressure of cloud computing adoption study and categories them in to three groups such as technology, organization and environment. The findings of the study have exposed that relative advantage, top management support, firm size, competitive pressure, and trading partner pressure characteristics have a significant reason on the adoption of cloud computing.

Taylor and Hunsinger (2011) has defined Cloud computing is a concept for delivering hosted services over the Internet and the study noted that many

students use software as a service of one of the services available in cloud computing is Google Docs and all three constructs of the Theory of Planned Behavior (Attitude, Subjective norm, and Perceived Behavioral Control) has significantly and positively correlation with intention to use it.

Perceived Ease of Use (PEoU) has denoted to the degree to which the user see the target system to be free of effort (Davis et al., 1989) and the study has addressed the ability to predict people accept of computers from a measure of their intentions in terms of their attitudes, subjective norms, perceived usefulness, perceived ease of use and related variables. Further the study has revealed that PEoU significant effect on intention of use of computers. According to Changchit (2014) PEoU has played an important task in encouraging students to accept cloud computing as part of their learning. Davis (1989) has defined Perceived Usefulness (PU) as the prospective user's subjective probability that using a specific application system would increase his or her job performance within an organizational context and the study. The study holds that PU strongly influenced peoples' intention of accept computers and PU is the major determinant of Behavioral Intension. Changchit (2014) has described that PU plays an important role in encouraging students to accept cloud computing as part of their program of study. Arpaci (2015) has emphasized that PU has a significant positive effect on the attitude to use of mobile cloud storage by students.

Perceived Security (PS) usually refers to the degree of protection against loss, damage, danger, and criminal activity (Changchit, 2014) and it is still a top concern and also plays an important role in encouraging students to accept cloud computing as part of their core curriculum. More, the study has suggested that it may be valuable for the universities to inform students about the security of cloud computing. According to Perera and Meedeniya (2012) private clouds located in the enterprise premises to ensure the maximum security and privacy of the data. Alotaibi (2014) has stressed that privacy and security issues were crucial for ensuring the successful adoption of cloud computing. Hashim and Hassan (2015) has expressed that high security has positively impact on the intention to adopt cloud computing.

Perceived Speed of Access (PSoA) of the Internet or Bandwidth access of the cloud computing is also a major factor that would be considered by students in using cloud based services. Changchit (2014) has

highlighted that one major benefit of technology nowadays is the ability to process a large amount of data very speedily. Further, the study has added PSoA as an additional construct to the Technology Acceptance Model of Davis (1989) to measure students' perception of cloud computing because this was an important to access the data at the same speed as when the data were stored in their own computers and it was also play an important role in encouraging students to accept cloud computing. Further, the study noted that the speed of access to cloud storage was also a vital factor for the students' access it. The results of Hashim and Hassan (2015) study has mentioned that performance expectancy was the most important factors that affect the behavioral intention to use cloud computing followed by effort expectancy, social influence, security, and trust. Accordingly, Behavioral intention and facilitating conditions have strong influence on use behavior of cloud computing services. Further, the study noted that social influence have a significant influence on the adoption of cloud services. The study of Hashim and Hassan (2015) deploys the unified theory of acceptance and use of technology (UTAUT) as a theory of adoption along with security and trust. The results of the study indicated that performance expectancy was the most important factors that affect the behavioral intention to use cloud computing followed by effort expectancy, social influence, security, and trust.

Based on the above literature review the study focuses the research variables of Perceived Ease of Use, Perceived Usefulness, Perceived Security, Perceived Speed of Access and Social Influences affect to the Students' Attitudes towards usage of Cloud Computing which will influence to the student acceptance and adoption of cloud computing. The study focuses the following research model with the five hypotheses (H<sub>1</sub> to H<sub>5</sub>).

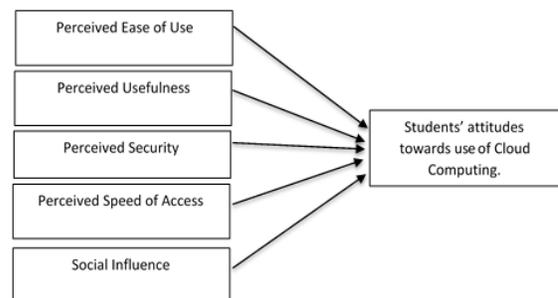


Figure 1 - Research Model

**Hypotheses**

- H<sub>1</sub>: Perceived ease of use of the technology positively affects the students’ attitudes towards use of Cloud Computing.
- H<sub>2</sub>: Perceived usefulness positively affects the students’ attitudes towards use of Cloud Computing.
- H<sub>3</sub>: Perceived security positively affects the students’ attitudes towards use of Cloud Computing.
- H<sub>4</sub>: Perceived speed of access positively affects the students’ attitudes towards use of Cloud Computing.
- H<sub>5</sub>: Social Influence positively affects the students’ attitudes towards use of Cloud Computing.

**3. Methodology**

This study focused questionnaires as a tool for data collection. Pilot study were done selecting students of Rajarata University of Sri Lanka to stressed the importance of students’ use of cloud computing. Then, the research model was developed considering empirical support of previous research studies and five hypotheses were formulated accordingly. Next a comprehensive questionnaire was developed and primary data were collected using purposive sampling technique from 150 respondents from the lately established university cluster of Rajarata University of Sri Lanka, Wayamba University of Sri Lanka and Sabaragamuwa University of Sri Lanka. The questionnaire was divided into two parts. First Part of

the questionnaire was kept for the demographic information of the respondents such as their Gender, University, Year of the study, Awareness and uses of cloud computing. Second Part was reserved for the variables of the study. Five point Likert Scale were used where one (1) is strongly disagree and five (5) is strongly agree. Two types of methods were used to distribute the questionnaire to the respondents as paper printed questionnaire and online (Google forms) questionnaire. Pearson correlation analysis and multiple regression analysis were used to identify relationship between independent and dependent variables and to test the hypotheses. Demographic factors were analyzed using t-test, one-way ANOVA test and descriptive analysis such as mean and standard deviation. A statistical tool such as reliability test (Cronbach’s Alpha value) was used to measure the reliability of variables.

**4. Results and Discussion**

**Demographic Analysis**

According to Table 1, the majority of the respondents were male (61.3%) students and there were only 58 female (38.7%) students from of 150 respondents in the sample. Among them 66 (44%) are fourth year students, 30 (20%) are third year students, 28 (18.7%) are second year students and 26 (17.3%) are first year students. 42% respondents are not knowing the concept of Cloud Computing even they used many resources in the Internet.

*Table 1- Respondents' Demographic Information*

Gender	Frequency	Year of study	Frequency	Cloud Computing Awareness	Frequency
Male	92	I	26	Yes	87
Female	58	II	28	No	63
		II	30		
		IV	66		

**Reliability test**

There are six research variables including the dependent variable in the study. According to Table 2 Cronbach’s Alpha value of Perceived Ease of Use is 0.841, Perceived Usefulness alpha value is 0.813, Perceived Security alpha value is 0.768, Perceived Speed of Access alpha value is 0.701, Social Influence alpha value is 0.773 and alpha value of Attitudes to use of Cloud Computing is 0.807. According to the results Cronbach’s alpha value for all constructs are

more than 0.7. Therefore, Constructs used to measure the variables are reliable

*Table 2 - Results of Reliability Analysis*

Variables	Cronbach’s Alpha	No. of Items
Perceived Ease of Use	0.841	4
Perceived Usefulness	0.813	4
Perceived Security	0.768	4
Perceived Speed of Access	0.701	4
Social Influence	0.773	4
Attitudes towards use of Cloud Computing	0.807	4

**Descriptive statistics for research variables**

Table 3 reports descriptive statistics of responses of respondents related with independent and dependent

variables of the study. Almost all the mean values of the research variables are relatively high and above 3.4. Maximum mean is having for attitudes towards the cloud computing (M= 3.99, SD=0.72) and lowest mean value is having for Perceive ease of access (M=3.44, SD=0.68). The mean values of the variables are ranging from 3.73 to 3.99; the standard deviation values are ranging from 0.68 to 0.78.

### Correlation Analysis

According to Table 4 Pearson correlation values are 0.648, 0.737, 0.602, 0.580 and 0.573 of the research variables Perceived Ease of use, Perceived Usefulness, Perceived Security, Perceived Speed of Access and Social Influence respectively. Correlation values of all the values are more than 0.3 with the attitudes towards use of cloud computing and also all the significant values are less than 0.01. This means that all the independent variables are positively and significantly correlated with the dependent variable attitudes towards the use of cloud computing and Hence,

### Multiple Regression Analysis

In multiple regression analysis, Students' Attitudes was entered as dependent variable and Perceived Ease

*Table 3 - Descriptive statistics for research variables*

Variable	Mean	Std. Deviation
Perceived Ease of use	3.658	0.789
Perceived usefulness	3.726	0.745
Perceived security	3.473	0.713
Perceived Speed of access	3.446	0.687
Social influences	3.733	0.763
Attitudes towards use of Cloud Computing	3.995	0.720

Perceived Ease of use, Perceived Usefulness, Perceived Security, Perceived Speed of Access and Social Influence are significant predictors to attitude towards use of cloud computing of lately introduced state universities in Sri Lanka.

*Table 4 - Correlation Analysis*

Variable	Pearson Correlation	Sig:
Ease of use	0.648	0.000
Usefulness	0.737	0.000
Security	0.602	0.000
Speed of access	0.580	0.000
Social influence	0.573	0.000

of Use, Perceived Usefulness, Perceived Security, Perceived Speed of Access and Social Influences were entered as predictors.

Table 5 – Multiple Regression Analysis

Variable	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
Ease of use	0.174	0.057	0.190	3.063	0.003
Usefulness	0.377	0.062	0.390	6.068	0.000
Security	0.157	0.059	0.156	2.645	0.009
Speed of access	0.150	0.060	0.143	2.500	0.014
Social influence	0.176	0.054	0.186	2.500	0.001
(Constant)	0.234	0.216		1.080	0.282
Adjusted R Square = 0.683      F = 65.295      p-value = 0.000					

a. Predictors: (Constant), Social Influence, Perceived Usefulness, Perceived Speed of Access, Perceived Security, Perceived Ease of Use  
 b. Dependent Variable: Attitudes towards use of Cloud Computing

In Multiple regression analysis, Adjusted R<sup>2</sup> value is 0.683 which means 68.3% of the variation attitudes towards use of cloud computing can be explained by Social Influence, Perceived Usefulness, Perceived Speed of Access, Perceived Security and Perceived Ease of Use. The p-value (0.000) from the ANOVA table is less than 0.001, which means that at least one of the five variables: Social Influence, Perceived Usefulness, Perceived Speed of Access, Perceived Security and Perceived Ease of Use can be used to model attitudes towards the use of cloud computing. Also, large F value (65.295) and a small p-value, implies good fit of the constructs.

According to the above table p-values (sig.) for Social Influence, Perceived Usefulness, Perceived Speed of Access, Perceived Security and Perceived Ease of Use are 0.001, 0.000, 0.014, 0.009, and 0.003 respectively and all values are less than 0.05. According to the regression analysis Perceived Ease of use, Perceived Usefulness, Perceived Security, Perceived Speed of Access and Social Influence are significant predictors of attitude towards use of cloud computing of lately introduced state universities in Sri Lanka.

Table 6 reports summary of hypotheses testing using correlation analysis and regression analysis

Table 6 - Summary of hypotheses testing

Hypotheses	Correlation	Regression
H1: Perceived ease of use of the technology positively affects the students' Attitudes towards use of Cloud Computing.	Supported	Supported
H2: Perceived usefulness positively affects the students' Attitudes towards use of Cloud Computing.	Supported	Supported
H3: Perceived security positively affects the students' Attitudes towards use of Cloud Computing.	Supported	Supported
H4: Perceived speed of access of the technology positively affects the students' Attitudes towards use of Cloud Computing.	Supported	Supported
H5: Social Influence positively affects the students' Attitudes towards use of Cloud Computing.	Supported	Supported

### 5. Conclusion and Recommendation

Purpose of this study is to find out the factors affecting to the student attitudes on usage of cloud computing with special reference to the lately established universities in Sri Lanka (Rajarata University of Sri Lanka, Wayamba University of Sri Lanka and Sabaragamuwa University of Sri Lanka) using five independent variables Perceived Ease of Use, Perceived Usefulness, Perceived Security, Perceived Speed of Access and Social Influences. A total of 150 respondents were participated in this study. The study developed a research model and tested five hypotheses using Pearson Correlation and Regression analysis. The findings showed that research model can be used to predict the students' attitude of usage of cloud computing with the five independent variables. All the hypotheses were supported by correlation and regression analysis coefficients. The highest coefficient value was determined by the Perceived Usefulness from the five constructs to improve the

Attitudes towards the use of cloud computing among the lately established state universities in Sri Lanka. Therefore, Learning environment of the students should be improved to access the cloud based resources of the students to improve students' attitude towards use of cloud computing and students should be aware the usefulness of cloud computing. The findings of the study were only for the undergraduates belonging to the said three universities with the constructs of perceived Usefulness, perceived ease of use, perceived security, perceived speed of access and social influences affect to the students' attitudes towards use of cloud computing. The future studies are needed with large samples in different context of using the same independent variable's towards attitudes of students' cloud computing usage to confirm the results and more studies are necessary with cloud computing usage with different constructs too.

### References

- [1] Alotaibi, M. B. (2014). Exploring Users' Attitudes and Intentions toward the Adoption of Cloud Computing in Saudi Arabia: An Empirical Investigation. *Journal of Computer Science*, 10(11), 2315-2329. doi:10.3844/jcssp.2014.2315.2329
- [2] Arpacı, I. (2015). Understanding and predicting students' intention to use mobile cloud storage services. *Computers in Human Behavior*, 58, 150-157. doi:10.1016/j.chb.2015.12.067
- [3] Changchit, C. (2014). Students' Perceptions of Cloud Computing. *Issues in Information Systems*, 15(1), 312-322.
- [4] Mingchang Wu., Low, C., & Ychsueh Chen (2011). Understanding the determinants of cloud computing adoption. *Industrial Management & Data Systems*, 111 (7), 1006 - 1023. doi:10.1108/02635571111161262
- [5] Davis, F. D. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 38(8), 982-1003.
- [6] Hashim, H. S., & Hassan, Z. B. (2015). Factors That Influence The Users' Adoption Of Cloud Computing Services At Iraqi Universities: An Empirical Study. *Australian Journal of Basic and Applied Sciences*, 9(27), 379-390.
- [7] Mell M. P. and , Grance T (2011). The NIST Definition of Cloud Computing, Retrieved 5<sup>th</sup> May, 2017 from <https://www.nist.gov/publications/nist-definition-cloud-computing>.
- [8] Perera, I. and Meedeniya, D. (2012). Enabling SMEs to Use Cloud Computing Services - An Exploratory Study on Enterprises Strategy Alterations. Publisher: INREWI, Editors: V. Tewari.
- [9] Steele, A., & Rickards, T.,. (n.d.). Student Perceptions of a Cloud Assessment Learning Environment. *The Online Journal of Distance Education and e-Learning*, 2(1), 30-38.
- [10] Tahirah Binti Mt Tahir, Sangeeth Ramalingam, Nurulhayati Binti Ilias & Bisyaarah Binti Mohd Surur. (2016). Study of the Application of Cloud Storage Services among Students: A Survey at a Malaysian Tertiary Institution. e-Proceeding of the 4th Global Summit on Education GSE 2016. 14-15 March 2016, Kuala Lumpur, Malaysia.
- [11] Tashkandi, A., & Al-Jabri, I. (2015). Cloud Computing Adoption by Higher Education Institutions in Saudi Arabia. *International Conference on Cloud Computing*. Riyadh, Saudi Arabia.
- [12] Taylor, C. W. & Hunsinger, D. S. (2011). A Study of Student Use of Cloud Computing Applications. *Journal of Information Technology Management*, 22(3), 36-50.
- [13] Wu, C. F. (2013, February 1). Learning Attitude and Its Effect on Applying Cloud Computing Service to IT Education. *International Journal of u-and e-Service, Science and Technology*, 6(1), 39-48.

# Attitude towards email advertising among the students in Rajarata University of Sri Lanka

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## Abstract

E-mail advertising is rapidly progressing among businesses due to advancement of technology, clicking on e-mail advertisement be not up to the expected level. The study examines the students' attitude towards clicking on email advertisements by students in Rajarata University of Sri Lanka. Literature noted that users did not click on e-mail advertisement due to its dimensions. Empirical data collected from 150 students from Rajarata University of Sri Lanka using administrative questionnaire, which was built on empirically evidences. Data analysis comprised statistical tools including correlation and regression analysis. According to the research, findings design features and content features of emails statistically significant students' attitude towards use of email advertising. The design features such as colours and fonts and the content features such as brand name, subject line and length of email have to be used effectively to improve the students' attitude towards email advertising. Hence, advertising companies are well advised to design their e-mail advertising messages carefully with necessary contents targeting the relevant groups.

**Keywords:** attitude, advertisement, e-mail, design features, content features

## Background

The evaluations of the technology new advertising methods were emerged and according to Asdemir, Nanda and Varghese (2012) online advertising has transformed the advertising industry with its measurability and accountability. Haq (2009) noted that E-mail marketing offers great opportunities for businesses and Marketing activities supported by e-mails allow companies to directly communicate with their consumers without time or location barriers. Further, researcher concluded that highly perceived value of advertising via e-mails reflects positively on the consumers' attitude toward advertising via e-mails.

Zulqurnain et al. (2015) noted that Electronic mail is an important medium for communication for marketers as it is low in cost and companies can contact their customers on regular basis. According to the Carvalho (2014) Email, marketing campaigns are cheap, fast, highly targetable and highly customizable, and thus claimed to generate twice as much the return on investment of other online advertising media.

According to the David (2009), new advertising methods were designed to reach large number of people, but they were substituted only a marginal level with the content and consumers had much controlled of looking over the content of webs advertisements. Chang, Hamid & Hanudin

(2013) highlighted that length of delay experienced not clicking the e-mail advertisement and only a travel industry industry much interested of e-mail advertisement.

Based on the pilot study conducted through personal interviews from selected students in Rajarata University of Sri Lanka found that most of the students were having negative attitudes towards e-mail advertisements. More than 90% students view was the click on e-mail advertisements were not useful for their progression of studies of lifestyle. Most of the previous research studies refer that attributes of e-mail may caused this effect. Morteza, Navid & Roozbeh (2012) stressed there was strong relationship between email-based advertising dimensions and consumers' attitude. Therefore, objective of this study is to find out main factors behind attitude of e-mail users regarding e-mail advertisements. Next part of this paper discusses the relevant literature regarding attitudes towards to click e-mail advertisements and its dimension. Then research model was developed using existing literature. After that, paper discusses used methodology for the study. Fourth section presents the results and discussion of the study. Final section concluded the study with recommendations, limitations and future works of the study.

## **Literature Review**

The study of Chang, Hamid & Hanudin (2013) highlighted that Attitudes toward e-mail advertising positively influence intentions toward the sender and Attitudes toward e-mail advertising positively influence consumer response. Further, the study highlighted that the Internet users in

Taiwan indicate that values and attitudes toward, and the perceived intrusiveness of, email advertising significantly affect consumers' behavioral dispositions toward email advertising. The results suggest that permission-based email is more effective as compared to spam email advertising. For solicited email, consumers perceived less intrusiveness if the email advertisement offered them financial incentives.

The study of Carvalho (2014) claimed that message design features of emails and yet, extant studies have produced little evidence of such design effects. The results of Haq (2009) indicated that the content and the frequency of advertising message have the largest impact on attitude toward advertising. In addition, the study predicted that entertainment and informativeness were positively associated with advertising value when addressing consumers via e-mails. Further, the study mentioned that Informativeness of the advertising message turns out to be the second strong influencing factor on consumers' perceived advertising value, but shows the strongest influence on consumers' attitude. The above findings have further strengthened by the research of Morteza, Navid & Roozbeh in 2012 and mentioned that entertainment and informativeness of advertising email content is strongly and positively affect customers' attitude about email-based advertisement.

According to David (2009), online advertising increases the supply of online content, which provides a substitute for traditional content and online advertising attracts the entry of content, provides that supply advertising inventory. In addition, the

study mentioned that content would attract the relevant people and Consumers have much greater control over the content they view on websites.

Mackenzie and Lutz (1989, as cited in Haq, 2009) noted that attitude toward an ad is defined as “a learned predisposition to respond in a consistently favorable or unfavorable manner toward advertising in general and In this context, it was important to note that attitude toward e-mail advertising pertains to consumers’ attitude toward this advertising type in general and not to the exposure to one particular advertisement”.

Based on the above literature review the study focuses the research variables of design features and content features of emails affects students’ attitude towards use of email advertising which will progress the email advertisements and following research model was formulated.

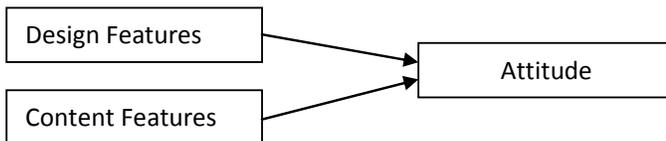


Figure 1 - Research Framework

## Methodology

Due to technology advancement, new methods of advertisement emerged and one of the methods was e-mail based advertisement. When conducts interviews the researcher found that most of e-mail users ignore clicking of e-mail advertisements. The study focuses the dimensions of e-mails advertisements, which improve the attitude of e-mail users to click of those advertisements. The research model was

developed using the previous research studies and questionnaire were used to collect data from 150 undergraduates from Rajarata University of Sri Lanka. Respondents’ attitude towards e-mail advertisements was used as dependent variable and design features & content features of e-mail advertisements were used as independent variables. First part of the questionnaire was dedicated for the respondents’ demographic information such as gender, types of e-mail accounts, second part of the questionnaire was used to collect information regarding research variables such as content features, and design features of e-mails. Five point Likert Scale was used where one (1) is strongly disagree and five (5) is strongly agree for each construct. Demographics data were analyzed using descriptive statistics mean and standard deviations etc. Cronbach’s Alpha values were used to test the reliability of questions regarding research variables. Data were checked for normality, outliers and multicollinearity, however no such discrepancy observed. Pearson correlation and multiple linear regressions were used to see the relationships between dependent and independent variables.

## Results and Discussion

According to Table 01, the male respondents were 46.67% and female respondents were 53.33% students from of 150 sample. Among them 21 (14%) users were Hotmail users, 42 (28%) were Yahoo mail users and 87 (58%) users were Gmail users. Almost all the mean values of the research variables are relatively high and above 3.9. Maximum mean is having for Content Features of e-mail advertisements (4.0571) and lowest mean

value is having Attitudes towards to click the mail advertisement (3.9643). The mean values of the variables are ranging from

3.9643 to 4.0571; the standard deviation values are ranging from 0.73568 to 0.79360.

Table 01 - Demographic Information/ Descriptive statistics for research variables

Gender	Frequency	Type of-email	Frequency	Variable	Mean	Std. Deviation
Male	70 (46.67%)	Hotmail	21 (14%)	Design features	4.0452	0.75199
Female	80 (53.33%)	Yahoo	42 (28%)	Content features	4.0571	0.79360
		Gmail	87 (58%)	Attitudes	3.9643	0.73568

### Reliability test

There are three research variables including the dependent variable in the study. According to Table 02, Cronbach's Alpha values of Design Features of e-mail advertisements is 0.861, Content Features of e-mail advertisements is 0.730 and Attitudes towards to click the email advertisement is 0.870. According to the results Cronbach's alpha value for all constructs are more than 0.7. Therefore, Constructs used to measure the variables are reliable.

Table 02 – Reliability Analysis

Variables	Cronbach's Alpha
Design features	0.861
Content features	0.730
Attitudes	0.870

### Correlation and Regression Analysis of the Research Variables

According to Table 03, Pearson correlation values are 0.687 (Design Features) and 0.758 (Content Features) with Attitudes towards to click the e-mail advertisements. Correlation values of all the values are more than 0.6 and

all the significant values are less than 0.01 (0.00). This means that all the independent variables are positively and significantly correlated with the dependent variable attitudes towards to click e-mail advertisements. Hence, Design Features and Content Features are significant predictors to attitude towards to click e-mail advertisements among students in Rajarata University of Sri Lanka.

Table 03 - Correlation Analysis (Pearson Correlation Value, (Sig. value))

	DF	CF	A
Design features (DF)	1		
Content features (CF)	0.676** (0.000)	1	
Attitude (A)	0.687** (0.000)	0.758** (0.000)	1

\*\* Correlation is significant at the 0.01 level (2-tailed)

### Regression Analysis

In multiple regression analysis, Students' Attitudes towards click to e-mail advertisement was entered as dependent variable and Design Features & Content Features of e-mail advertisements were entered as predictors (Table 04).

Table 04 - Regression Analysis

Variable	B	sig	VIF
(Constant)	0.534	0.023	--

Design features (DF)	0.331	0.000	0.1840
Content features (CF)	0.533	0.000	0.1840
<b>Adjusted R Square = 0.633, ANOVA Sig. = 0.000 , F = 117.929, Durbin-Watson = 2.145</b>			
<b>Predictors:</b> (Constant), DF, CF <b>Dependent Variable:</b> Attitude			

In Multiple regression analysis, Adjusted R<sup>2</sup> value is 0.633, which means 63.3% of the variation attitudes towards to click e-mail advertisements can be explained by Design Features & Content Features of e-mail advertisements. The p-value (0.000) from the ANOVA table is less than 0.001, which means that at least one of the two variables: Design Features & Content Features of e-mail advertisements can be used to model attitudes towards to click e-mail advertisements. Also, large F value (117.929) and a small p-value, implies good fit of the constructs. The Durbin-Watson statistic of 2.145 is not too far from two (02). The VIF values are below five (05), indicating that there is no problem of multicollinearity.

According to the above table 04, regression coefficient values of Design Features & Content Features of e-mail advertisements are 0.331 & 0.533 respectively. Further, both p-values (sig. values) for Design Features & Content Features of e-mail advertisements are 0.000 and the values are less than 0.01. According to the regression analysis, Design Features & Content Features of e-mail advertisements are significant predictors of attitude towards to click email as advertisements by students in Rajarata University of Sri Lanka.

## Conclusion and Recommendation

Due to technology advancements businesses start advertisement using multiple methods. E-mail advertisement is one of the methods is rapidly progressing advertisement type and cost-effective advertisement method. E-mail advertisement is still not developed as expected by the business industry due to negative attitudes of e-mail users. Most of the e-mail users do not intent to click e-mail advertisements as they think they were not useful for their progression of their lives. Previous researchers had noted that dimensions of e-mails may reasons to this negative attitude. Therefore, objective of this research study was to identify the reasons relevant to attitude to click e-mail advertisements of email users among students in Rajarata University of Sri Lanka. According to the literature, the most of the dimensions regarding attitude of email users were Design Features & Content Features of e-mail advertisements. Administrative questionnaire was developed using previous literature support of above variables and data were collected from 150 students from Rajarata University of Sri Lanka.

Design Features & Content Features of e-mail advertisements were statistically significant to change attitude of students of Rajarata University of Sri Lanka based on Pearson correlation and regression coefficient. The companies have much concern of content features and design features when creating e-mail advertisements. The study revealed that

Design Features & Content Features of e-mail advertisements were statistically significantly to change the attitudes of e-mail users. Students of Rajarata University of Sri Lanka noted that there were some other variables like length and entertainment features etc. were important to change the attitude of e-mail user to click on e-mail messages. Further, more research studies should be done in different context to confirm the result.

## References

- Asdemir, K., Nanda, K. & Varghese, S. J. (2012). Pricing Models for Online Advertising: CPM vs. CPC. *Information Systems Research* , 23 (3), 804-822.
- Carvalho, A. T. (2014). Effects of message design and content on the performance of email marketing campaigns. *Dissertation submitted in partial fulfillment of the requirements for the degree of MSc in Business Administration at Católica-Lisbon School of Business & Economics* .
- Chang, H. H., Hamid, R. & Hanudin A. (2013). The determinants of consumer behavior towards email advertisement. *Internet Research* , 23 (3), 316-337.
- David, S. E. (2009). The Online Advertising Industry: Economics, Evolution, and Privacy. *Journal of Economic Perspectives* .
- Haq, Z. U. (2009). E-mail advertising: A study of consumer attitude toward e-mail advertising among Indian users. *Journal of Retail & Leisure Property* , 8 (3), 207 – 223.
- Morteza Jamalzadeh, Navid Behravan & Roozbeh Masoudi. (2012). An Empirical Study of Email-Based Advertisement and its Influence on. *International Review of Management and Marketing* , 02 (03), 130-138.
- Zulqurnain, A., Saira, E., Asma A., Muhammad, U. S., Faisal, A. T. & Muhammad, K. (2015). Understanding E-Marketing as a Firm's Promotional tool: It's Impact on Consumer Perception. *International Journal of Academic Research in Business and Social Sciences* , 5 (4).

An Analysis of the Impacts of International Trade, Foreign Direct Investment (FDI), Energy Consumption, and Gross Domestic Product (GDP) on Carbon Dioxide Emission

in Thailand [Memo1]

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**Abstract**

This study aims to analyze the impacts of international trade, Foreign Direct Investment, energy consumption, and GDP on carbon dioxide emission in Thailand during the period of 1981-2015. The method used in this research is Vector Autoregressive (VAR). The findings show that international trade has a significant negative effect on carbon dioxide emission. This means an increase in international trade will reduce the amount of carbon dioxide in Thailand. Then, energy consumption and GDP show a significant positive effect on carbon dioxide emission. This means that increased energy consumption and GDP will increase carbon dioxide in Thailand. The research results have policy implications for the effort to reduce carbon dioxide emission primarily in the industrial sector to support green economic growth in Thailand. The originality of this study derives from the fact that the research was only conducted in Thailand and which has economic growth closely related to the level of environmental degradation.

**Keywords:** International trade, FDI, Energy consumption, GDP, Carbon dioxide emissions, VAR.

## 1. INTRODUCTION

One of the most significant events in the last decade to date is global warming (Jafari et al., 2012). The occurrence of global warming is the result of the increasing average temperature of the atmosphere, ocean and land on earth caused by the increasing concentrations of greenhouse gases such as water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrogen oxide (N<sub>2</sub>O) produced by human activities. This can lead to threats to climate change that will have a devastating impact on life on earth. Based on a report from the Intergovernmental Panel on Climate Change (IPCC) in 2007, it is estimated that the average global temperature has increased between 1.1 degrees Celsius and 6.4 degrees centigrade in the next 100 years. [Memo2] It is also estimated that only a 2 degree Celsius temperature rise will lead to considerable changes in life on Earth, especially environmental ecosystems and rising sea levels that have a major impact on the lives of the world's population in coastal areas (Liu et al. 2016). In addition, most studies recognize carbon dioxide (CO<sub>2</sub>) as the most common and the largest factor contributing to global warming as a result of anthropogenics (Zhu, et al., 2016). Anthropogenic is a term for pollution that occurs unnaturally or arises as a result of human activities. Zhu, et al (2016) also mention that one of the most important anthropogenic sources is industrialization which takes place globally. Carbon dioxide is the largest contributor of greenhouse gas concentrations that have the longest cycle in the Earth's atmosphere. The high carbon dioxide is one of the benchmarks of the rate of environmental degradation. Many previous studies have shown that carbon dioxide emission levels are closely related to economic growth and energy consumption in a country.

Salim, et al. (2008) in their research describe the economic growth that causes and affects the amount of energy consumption in a country. Although the standard of economic growth does not include energy variables, the importance of energy in modern economic activities cannot be denied. In the increasing economic activity, energy is needed to run the wheels of growth.

Along with the economic growth, people's income will also increase. This also leads to higher energy demands in support of community activities. Therefore, it is necessary to regulate the use of fossil energy in order to achieve economic growth which does not sacrifice the environment.

The phenomenon of the relationship between environment and growth has been studied and explained by Salmon Kuznets in his theory commonly referred to as the Kuznets Curve (EKC) theory (Shahzad et al., 2014). The EKC hypothesis explains that the economic growth of a country will be followed by the level of environmental degradation where a country with low income level will be more focused on its economic growth than its environmental quality problem to a certain point of achievement of economic growth; the level of environmental damage will decrease with a marked decrease in the inverted U curve (Lean and Shahbaz, 2011). Although the EKC hypothesis postulates an inverted U-shaped relationship to economic growth with environmental degradation, there is some evidence that the EKC hypothesis has a linear relationship (Khalid and Muhammad, 2013). Research conducted by He and Richard (2010) found that the EKC hypothesis is invalid. This occurs due to several reasons that make a difference to the conclusions of each study. For example, the samples used are different, and the control variables included in the modeling are also varied.

The awareness of the importance of protecting the environment brings about a number of efforts undertaken in different countries such as the reduction of fossil fuel use, the development of environmentally friendly energy, to the formation of community as a form of concern for the world<sup>[Memo3]</sup> to reduce the carbon dioxide content in the atmosphere. One of interesting areas to do research in this case is Thailand. Thailand is a country with a rapidly growing economy over the past three decades in the ASEAN region, where the economic growth is associated with a sharp rise in energy consumption that is a major source of carbon dioxide emission. Increasing carbon dioxide emission annually encouraged Thailand to join the 2004-2009 ASEA

N Plan of Action for Energy Cooperation (APAEC), the ASEAN Socio-Cultural Community (ASCC) Blueprint 2009-2015 and the ASEAN Cooperation on Climate aimed at reducing emission levels of carbon dioxide (Sahraie, 2011; Hooi-Hooi and Russell, 2010). However, in reality, the development of carbon dioxide emission in Thailand continues to increase every year (Figure 1). Therefore, this is an interesting issue to investigate.

Thailand is a country in Southeast Asia that has rapidly growing economy over the last three decades. Thailand is the second largest economy after Indonesia in Southeast Asia. Thailand's GDP per capita was 5,907 USD in 2016 with the second largest population in Southeast Asia of 68,863,514 residents. The ability of the Thai government to eradicate national poverty from 1988 to 2011 has allowed the state to be recognized by the World Bank as "*one of the broadest development success stories*" in development and social indicators so as to make Thailand an economically upward country (Overview Thailand, 2011). The rapid increase in economic growth has also been attributed to the level of environmental degradation occurring in Thailand.

#### Figure 1. International Trade, FDI, Energy Consumption, and GDP, CO<sub>2</sub> in Thailand

The relationship of economic growth and energy consumption to carbon dioxide emissions has become an interesting topic to research. Given that in Thailand, to increase its economic activity, energy is one of important factors to run the wheels of economic growth in the country. The economic growth will be followed by the higher energy consumption for supporting activities of community needs. However, the high consumption of energy, especially fossil fuels (crude oil, natural gas and coal) will cause adverse effects on the increase of carbon dioxide gas in the earth's atmosphere. Meanwhile, in the last few decades, many developing countries, including Thailand, have been trying to increase the number of FDI entry to improve their ec

onomy. This makes FDI increasingly important in a country, causing some countries to ignore the quality of the environment so that FDI easily enters the country. This phenomenon can lead to an understanding of FDI that can lead to a decrease in environmental quality. However, increased FDI may also be reversed if low-carbon technologies used in an economic activity on FDI are able to reduce the level of carbon dioxide emission in the country. So, this raises an important question, whether or not the level of FDI can affect the quality of the environment in a country that receives the FDI. Therefore, this study aims at identifying the influence of international trade, Foreign Direct Investment (FDI), energy consumption, and Gross Domestic Product (GDP) on carbon dioxide emissions in Thailand from 1981 to 2015.

## **2. REVIEW OF LITERATURE**

Research on carbon dioxide (CO<sub>2</sub>) emissions, energy consumption and economic growth in ASEAN countries including Thailand has been done by Behnaz Saboori and Jamalludin Sulaiman in 2012. The research was done to find out the cointegration and causal relationship between economic growth, CO<sub>2</sub> emissions and energy consumption in ASEAN countries such as Indonesia, Malaysia, Philippines, Singapore and Thailand in the period of 1971-2009 using Autoregressive Distributed Lag (ARDL) and Vector Error-Correction Model (VECM). The results show that there was a positive and significant cointegration relationship between the carbon dioxide emission variable and the energy consumption both in the short and long term in all countries studied. Long-term elasticity on energy consumption associated with carbon dioxide emissions has a higher effect than short-term elasticity. This means that carbon dioxide emission levels are found to increase with respect to energy consumption over time in selected ASEAN countries. Meanwhile, with regard to the variable of economic growth and CO<sub>2</sub> emissions, significant non-linear relationships are found in the country of Indonesia, Singapore, and Thailand in the long term that support the hypothesis of EKC. Granger causality results s

how a causal relationship between consumption energy and CO<sub>2</sub> emissions in all ASEAN-5 countries, meaning that CO<sub>2</sub> emissions and energy consumption are interrelated with each other.

Research on the impact of the dynamics of GDP growth, energy consumption and population growth on CO<sub>2</sub> emissions using the econometric approach of Dynamic OLS in Malaysia has been done by Bagum, et al. (2014) under the title "*CO<sub>2</sub> emission, energy consumption, economic and population growth in Malaysia*". The results of this study show that the EKC hypothesis during the study period is not applicable in Malaysia and that both per capita GDP and energy consumption have a long-term positive impact on CO<sub>2</sub> emissions; meanwhile, the population growth variable does not have a significant impact on CO<sub>2</sub> emissions. However, this study also shows that in the long term, economic growth has a negative impact on CO<sub>2</sub> emissions in Malaysia.

In general, researchers conduct research on the emission of carbon dioxide (CO<sub>2</sub>) by linking the consumption of fossil energy in a country, where fossil energy is the main factor contributing to CO<sub>2</sub> emissions in economic activities. However, different things are done by some researchers who associate CO<sub>2</sub> emissions with electricity consumption in a country; one of which is Hooi Hooi Lean and Russell Smyth in 2009 under the title "*CO<sub>2</sub> Emission, Electricity Consumption, and Output in ASEAN*". The study was conducted by to determine the causal relationship between carbon dioxide emissions (CO<sub>2</sub>), electricity consumption and economic growth using the Vector Autoregression (VAR) method, and to test Granger data causality in five ASEAN countries during the 1980- 2006. The estimation results show that in ASEAN-5 countries, there is a significant non-linear relationship between CO<sub>2</sub> emissions and income, and a positive relationship between electricity consumption and CO<sub>2</sub> emissions. In a long term, Granger causality test results indicate a direct relationship of electricity consumption and CO<sub>2</sub> emissions to economic growth. This means that the ASEAN-5 the economy depends on energy

, where increases in electricity consumption will produce higher GDP.

Research on the testing of the dynamic relationship between carbon dioxide (CO<sub>2</sub>) emissions, economic growth, energy consumption and international trade based on EKC hypothesis was done by Behnaz Saboori and Abdorreza Soleymani (2011) in Indonesia during the period 1971-2007 using Autoregressive Distributed Lag (ARDL). The study, entitled "Environmental Kuznets curve in Indonesia, the role of energy consumption and foreign trade" proves that it does not support the existence of the EKC hypothesis in Indonesia, which illustrates an inverse U relationship between income and environmental degradation. In the long run, it shows that international trade is the most significant variable influencing carbon dioxide emissions (CO<sub>2</sub>), which is then followed by energy consumption and economic growth in Indonesia. To see the stability of variables used in the model, Behnaz Saboori and Abdorreza Soleymani also examined the variables, and the results show that the variables in the estimate model are stable during the use of the sample period.

### 3. METHODOLOGY

The data used in this study is secondary data in the form of time series data from the period of 1981-2015 presented in the form of annual data.<sup>[Memo4]</sup> The main object used in this study is the country of Thailand. The data used in this research are sourced from several sources, including World Bank, BP Statistic, Global Carbon Atlas, EIA and also other data sources supporting this research. The determination of the time span of the study is based on important events occurring in that timeframe, namely the global financial crisis that occurred in 1997-1998 and 2008 which affected almost all economic activities of countries around the world, including Thailand. Variables in this research are carbon dioxide emissions (metric ton) international trade (percent), Foreign Direct Investment (percent), energy consumption (million tons), and Gross Domestic Product (percent). This research uses Vector Autoregression (VAR) method.

The basic model adopted from the research of Kazman and Duman (2014) is as follows:

The above equation is transformed into econometric model; the research becomes:

where :

CO <sub>2</sub>	= Carbon dioxide emissions	GDP	= <i>Gross Domestic Product</i>
TRD	= International trade	<i>t</i>	= Time Period
FDI	= <i>Foreign Direc Investment</i>	$\varepsilon$	= <i>Error Term</i>
EC	= Energy Consumption		

#### 4. EMPIRICAL RESULTS

This study aims to identify the influence of international trade (%), Foreign Direct Investment (%), energy consumption (million tons), and Gross Domestic Product (%) on environmental degradation rate which will be proxied by the level of carbon dioxide emissions (metric tons) in Thailand from the periode 1981 to 2015. The method of analysis used in this research is V  
ector Autoreggretion (VAR) method by using time series data.

##### 4.1 *Unit Root Test*

The stationarity test of the data was done in the research to see the kestality of data of each variable used to avoid spurious regression. Test stationarity of data in this study employed the ADF test (*Augmented Dickey - Fuller* test). Stationary data are data that have a probability value smaller than the value of  $\alpha$  and vice versa. The  $\alpha$  values used in this study were 1%, 5%, and 10%. The results of the stationarity test of the data in Table 1 show that the data used in this

study are generally not stationary at the level level. [Memo5] In order for all variables to be stationary at the same level, it is necessary to decrease at the 1<sup>st</sup> difference level. At the stage of stationarity testing at the 1st level, the result difference shows that all variables are carbon dioxide (CO<sub>2</sub>), international trade (TRD), Foreign Direct Investment (FDI), energy consumption (EC), and Gross Domestic Product (GDP) in Thailand stationary at the level 1<sup>st</sup> difference.

#### 4.2 Cointegration Test

Cointegration test is a test conducted to determine whether or not there is a balance in the long term in the time series data used in the study by comparing the value of *Trace Statistic* with *Critical Value*. Cointegration test in this research was used by using *Johansen-Cointegration* test. The data can be said to achieve cointegration [Memo6] if *Trace Statistic* value is greater than a *Critical Value*.

Table 1. Cointegration Test Results

Level	<i>T-statistic</i>	<i>Critical Value</i>	Cointegration
1%	83.90466	77.81884	Yes
5%	83.90466	65.81970	Yes
10%	83.90466	69.81889	Yes

The result of cointegration test presented in Table 1 states that in this research, cointegration occurred at the level of 1%, 5%, and 10% in all variables in Thailand. This shows that in Thailand, there is long-term relationships among the research variables. [Memo7]

#### 4.3 Optimum Lag

Optimum lag test is a test conducted to determine the optimum lag so that a good model of Vector Autoregression (VAR) in the research model can be obtained. The function of lag use in

the research is to identify the length of period of *ketpengaruhannya* [Memo8] between variables. In this research, optimum lag determination employed AIC (*Akaike Information Criterion*) value because AIC can give additional variable hose [Memo9] to be able to decrease degree of freedom so that in VAR model, with minimum AIC value, optimal hose will be found on specification of built model. Based on the minimum AIC value approach, it is known that Thailand has a minimum lag of 1 with a value of 6.319260. Then, the lag to be used in the VAR model is lag 1.

#### *4.4 Granger Causality Test*

Testing in granger causality was done to find out whether or not the variables have reciprocal relationship in the same direction or two directions. In this study, a variable can be said to have a causality relationship if the probability value is smaller than  $\alpha$  of 0.05, but if the probability value is greater than the value of  $\alpha$ , then there is no relationship between variables in the study. Based on the results of the Granger causality test in Thailand, using lag 1, there are eight relationships between variables, namely the variable of carbon dioxide with international trade variable, carbon dioxide variable with FDI, carbon dioxide variable with energy consumption, international trade variable with FDI, variable of energy consumption with international trade, energy consumption variable with FDI, GDP variable with FDI, and variable of GDP with energy consumption.

#### *4.5 Estimation Model Vector Autoregressive (VAR)*

After going through several stages in VAR testing and the optimum lag of the research model had been known, the estimation results from the Vector Autoregression model (VAR) can be seen. The results of the VAR empirical model will be presented. The determination of the significant level of VAR model in this study is reflected by the probability value less than the va

lue of  $\alpha = 5\%$ . The VAR model which will be presented is only the model of carbon dioxide emissions (CO2) in Thailand, while other models are not written down. [Memo10]

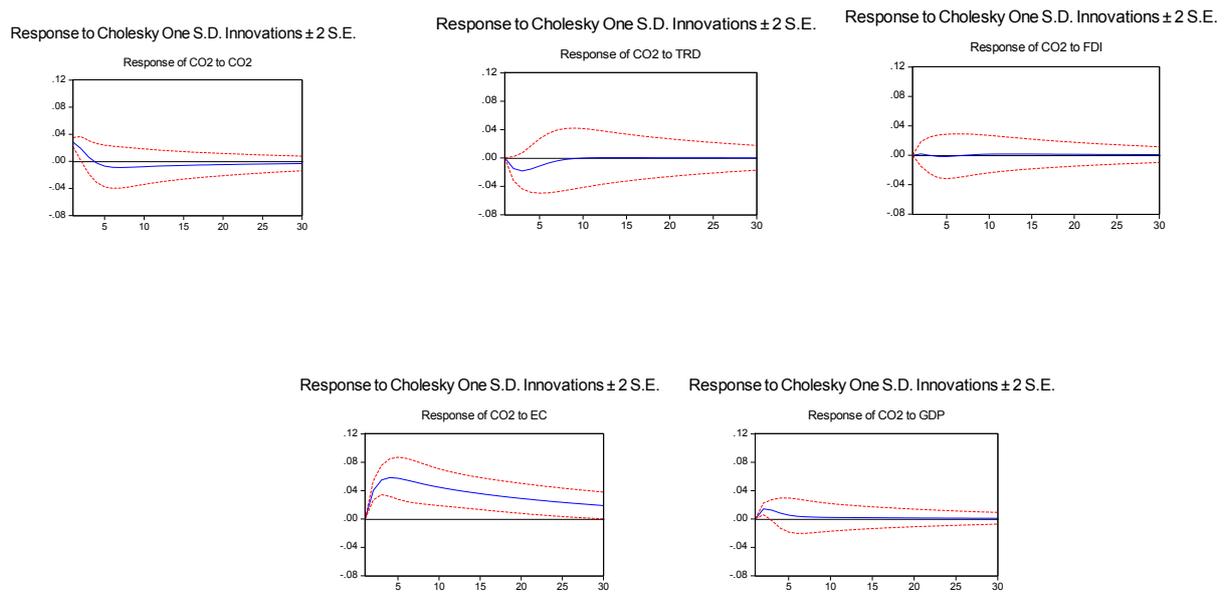
$$\begin{aligned}
 \text{CO2}_t = & 0.40773 + 0.533852\text{CO2}_{t-1} - 0.002116\text{TRD}_{t-1} + 0.002304\text{FDI}_{t-1} + 0.53855\text{EC}_{t-1} \\
 & [0.0276] \quad [0.0001] \quad [0.0003] \quad [0.6161] \quad [0.0000] \\
 & + 0.007218\text{GDP}_{t-1} + \\
 & [0.0002]
 \end{aligned}$$

From the VAR estimation result, it is found that international trade variable has an influence with negative direction toward carbon dioxide emission. Then, the carbon dioxide emissions, energy consumption, and GDP also showed significant results on CO2 emissions but with a positive direction in 1981-2015. The FDI variable does not show any effect on carbon dioxide emission. It is known based on probability value of FDI variable which has a value of more than  $\alpha = 5\%$ .

#### 4.6 Impulse Response Functions (IRF) and Variance Decomposition (VD)

IRF is used in this research to know the shock that can affect other variables. Then, it will be followed by testing *Variance Decomposition* (VD) to determine the magnitude of influence on each variable. In this case, IRF testing is supported by VD testing, where IRF testing only describes the shock through a graph which will be supported by the VD test to know the magnitude of the effect. Here are the results of IRF and VD testing in Thailand, showing various responses to the effects of shock or shock from the variables used in this study.

Figure 2. IRF Test Results



The IRF test results indicate that the variable of energy consumption is the variable that has the greatest shock to carbon dioxide emissions. Figure 1 shows that it takes a long time to stabilize the carbon dioxide emissions associated with shocks that occur in energy consumption. This is also shown by the results of the VD test which indicates that the energy consumption variable in the 30<sup>th</sup> period of 91.82108 percent in Thailand is the variable that contributed the highest to the carbon dioxide emission level in 1981-2015.

#### 4.7 The effect of International Trade, Foreign Direct Investment (FDI), Energy Consumption, and Gross Domestic Product (GDP) on Carbon Dioxide Emissions in Thailand with VAR

VAR method performed in Thailand in 1981-2015 show that international trade variable has a significant influence on carbon dioxide emissions in a negative direction. An increase of international trade will reduce the amount of carbon dioxide emissions. This is in line with the research of Antweiler, et al (2001) conducted in 44 countries using panel data analysis, indicating that international trade will decrease carbon dioxide emissions. Improvement in international trade also means an increase in the scale of production of a company within a country. An increase in international trade will make a company increase the amount of its production to

meet the demand in the international trade. Conditions like this will encourage the company to use advanced technology that is energy efficient and environmentally friendly. So, the increase in international trade will reduce the level of environmental degradation, especially carbon dioxide emissions. Then, on the energy consumption variables, GDP also shows a significant effect on carbon dioxide emissions but with a positive direction. This means that an increase in energy consumption and GDP in Thailand will affect the increase in carbon dioxide emissions. This result is in line with research conducted by Ramping and Smyth (2010) which shows that energy consumption and GDP have a positive relationship with carbon dioxide emissions in 5 ASEAN countries, including Indonesia, Malaysia, Philippines, Singapore and Thailand during the period of 1980-2006 using data VAR panel.

Energy has an important role in the life of the world community, including in Thailand. The use of energy in industrial and household activities makes it easy for the community to support their activities. In addition, energy consumption in productivity activities will also encourage economic growth in a country. So, this will encourage a country to increase its energy consumption. Consequently, an increase in energy consumption will have an impact on the increase in carbon dioxide emissions that causes global warming effects (Nuryanto and Rifai, 2017). It is said that extraction and burning that occur in the energy of fossil fuels can produce carbon dioxide gas in the earth's atmosphere. This condition is in line with the results of research conducted by Haliciouglu (2008) and Chibueze, et al (2013), suggesting that energy consumption is one of the largest factors that contributes to the generation of carbon dioxide gas in the Earth's atmosphere that causes global warming.

Economic growth and energy consumption are interrelated variables. An increase in energy consumption can lead to an increase in economic growth through productivity within a country. According to Kuznet (1970) in Jhingan (2002), economic growth is a process of increasing

production capacity undertaken by a country in order to improve the fulfillment of the needs of its people. To improve the fulfillment of the needs of the community, a country will increase the amount of energy consumption to support production activities in the country. This is what causes environmental degradation, especially carbon dioxide emissions when there is a rise in economic growth and energy consumption in a country. This condition is in line with Kuznets Curve's Environmental theory that explains the relationship between economic growth and the level of environmental degradation of a country. The low economic growth in the first stage will encourage a country to increase its economic growth through various economic activities regardless of the quality of the environment. So, the results of economic growth in a country will be followed by the level of environmental degradation. Meanwhile, the FDI variable does not show any positive or negative effects on carbon dioxide emissions in Thailand. This is known based on the probability value of FDI variable, which is more than  $\alpha = 5\%$ .

#### *4.8 Policy Implications*

The increasing carbon dioxide emissions in Thailand encourage the efforts to reduce the emissions. In this regard, the Government of Thailand has targeted to cut carbon dioxide emissions by 20% by 2030 and make policies related to the use of renewable energy. The policy is the Alternative Energy Development Plan 2008-2022 which aims to achieve 30% share of renewable energy in total final energy consumption in 2036, the government formed a strategy, that is by promoting environmentally friendly technology with the use of alternative energy such as biofuel, biomass, and biogas. In addition, the Thailand government also made a policy on the Energy Efficiency Development Plan (EEDP) 2011-2030. Under the policy, the Thailand government sets short and long-term energy conservation targets at both national and regional levels in all sectors in Thailand. For the industrial sector, EEDP implementation is conducted by the Thailand government with a strategy focusing on R & D to improve energy efficiency

of production processes using renewable alternative energy technologies, providing support for all industrial energy efficiency activities listed in EEDP, and creating cooperation between public and private sectors, as well as educational / research institutions in energy efficiency development efforts in Thailand.

## 5. CONCLUSION

Based on the results of data analysis using the Vector Autoregression (VAR) method to determine the effect of international trade, Foreign Direct Investment (FDI), energy consumption, and Gross Domestic Product (GDP) on carbon dioxide emissions in Thailand in 1981-2015, it is found that carbon dioxide emissions in Thailand are affected by international trade with a negative direction. In addition, carbon dioxide emissions in Thailand are also significantly influenced by energy consumption variables, and GDP but with a positive direction. This is reflected by a probability value less than the value of  $\alpha = 5\%$  of energy consumption and GDP.

## REFERENCE

- Abidin, I., et al. 2015. Foreign Direct Investment, Financial Development, International Trade and Energy Consumption: Panel Data Evidence from Selected ASEAN Countries. *International Journal of Energy Economics and Policy*, 2015, 5(3), 841-850.
- Antweiler, W., Copeland, B., dan Taylor, MS. 2001. Is Free Trade Good for the Environment?. *American Economic Review*. 91(4), 877-908.
- Bagum, R., Sohag, Kazi., Abdullah, SMS., Jaafar, M. 2014. CO<sub>2</sub> emissions, energy consumption, Economic and population Growth in Malaysia. *Renewable and Sustainable Energy Reviews*. Vol. 41(2015) 594–601.
- BP. 2017. BP Statistical Review of world Energy. *British Petroleum*, London, UK.
- Chibueze, E.N., Chukwu, J.O., Moses, Nnaji. 2013. Electricity Supply, Fossil Fuel Consumption, CO<sub>2</sub> emissions and Economic Growth: Implications and Policy Options for Sustainable

- Development in Nigeria. *International Journal of Energy Economics and Policy*, 3(3), 262-271.
- Diartho, H.C. 2017. Enviromental Tax as an Instrument to Restore Coastal Pollution in Banyuwangi Regency. *American Journal of Economics*, 7(5), 240-248.
- Gujarati, Damodar N., dan Potter Dawn C. 2009. Basic Econometrica, 5th ed. *McGraw-Hill Education* (Asia).
- Halicioglu, Ferda. 2008. An econometric study of CO<sub>2</sub> emissions, energy consumption, income and foreign trade in Turkey. *Energy Policy* 37, 1156e1164.
- He, J., Richard, P. 2010. Enviromental Kuznets Curve for CO<sub>2</sub> in Canada. *Ecological Economics*, 69, 1083-1093.
- IPCC. 2007. Climate Change 2007: the Physical Science Basic. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Paris.
- Jafari, Y., Othman, J., Hassan Shaari Mohd Nor, Abu. 2012. Energy Consumption, Economic Growth and Environmental Pollutants in Indonesia. *Jurnal of Policy Modeling* 34 (2012) 879-889.
- Kazman, A., dan Duman, YS. 2014. CO<sub>2</sub> Emissions, Economic Growth, Energy Consumption, Trade and Urbanization in New EU Member and Candidate Countries: A Panel Data Analysis. *Econ Model* 2015;44:97–103.
- Khalid, A., dan Muhammad, J. 2013. Energy Consumption, Carbon Emissions and Economic Growth in Saudi Arabia: an Aggregate and Disaggregate Analysis. *Energy Policy*. 62, 1525-1532.
- Lean, Hooi Hooi., dan Symth, Russell. 2010. CO<sub>2</sub> Emissions, Electricity Consumption and Output in ASEAN. *Applied Energy*, 87, 1858-1864.
- Lin, Boqiang., dan Sun, Chuanwang. 2009. Evaluating Carbon Dioxide Emissions in Internati

- onal Trade of China. China Center for Energy Economics Reserce, Xiamen Univercity. *ELS EVIER journal Energy Policy* 38 (2010) 613-621.
- Liu, Y., Zhou, X., Yang, JH., Hoepner, A. 2016. Corporate Carbon Emission and Financial Performance: Does Carbon Disclosure Mediate the Relationship in the UK?. *ICMA Centre: ICMA-2016-03*.
- Luthfi, A., Maryunani, M., Saleh, M., dan Dirtho, H.C. 2018. Analysis of Sustainable Groundwater Resources Management in Jember District (Study in Sumberjati Village, Silo Sub-District).
- Luthfi, A., Saleh, M., Maryunani, M., dan Diartho, H.C. 2017. Ability to Pay and Willingness to Pay Analisis of Clean Water Needs From Dusun Sepuran, Jember Regency. *Journal of Indonesian Applied Economics*, 7(2), 190-200.
- Nuryanto, Nunung., dan Rifai, Muhamad Amin. 2017. Analysis of Causality between Economic Growth, Energy Consumption and Carbon Dioxide Emissions in 4 ASEAN Countries. *International Journal of Energy Economics and Policy*,7(6), 141-152.
- Saboori, Behnaz, dan Solaemany, A. 2011. Environmental Kuznets Curve in Indonesia, the Role of Energy Consumption and Foreign Trade. *Munich Person RePEc Archive (MPRA) Paper No. 3153*.
- Saboori, Behnaz., dan Sulaiman, Jamalludin. 2012. CO<sub>2</sub> Emissions, Energy Consumption and Economic Growth in Assosiation of South East Asian Nations (ASEAN) Countries: A Cointegration Approach. Economic Programme, School of Social Sciences, Universiti Sains Malaysia, 11800 USM Penang, Malaysia. *Energy* 55 (2013) 813e822.
- Sahraie, Melodoe. 2011. The ASEAN Action on Climate Change: Recognizing or Pro Active ly Addressing the Issue?. *IDLO Sustainable Development Law on Climate Change Working Paper Series 2011*.
- Salim, R., Rafiq, S., Hassan, K. 2008. Causality and Dynamics of Energy Consumption and

Output: Evidence from non-EOCD Asian Countries. *Journal Economic Development*. 33, 1-26.

Shahbaz, Muhammad., Hye, QMA., Tiwary, AK. 2011. Economic Growth, Energy Consumption, Financial Development, International Trade and CO<sub>2</sub> Emissions in Indonesia. *ScienDirect - Renewable and Sustainable Energy Reviews* 25 (2013) 109-121.

Shahzad, S., Rehman, MU., Hurr, Maryam., Zakaria, M. 2014. DO Economic and Financial Development Increase Carbon Emission in Pakistan: Ampirical Analysisi Through ARDL Cointegration and VECM Causality. *Munich Person RePEc Archive (MPRA) Paper* No. 60310.

Zhu, Huiming., Duan, Lijun., Guo, Yawei., Yu, Kening. 2016. The Effects of FDI, Economic Growth and Energy Consumption on Carbon Emissions in ASEAN-5: Evidence from Panel Quantile Regression. *Economic Modelling* 58 (2016) 237–248.

## **SOCIAL CAPITAL ROLES IN MAINTAINING INVESTMENT SUSTAINABILITY IN LUMAJANG REGENCY**

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### **ABSTRACT**

This study aims to uncover the role of social capital in maintaining investment sustainability in Lumajang Regency. The findings of this research indicate that social capital is important for the sustainability of investment in Lumajang Regency. Norms, trust, networks and information equally play important roles. Religious norms and family values become an important basis sustaining the continuity of investment in Lumajang Regency. Trusting each other is an effective social bond. Networks and information facilitate investors' access to the process of business production. The findings of this research can be used by existing investors to consider social capital as a way of how they can sustain their business with profitable investment in Lumajang Regency. The research is original in that it is the only study in Lumajang Regency that analyzes other variables impacting investment sustainability.

**Keywords :** Social capital, Investor, Lumajang Regency

### **INTRODUCTION**

High crime rate is one of the causes of weakening investment rate in Lumajang regency. In 2015, Lumajang District investment figures amounted to 5.60 to 5.40 in 2016. With regard to this condition, the regional government has made some efforts. However, a high number of criminal cases still occur, such as robbery, rape, and murder. One example of what has now become a national case is the one known as the *Salim Kancil* case - a victim of a raid and murder case by a pro-mining group in Selok Awar-Awar Lumajang District. As reported by local news agencies, such as Lumajang Online (lumajangsatu.com), criminal cases often happen in the area. For example, in August 2016, there was a robbery in the house of the village secretary of Denok. In September 2016, a floating body was found in the former sand dump in Dusun Gempar. This is also reinforced the statement of Subardi Wijaya, an informant from Wonogriyo District, which is one of vulnerable areas. He stated:

(“...*disini termasuk daerah rawan mbak*” )

... this is a dangerous area ". (source: interview Subardi Wijaya, 2016).

This is in line with the statement of the other informant, Yuli Harismati, SP:

(“...*investor masuk itu kan syaratnya dua. Keamanan dan kenyamanan*” )

"... investment require two aspects, which are security and conduciveness"(Source: interview Yuli Harismati, 2016)

This poor security condition also becomes a difficult consideration for investors to come and start their economic activities in Lumajang Regency because the criminal cases result in costs incurred by the victims, such as the cost of security, the value of property lost, the cost of treatment for accidents, the opportunity cost of work time and reduced life value. So, the costs incurred by the company is also higher and production becomes more expensive, causing losses due to decreased demands for products and more expensive products. However, when macroeconomic conditions are not able to support the sustainability of investment, non-economic factors such as social capital can be useful to help sustain the production of investors. Therefore, this research addresses the role of social capital for the sustainability of investment in Lumajang Regency.

## **LITERATURE REVIEW**

### **Investment Understanding**

One of key factors that affects investment, according to Kane and Marcus (2006), is the interest rate. The level of investment will be high if interest rates are low, and *vice versa*. Increasing future economic activity is one factor that investors consider when investing. Furthermore, as Jhingan (1996) argues, technological advances can help investors obtain capital and time efficiency. So, the more sophisticated the technology is, the higher profit will be obtained.

### **Social Capital Understanding**

The dimension of social capital of social relations and social network structures within a society creates a wide range of social obligations; it creates a climate of trust, carries channels of information, and establishes norms, as well as social sanctions for members of the community (Coleman, 1999) . Nevertheless Fukuyama (1995, 2000) states that norms and values do not necessarily share reference attitude, act, and behavior. It automatically becomes social capital. However, shared norms and values are generated by trust. Trust comes from expectations of regularity, honesty, and cooperative behavior arising from a community community based on the norms adopted. The existing cooperation in social capital forms an organization in which its members voluntarily give up some of their individual rights to work together to achieve a goal based on agreed rules.

The agreement encourages individuals to carry out their obligations. This is called mutual trust, because everyone is trying to carry out a mandate. If group members expect other members to behave honestly and reliably, they will trust each other. Trust makes an organization more efficient and more efficient. Social capital is created when relationships between people undergo changes in a way that facilitates actions. Social capital has no form, but it is manifested in relationships among people (Coleman, 2008: 373 in Yustika 2013: 140). According to Lin (2001: 19-20) in Yustika (2010: 184), information is a form of social capital that provides benefits due to its strategic position. It helps the information owners reduce transaction costs in economic activities. Information is important to underlie an action, but the acquisition of harmful information. The tool that can be used to obtain information is social relations for specific purposes (Coleman, 2008: 380).

Some reference values and elements underlying social capital include: participatory attitudes, attitudes of mutual care, mutual giving and receiving, mutual trust trust and reinforced by the values and norms that support it. Another element that plays an important role is the willingness of the community to be pro-active continuously in maintaining value, forming a network of cooperation with regard to the creation of new creations and ideas. This is the true identity of social capital. Social capital can influence economic, social and cultural life if not immediately resolved. In terms of social status, wealth sometimes

can lead to individualism, causing a conflict between individuals who culminate in networks that are not good. Information is not given voluntarily, but rather in business. It then decreases the values in the community. People who are under business pressure, if they cannot survive, they will disappear and switch to other professions that are considered easier to live. If it happens to cultural or cultural preservation, fewer societies will preserve culture and gradually extinct. So, a strong social capital between communities is needed to bind good relations between them, so that people can achieve the same goal.

## **RESEARCH METHOD**

This qualitative research employed the phenomenology approach using triangulation method. The types of data used in this study include primary and secondary data. The data collection methods used were documentation studies, interviews, and observations. The units analyzed are investors, society, and government in Lumajang regency.

## **FINDINGS AND DISCUSSION**

### **Norm**

As the leader of Lumajang Regency, Mr. As'at tried to convey his people's aspirations regarding the boundaries of norms in terms of religious matters. Actually, investing in Lumajang Regency is not difficult as long as investors are able to comply with the prevailing values and norms. The enforcement of moral sanctions is part of the control for the community. The good impact of the sanctions on values and norms is the creation of a harmonious society. The harmonious society can minimize conflicts and create a comfortable environment. It is also safe for investors. On the other hand, religious values and norms, especially the religion of Islam, also make people respect each other.

The few community members that give criticisms or the occurrence of social conflicts due to the informant's business, caused by respect to the informants because the informant is a religious figure in his area. The position as a religious leader, the teacher of the Koran, makes the bargaining position of M Iqbal becomes strong at the community level. Based on Sumiyati's statement, it can be concluded that the criticism or protest on M Iqbal's business is not absent altogether. The community does not criticize the informant because the informant is a religious figure and members of the society respects him. The moral penalty for the community is heavier when compared to the criminal sanction. This is because an individual will always live in the society, also acceptable to the community. For example, a person who gets a criminal sanction, but the community can accept the return of the person, then the person can return in the community. It is different when someone violates social sanctions that are unacceptable, it is difficult for the person to return to the social environment. In order to avoid the moral sanctions of the community, Mr. Subardi explained that he could not impose company rules on his employees when there was a "*slametan*" even though the company needed them. This means that everyone must comply with the values and norms of the community. In addition to maintaining the harmony, it is also for avoiding social sanctions.

The government has simplified the process of investment licensing. However, investors must comply with the rules in the community of Lumajang. If not, then the investor will face difficulties in doing their activities. As Nimin mentioned, investors who come from outside Lumajang District will experience difficulties in entering the investment area of Lumajang. Good image (corporate and personal image) is one of key investments that has a long life. Due to the presence of a good image, the community will indirectly support the existence of investment in the area although it gives adverse impact on them. Once the importance of an image, a good image can make people do not express discomfort to Nimin. Kinship is also a very strong value in Lumajang Society. This family value creates a mutual community. For example, when there is a dead cow, people will help bury it.

The role of social values, according to Huky (1982: 46) in Prambudi (2010: 16), among others, is as a tool of solidarity to encourage people to work together to achieve something that cannot be achieved alone. The family values reflected in this *gotong royong* behavior do not only help improve the production of a business, but they also help reduce the company's production cost. It is not surprising that Mr. Subardi, who comes from Chinese ethnicity, applied kinship system in his company to cooperate with people coming from ethnics of Java and Madura.

In addition to helping out and good cooperation, togetherness also has an important role. This form of kinship, such as helping and cooperation, also helps investors reduce production costs such as paying security personnel and conducting motivational training for their workers. These very strong family values support good investment. Mutual benefit, mutual respect, tolerance and help are factors that have an important role in maintaining the prosperity and sustainability of investment in Lumajang District.

## **Trust**

Humans are social beings who cannot live alone. The roles of other social beings are needed. The more a person knows other persons - both in terms of proximity and the number of friends - then the social relationship that exists will be more widespread. Trust will arise in the society through social capital. Trust is an element of social capital that can impact not only on kinship relationships, but also on the financial aspect. For example, when trust has been established between A and B, when A needs B to keep a secret, then B will do his job well, and vice versa. Then, A and B can share personal stories. In terms of financial aspect, for example, when A will open a business and face a lack of capital, because B believe that A is trustworthy, then A will get additional loan from B.

One's beliefs will not be the same each other. The proximity of someone with others cannot guarantee that the trust received by others has the same portion. Proximity can determine how much trust will be given to others. According Fukuyama in Mawardi (2007: 7-8), belief is the hope that grows in a society which is shown by the existence of honest, organized, and cooperative behavior based on shared norms. In addition to a high level of trust in the society, the rules of society are positive, and relationships are cooperative. The statement is in accordance with the statement of three informants as below, that trust is able to build a mutually beneficial relationship in a society. Cooperation is an activity done jointly. It cannot run well if there is no trust from individuals.

Fukuyama (2002) who examined social capital and trust in complex economic societies mentioned that trust is beneficial to the creation of a superior economic order, as it can be relied on to reduce costs. If people have put trust in someone, then a sense of loyalty or loyalty to the company is also created. In this case, people not only believe in the economic opportunities they will get, but also believe that investors will directly benefit them materially and not-materially (eg in the form of good treatment).

Trusting others is a capital with the advantage of winning the trust of others. As informed by Subardi Wijaya, one informant, the company where he sells tobacco gives concession requirements such as standards and tobacco criteria because the company believes in the ability of informants in maintaining the quality of tobacco. Further, Subardi Wijaya also believes that the company performs the calculations correctly.

## **Network**

The role of values and norms and trust as social capital has shown its role towards community empowerment of Padang Tegal. The society depends not only on values and norms, but on trust alone. Networking is an aspect of individual aides to establish relationships so as to live in the society and establish cooperation relationships. According to Hasbullah (2006) in Inayah (2012: 44-45), participation in a network is the ability of a group of people in the association and then involve themselves in a network of social relations. Networking can help someone in the field of work; social capital is an important point in addition to trust in order to gain financial benefits. The broader network of a person can facilitate the person in getting help. One informant, Nimin, started his business by getting guidance from others so that the informant is able to run the business well. Network relationship according to Fauzan (2012: 190) is the amount and form of cooperation which then raises the hope, which then will be an exchange of knowledge and other things. Network configuration describes how to build cooperation with who is the initiator. The organizations involved are organizations or actors who participate in the network. The bonds created in a network can have a beneficial effect in terms of material.

Large networks can have a beneficial impact even in the unexpected or in times of emergency, that is the functionality of the Network itself. When the financial aspect is insufficient, then this social capital can be used to achieve the goal. Relationships or friends are many and not only in one group but also in other groups and regions; this can be a very helpful network. Networks can minimize budget expenditure, also help achieve goals because of networking functions that rely on kinship relationships. So when you need help, it will make it easier to get what is needed.

## **Information**

Information is an advantage that can be an important capital in social life. Socialization is established within the community into information traffic. The values and norms that bind the community to coexistence result in the emergence of a sense of trust to each individual so that the community is bound in a network with a community full of information that can be a new science or knowledge in order to develop themselves for the better. Community empowerment is a joint task, not only government services but also the community itself. Without community support, the government's efforts might fail. According to Sayogyo (1999: 6) in Mawardi (2007: 10-11), one of the conditions that must be met to stimulate the birth of a community movement that originates in the local community is a top-down approach that is replaced by bottom-up. Communities that were initially inactive in government activities, with the bottom-up system of society are the subject and the main actors in development activities. So, the community can accept the failure and success of the program because the community is also doing exploratory problems and needs, planning, implementation, as well as supervision.

Top-down is used by the government to run programs for the community, but the public gets the opportunity to express opinions, plans, information that can support the public needs. The system is bottom-up. In addition, based on information from the informant, Subardi Wijaya, the information also makes it easier for him to find out who his cheating tobacco farmers. This information comes from mouth to mouth even though the distance is far away. Communication is an important step to do in order to avoid asymmetric information between investors and the public. The presence of asymmetric information will cause unhealthy turmoil in the community. Thus, there needs to be a good exchange of information so that investors and communities have the same understanding and perception of something that will help harmonize their relationship.

## CONCLUSION

In general, the level of investment is influenced by interest rates, technology, and increased economic activity. However, when these factors are not able to support unstable investment conditions, there is another factor that is rarely noticed in the world of investment, that is social capital. Norms, trusts, networks and information have an equally important role. Religious norms and family values have the power to be an important base in sustaining the continued investment in Lumajang District. Mutual believes can be used as a social bond capable of minimizing transaction and production costs. Network and information facilitate the access of investors in carrying out their investment activities in Lumajang District.

## REFERENCES

- Bodie, Z. A. K. d. A. J. M. (2006). *Investasi*. Jakarta: Salemba Empat.
- Bourdieu, P. (2011). The forms of capital.(1986). *Cultural theory: An anthology, 1*.
- Coleman, J. S. (2008). Dasar-dasar teori sosial. *Bandung: Nusa Media.*(Translated from James S. Coleman. *Foundation of Social Theory. The Belknap Press of Harvard University Press. 1994.*).
- Dasgupta, P. (2001). *Social capital and economic performance: Analytics*: Beijer international institute of ecological economics.
- De Geus, A. (1997). The living company: habits for survival in a turbulent environment. *London: Nicholas Brealey*.
- Deliarnov. (1995). *Pengantar Ekonomi Makro*. Jakarta: UI Press.
- Inayah. (2012). Peranan Modal Sosial dalam Pembangunan. *Ragam Jurnal Pembangunan Humaniora, 12 No.1*.
- Jhingan, M. (1999). *Ekonomi pembangunan dan perencanaan*: Jakarta: Raja Grafindo Persada.
- Lincolin, A. (1999). *Ekonomi Pembangunan*. Yogyakarta: STIE YKPN.
- Mankiew, N. G. (2006). *Makroekonomi*. Jakarta: Erlangga.
- Moleong, L. J. (2006). *Metodologi Penelitian Kualitatif Edisi Revisi*, Cetakan kedua puluh dua, Bandung: PT.Remaja Rosdakarya Offset.
- Nurkse, R. (1996). *Masalah pembentukan modal di negara-negara yang sedang membangun*. Jakarta: Bharata.
- Putnam, R. D. (1993). The prosperous community. *The american prospect, 4*(13), 35-42.
- Sachs, J. (2005). *The end of poverty* (Vol. 59): New York: Penguin.
- Sugiyono. (2008). *Metode Penelitian Kuanitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Sukirno, S. (2000). *Pengantar Ekonomi Makro*. Jakarta: Raja Grafindo Persada.
- Yustika, A. E. (2006). *Ekonomi Kelembagaan: Definisi, Teori, dan Strategi*. Malang: Bayumedia Publishing.

**DETERMINANT VARIABLE TOWARD LEVEL OF DONOR TRUST  
AND AMOUNT OF INFAQ PAYMENT  
(EMPIRICAL STUDY AT FOUNDATION OF SOCIAL FUND IN JEMBER-  
INDONESIA)**

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**ABSTRACT**

This research aims to know the variables determining level of donors trust and amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. Type of the research is explanatory research that explain the impact independent variable to dependent variable through hypothesis test. A method of data analysis in this study uses Partial Least Square approach (PLS). The research result showed that (a) Accountability has no significant negative effect on the amount of infaq payment; (b) Transparency has a significant positive effect on the amount of infaq payments; (c) Quality of service has a significant positive effect on the amount of payment infaq; (d) Institution image has positive effect not significant to infaq payment amount; (e) Accountability has no significant positive effect on donor trust level ; (f) Transparency has no significant positive effect on donor trust level; (g) Quality of service has a significant positive effect on donor trust level; (h) Institutional image has a significant positive effect on donor trust level; (i) The level of trust has no significant negative effect on the amount of infaq payments. Based on the findings, researcher recommend that managements of foundation of social fund should improve transparency, accountability, quality of service, image of the institution and level of donors trust to increase a performance of infaq collecting activities.

**Keyword:** Infaq, Trust, Accountability, Transparency, Quality of Service, Image

**Background**

Equity of income in Indonesia is of particular concern to the government. The high level of income inequality makes some Indonesian people still cannot feel the full prosperity. In addition, the high level of income inequality also leads to an increase in the number of two groups, i.e. those who can easily meet their needs (the rich) and those who find it difficult to meet the needs of their lives (the poor). Based on data from the Central Bureau of Statistics (BPS) March 2017, the number of poor people (population with per capita expenditure per month below the Poverty Line) in Indonesia reached 27.77 million people (10.64 percent), increased by 6.90 thousand compared to the condition of September 2016 which amounted to 27.76 million people (10.70 percent).

Efforts to reduce poverty are one way is to optimize the amount of infaq payment to be provided by the donorS. Infaq is one of the most highly recommended worship services for every Muslim. In fact, the command to give infaq is also described in the Qur'an, one of which is described in Surah Al-Baqarah verse 195. Infaq itself is defined as an asset issued by a person or business entity outside of zakah for general benefit (Law No. 23 of 2011 ). For example infaq funds used for the construction of mosques, compensation orphans, disaster relief, and others. For the country, infaq can help create better revenue distribution.

Related to the effort to optimize the amount of infaq payment from donors, there are five things that must be paid attention by social fund management organization. First, there needs to be an analysis related to the application of accountability principle in a zakah management organization. Second, is an analysis related to the application of the principle of transparency in an organization managing zakah. Third, is an analysis related to the quality of services provided by the zakah management organization. Fourth, is an analysis related to the image of the institution. Fifth, it is related to the level of trust the donor should be grown by the zakah management organization.

Zakah management organizations are required to apply the principle of accountability in managing infaq funds from donors. Accountability is a form of accountability of zakah managing organization to its donors. The research conducted by Judge (2014) proves that accountability has a significant effect on interest of payer of zakah at Rumah Zakah in Semarang Indonesia. However, this is not in accordance with research conducted by Rahayu (2015) which proves that accountability does not affect the motivation payer of zakah pay zakah to the Institution of zakah management.

Zakah management organizations are required to apply the principle of transparency in managing infaq funds from donors. Transparency is the openness of zakah management organizations in delivering information to the public / donors. This is supported by research conducted by Judge (2014), which proves that transparency has a significant effect on payer of zakah interest at Rumah Zakah in Semarang Indonesia.

Zakah management organizations are required to provide quality services that can provide satisfaction for donors. Thus, this can encourage interest in payer of zakah pay infaq and ultimately this will also affect the amount of payment infaq from donors. This is supported by research conducted by Rendi (2017) which proves that the quality of service significantly influence people's desire to pay infaq at LAZNAS in Palembang Indonesia. However, this is not in accordance with research conducted by Kurniati (2015) which proves that the service has no effect on the interests of payer of zakah paying zakah, infaq and shadaqah at LAZISMU in Pekajangan Indonesia.

To optimize the amount of infaq payments from donors, zakah management organizations must have a good institutional image in the eyes of the community and donors. This is supported by research conducted by Insani (2017) to prove that the institution image has a significant positive effect on the interest of payer of zakah in distributing zakah of profession at BAZNAS in Yogyakarta Indonesia. However, this is not in accordance with research conducted by Rendi (2017) which proves that the image of the institution does not affect people's desire to pay infaq at LAZNAS in Palembang Indonesia.

To optimize the amount of infaq payments from donors, zakah management organizations should be able to foster the trust of their donors. This is in accordance with research conducted by Satrio & Siswanto (2016) which proves that trust has a significant effect on the interest of the community to pay zakah in Lembaga Amil Zakah. However, this is not in accordance with research conducted by Kurniati (2015) which proves that trust has no effect people's desire to payer of zakah pay zakah, infaq and shadaqah at LAZISMU in Pekajangan Indonesia.

Based on research conducted by previous researchers, there are differences in research results related to testing factors of accountability, transparency, service quality, agency image, and the level of trust in interest payer of zakah conducted by some researchers. Based on the differences, the researcher is interested in conducting the research about determinant variable of trust rate of infaq payer and amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. Based on the background that has been described before, it can be formulated the following issues: (a) whether accountability effect on the amount of infaq payment; (b) whether transparency effect on the

amount of infaq payment; (c) whether quality of service effect on the amount of infaq payment; (d) whether institution image effect on infaq payment amount; (e) whether accountability effect on donor trust level; (f) whether transparency effect on donor trust level; (g) whether quality effect on donor trust level ; (h) whether institution image effect on donor trust level; (i) whether the level of trust effect on the amount of infaq payments.

**Literature Review**

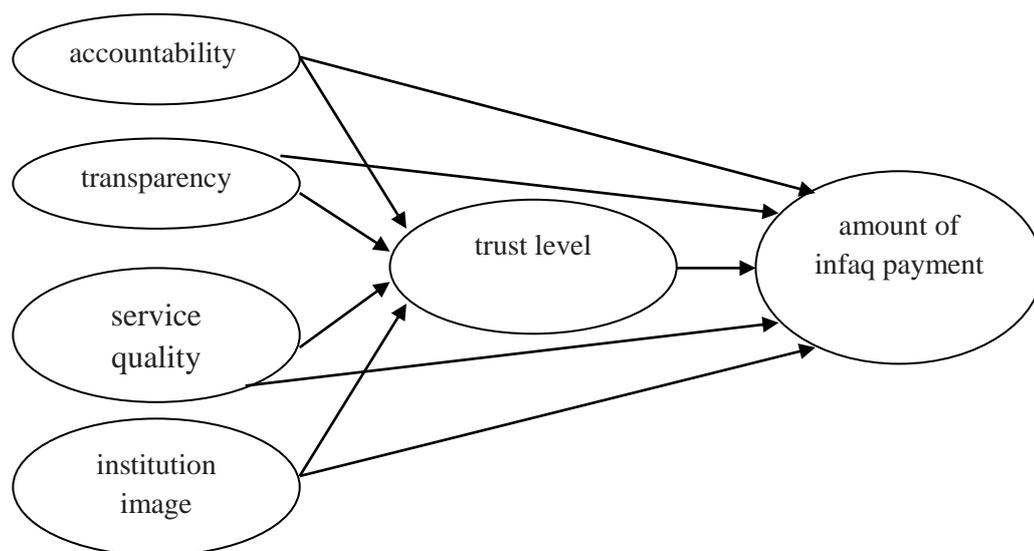
**Organization of Zakah Management in Indonesia**

The management of zakah in Indonesia is conducted by Badan Amil Zakah Nasional (BAZNAS) and Lembaga Amil Zakah (LAZ). According to Law of Zakah No. 23, 2011, BAZNAS is an institution that conducts management of zakah nationally, while LAZ is a community-formed institution that has the task of assisting the collection, distribution and utilization of zakah. BAZNAS reports the results of its written duties to the President through the Minister and to the People's Legislative Assembly of the Republic of Indonesia at least one time in one year.

BAZNAS is a zakah management organization established by the government. While the LAZ is a zakah management organization that can be formed by the community. However, in its formation of LAZ shall obtain the permission from the Minister or an official appointed by the Minister, among them LAZ shall meet the conditions among them; (a) registered as an Islamic social organization that manages education, religious lectures and social affairs; (b) in the form of a legal entity; (c) get recommendation from BAZNAS; (d) having a Shari'a supervisor; (e) have technical, administrative and financial capacity to execute its activities; (f) non-profit orientation; (g) having a program to utilize zakah, infaq and shadaqa for the welfare of the people; and (h) are willingly sharia and financials audited.

**Research Conceptual Framework**

These five variables can increase or decrease the amount of funds infaq that will be paid donors to foundation of social fund named Yayasan Dana Sosial al Falah. Based on the theoretical basis that has been described, this study aims to determine the determinant variable of donors trust level and the amount of infaq payment consisting of variables; accountability, transparency, service quality, and institution image, Here is the conceptual framework in this study:



**Figure 1. Research Conceptual Framework**

### **Research Hypothesis:**

- H1 = Accountability significant effect on the amount of infaq payment
- H2 = Transparency significant effect on the amount of infaq payment
- H3 = Quality of service significant effect on the amount of infaq payment
- H4 = Institutional image significant effect on the amount of infaq payment
- H5 = The level of trust significant effect on infaq payment
- H6 = Accountability significant effect on donor trust level
- H7 = Transparency significant effect on trust level
- H8 = Service quality significant effect on donor trust level
- H9 = Institutional image significant effect on donor trust level

### **Research Method**

This research is one form of research in the field of sharia accounting, but in this study only limited to the analysis of determinant variable of donor trust level and amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The type of research used is explanatory research that is research that aims to explain the relationship between two or more symptoms or variables. This study is also intended to test the hypotheses that have been formulated. The population in this study were all registered donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. Yayasan Dana Sosial al Falah located in Jember Indonesia selected as the object of research because the institution is one of the zakah, infaq and shadaqa management institutions that are still active and productive. In addition, this institution also not only manage zakah, but also manage infaq and shadaqa. The sampling technique used in this research is purposive sampling. Sample selection using this technique is done with the aim to obtain a representative sample based on the criteria specified. In addition, this technique is used with the aim of avoiding the occurrence of errors in the determination of samples to be used. The sample of research taken is based on the following criteria:

1. Donors of infaq are registered at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia.
2. The donor has been using at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia at least in one year. This is because donors are deemed to have known and has a relationship with Yayasan Dana Sosial al Falah.

Type of data used in this study is the primary data. Primary data in this study is the opinion / perception of donors about the discriminant variables of level of donors trust and the amount of infaq payment. Primary data source in this study was obtained from respondents at Yayasan Dana Sosial al Falah. Technique of data collecting uses questionnaire distribution. The research questionnaire was given to the donor of Yayasan Dana Sosial al Falah directly to the respondent in accordance with the address given by the Yayasan Dana Sosial al Falah. Then, the respondents filled in the questionnaire by checking the answers in the questionnaire.

This research uses Partial Least Squares (PLS) approach using SmartPLS 3.0 software. According to Ghozali & Latan (2015: 5), "Partial Least Squares (PLS) is a powerful method of analysis and is often referred to as soft modeling because it eliminates the assumptions of OLS (Ordinary Least Square) regressions, such as data must be normally distributed multivariate and no multicollinearity among exogenous variables ". According to Ghozali & Latan (2015: 11) PLS aims to help researchers get the value of latent variables for prediction purposes. Its formal model is to explicitly define linear variables linearly aggregates from

observed variables or indicators. Weight estimates for creating latent variable score components are obtained based on how the inner and outer models are specified. The result is the residual variance of the endogenous variable minimized. To find out the linear equations used in forming the variables used in the research, the following regression equations can be formed:

$$Y_1 = \alpha + \beta_{y1x1}X_1 + \beta_{y1x2}X_2 + \beta_{y1x3}X_3 + \beta_{y1x4}X_4 + e$$

$$Y_2 = \alpha + \beta_{y2y1}Y_1 + \beta_{y2x1}X_1 + \beta_{y2x2}X_2 + \beta_{y2x3}X_3 + \beta_{y2x4}X_4 + e$$

## Results And Discussion

Outer model test is used to test the indicator with its latent variables. Testing of indicators in this study was done by looking at the outer loadings (convergent validity), discriminant validity, and composite reliability. Convergent validity of outer model test can be seen from outer loadings of research model with reflective indicator showing correlation between indicator value with construct. Individual indicators are considered to be reliable if they have a correlation value above 0.70 and t-statistic significance > 1.96 .. However, in the scale scale development studies, loading 0.50 to 0.60 is still acceptable. Outer loadings results can be obtained after bootstrapping in the PLS procedure against the research model. Here is the research model after bootstrapping.

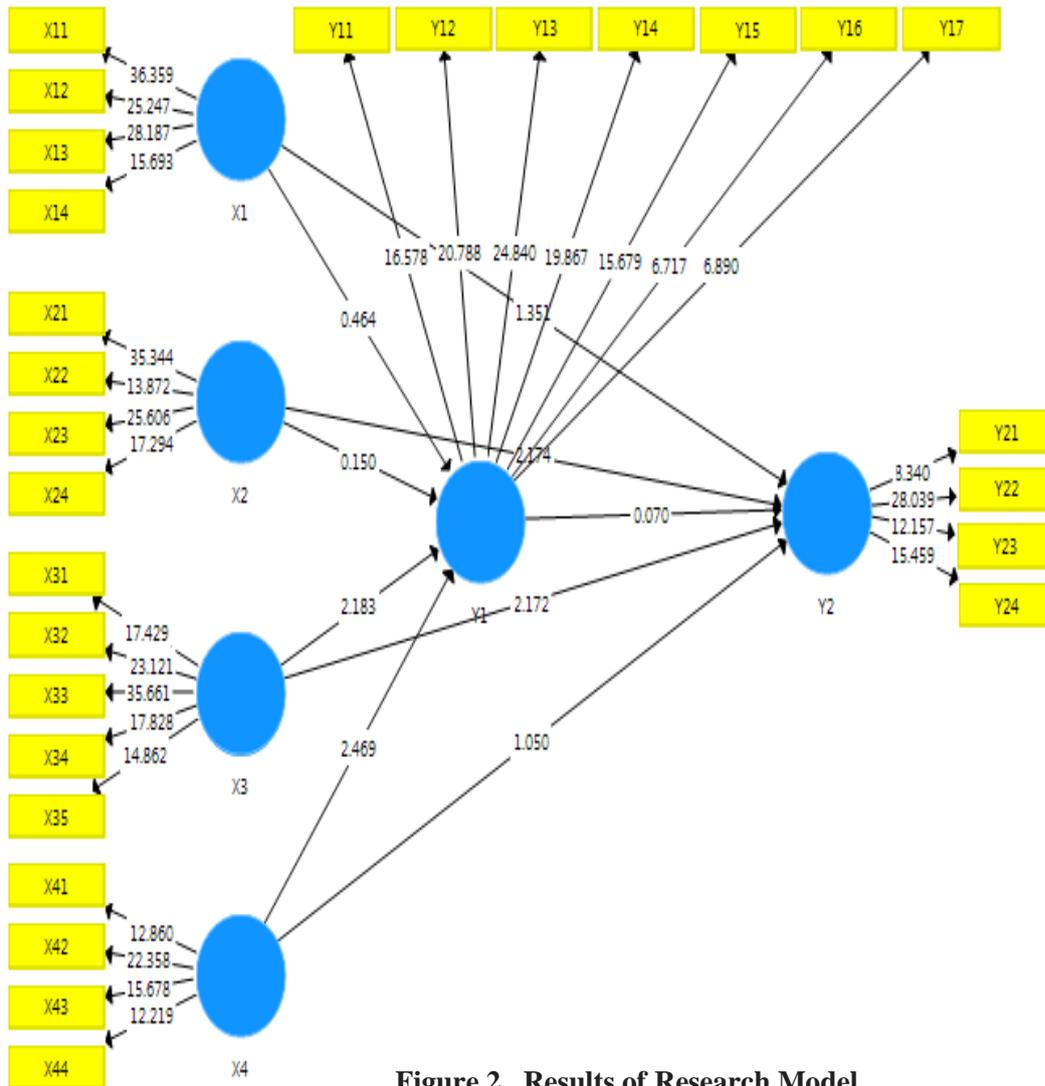


Figure 2. Results of Research Model

### Path Analysis

Path analysis shows the influence and significance between latent variables in the study. Path analysis results are seen from the magnitude of the coefficients path (path coefficients) and the t-values for predictive model significance. The result of path coefficients can be seen in table 1.

Tabel 1. Result of *Path Coefficients*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )
X1 -> Y1	0,163	0,159	0,351	0,464
X1 -> Y2	-0,360	-0,376	0,267	1,351
X2 -> Y1	0,054	0,049	0,358	0,150

<b>X2 -&gt; Y2</b>	0,573	0,574	0,264	2,174
<b>X3 -&gt; Y1</b>	0,321	0,334	0,147	2,183
<b>X3 -&gt; Y2</b>	0,346	0,368	0,159	2,172
<b>X4 -&gt; Y1</b>	0,381	0,381	0,154	2,469
<b>X4 -&gt; Y2</b>	0,210	0,205	0,200	1,050
<b>Y1 -&gt; Y2</b>	-0,014	-0,007	0,207	0,070

Based on the table path coefficients above, can be made the result of regression equation as follows:

$$Y_1 = 1,010 + 0,163X_1 + 0,054X_2 + 0,321X_3 + 0,381X_4 +$$

$$Y_2 = 1,096 - 0,360X_1 + 0,573X_2 + 0,346X_3 + 0,210X_4 - 0,014Y_1$$

Based on path analysis that has been done, obtained result that coefficient of path of accountability (X1) to amount of payment infaq (Y2) has parameter value equal to -0,360. While the value of t-statistic < t-table or 1.351 < 1.96. The first hypothesis in this study is that accountability has an effect on the amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be decided that research hypothesis 1 (H1) is rejected. This indicates that accountability has no effect on the amount of infaq payments at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study are supported by research conducted by Rahayu (2015) which proves that accountability did not affect the motivation payer of zakah to pay zakah to the Institute of Zakah. However, this is not in accordance with the research conducted by Judge (2014) which proves that accountability has a significant effect on the interest of payer of zakah to pay zakah at LAZ BMH and LAZ LMI in Bondowoso regency.

Based on path analysis that has been done, obtained result that coefficient of transparency path (X2) to infaq payment amount (Y2) has parameter value 0,573. While the value of t-statistic > t-table or 2.174 < 1.96. The second hypothesis in this study is that transparency affects on the amount of infaq payments at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so that it can be taken decision that research hypothesis 2 (H2) is accepted. This shows that transparency affects the amount of infaq payments at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study are supported by research conducted by Judge (2014) which proves that transparency has a significant effect on interest of payer of zakah to pay zakah at LAZ BMH and LAZ LMI in Bondowoso.

Based on path analysis which has been done, obtained result that coefficient of service quality line (X3) to infaq payment amount (Y2) has parameter value equal to 0,346. While the value of t-statistic > t-table or 2.172 > 1.96. The third hypothesis in this study is the quality of service affect on the amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be taken decision that research hypothesis 3 (H3) is accepted. This shows that the quality of service influences the amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study is supported by research conducted by

Rendi (2017) which proves that the quality of service affect on the public interest to pay infaq at LAZNAS DPU DT in Palembang.

Based on path analysis that has been done, obtained result that coefficient of institution image line (X4) to infaq payment amount (Y2) has parameter value equal to 0,210. While the value of t-statistic  $< t\text{-table}$  or  $1.050 < 1.96$ . The fourth hypothesis in this study is the agency image has an effect on the amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be decided that research hypothesis 4 (H4) is rejected. The results of this study is supported by research conducted by Rendi (2017) which proves that the image of the institution does not affect on the interest of the community to pay infaq at LAZNAS DPU DT in Palembang. However, this is not in accordance with research conducted by Nur'aini and Ridla (2015) which proves that the institution image has an effect on the interest of payer of zakah to distribute zakah of profession at PKPU in Yogyakarta. The mismatch of research results occurs because of the different indicators used to measure institution image variables and the amount of infaq payments or interest in paying zakah.

Based on path analysis that has been done, the result that the coefficient of trust level (Y1) to infaq payment amount (Y2) has parameter value equal to -0,014. While the t-statistic value  $< t\text{-table}$  or  $0.070 < 1.96$ . The fifth hypothesis in this study is the level of trust affect on the amount of payment infaq at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be taken decision that research hypothesis 5 (H5) is rejected. This shows that the level of trust does not affect on the amount of infaq payment at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study are supported by research conducted by Kurniati (2015) which proves that trust does not affect the interest of payer of zakah pay zakah, infaq and shadaqa at LAZISMU in Pekajangan.

Based on path analysis that has been done, obtained result that coefficient of path of accountability (X1) to level of trust (Y1) have parameter value equal to 0,163. While the value of t-statistic  $< t\text{-table}$  or  $0.464 < 1.96$ . The sixth hypothesis in this study is that accountability affects on the level of donor trust at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be decided that research hypothesis 6 (H6) is rejected. This shows that accountability has no effect on donor trust level at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study are supported by research conducted by Nugraha (2015) which proves that accountability has no effect on payer of zakah trust.

Based on path analysis that has been done, obtained result that coefficient of transparency path (X2) to level of trust (Y1) have parameter value equal to 0,054. While the value of t-statistic  $< t\text{-table}$  or  $0.150 < 1.96$ . The seventh hypothesis in this study is that transparency affects on the level of donor trust at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be decided that research hypothesis 7 (H7) is rejected. This shows that transparency has no effect on donor trust level at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study are supported by research conducted by Nugraha (2015) which proves that transparency has no effect on payer of zakah trust. However, this is not in accordance with research conducted by Safrizal (2015) which proves that transparency affects on the level of beliefs of payer of zakah at Baitul Mal in East Aceh regency.

Based on path analysis that has been done, obtained the result that coefficient of service quality line (X3) to level of trust (Y1) has parameter value equal to 0,321. While the value of t-statistic  $> t\text{-table}$  or  $2.183 < 1.96$ . The eighth hypothesis in this study is the quality of service affect the level of trust of donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be taken decision that research hypothesis 8

(H8) is accepted. This shows that the quality of service influences the level of trust of donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study are supported by research conducted by Jamilatun (2011) which proves that the quality of service (service) has a positive effect on the trust of payer of zakah at LPDU in Semarang.

Based on path analysis that has been done, obtained result that coefficient of institution image line (X4) to level of trust (Y1) has parameter value equal to 0,381. While the value of  $t\text{-statistic} > t\text{-table}$  or  $2.469 > 1.96$ . The ninth hypothesis in this study is the image of the institution affect on the level of trust of donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be taken decision that research hypothesis 9 (H9) is accepted. This shows that the quality of service influences the level of trust of donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study is supported by research conducted by Hamidah (2017) which proved that the image of zakah management agency has a significant effect on trust of payer of zakah at BAZNAS in Mojokerto regency .

Based on path analysis that has been done, obtained result that coefficient of institution image line (X4) to level of trust (Y1) has parameter value equal to 0,381. While the value of  $t\text{-statistic} > t\text{-table}$  or  $2.469 > 1.96$ . The ninth hypothesis in this study is the image of the institution affect on the level of trust of donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia, so it can be taken decision that research hypothesis 9 (H9) is accepted. This shows that the quality of service influences the level of trust of donors at foundation of social fund named Yayasan Dana Sosial al Falah located in Jember Indonesia. The results of this study is supported by research conducted by Hamidah (2017) which proved that the image of zakah management agency has a significant effect on trust payer of zakah at BAZNAS in Mojokerto regency.

### **Bibliography**

- The Qur'an and its Translation. 2005. Bandung: Ministry of Religious Affairs.
- Assagaf, M. A. 2016. Influence of Accountability and Transparency Zakah Management to Interest Payer of zakah. Essay. Makassar: Faculty of Economics and Islamic Business.
- Central Bureau of Statistics. 2017. Poverty and Inequality.
- Endahwati, Y. D. 2014. Accountability Management of Zakah, Infaq, and Shadaqah (ZIS). Journal of Accounting and Human Sciences JINAH. 4 (1): 1356-1379.
- Ghozali, I. & H. Latan. 2015. Partial Least Squares. Semarang: Diponegoro University.
- Judge, M.E 2014. The Influence of Transparency and Accountability of Zakah Management on Interests of Payer of zakah at Rumah Zakah, Semarang Branch. Essay. Semarang: Faculty of Economics and Islamic Business IAIN Walisongo.
- Hamidah, D. W. N. 2017. The Influence of Application of Management Information System Technology BAZNAS (SIMBA) and the image of Zakah Management Institution to Payer of zakah Trust in BAZNAS Kota Mojokerto. Essay. Surabaya: Faculty of Economics and Islamic Business UIN Sunan Ampel.
- Insani, F. A. 2017. The Influence of Institutional Image on Payer of zakah's Interest to Distribute Zakah Profession to National Amil Zakah Body (BAZNAS) of Yogyakarta City. Essay. Yogyakarta: Faculty of Da'wah and Communication. UIN Sunan Kalijaga Yogyakarta.
- Jamilatun. 2011. The Influence of Service Quality (Service) to Payer of zakah's Satisfaction and Trust in Lembaga Dana Umat Sultan Agung (LPDU) Semarang. Essay. Semarang: Faculty of Syari'ah IAIN Walisongo.
- Jefkins, F. 2003. Public Relations. Issue 5. Jakarta: Erland.
- KBBI. 2018. Understanding of Quality, Trust, Image.
- Kotler, P. & K. L. Keller. 2009. Marketing Management. Jakarta: Erland.

- Kurniati, S. 2015. Analysis of Factors Affecting Interest Payer of Zakah, , Infaq and Shadaqa at LAZISMU in Pekajangan. Essay. Pekalongan: Faculty of Economics Syariah STAIN Pekalongan.
- Mardiasmo. 2002. Public Sector Accounting. Yogyakarta: Andi Press.
- Mus'ab, A. 2011. The Influence of Religiosity, Level of Income, and Service to Payer of Zakah to Interest to Pay Zakah of Maal at LAZIS NU. Essay. Yogyakarta: Faculty of Sharia and Law of Sunan Kalijaga State Islamic University.
- Nugraha, S. 2013. Influence of Perception Implementation of Accountability and Financial Transparency to Interest of Payer of Zakah to Pay Zakah at Lembaga Amil Zakah (LAZ). Essay. Jember: Faculty of Economics, University of Jember.
- Nurhayati, S. & Wasilah. 2015. Sharia Accounting in Indonesia. Issue 4 Jakarta: Salemba
- Nur'aini, H. & M. R. Ridla. 2015. Influence of Service Quality, Institution Image, and Religiosity to Payer of Zakah's Interests for Channeling Zakah Profession: 207-228.
- Statement of Financial Accounting Standards No. 109. Accounting for Zakah and Infak / Alms. Jakarta: Sharia Accounting Standards Board of the Indonesian Institute of Accountants.
- Prasetyo, W. 2009. Zakah Accounting Application in Order to Realize A Zakah Methaporised Organizational Reality on Cooperative Enterprises. Accounting journal. 7 (1): 8-22.
- Rahayu, R. 2015. Factors Determinaning of Motivation of Payer of Zakah to Pay Zakah at Zakah Institution. Thesis. Yogyakarta: Graduate Program UIN Sunan Kalijaga Yogyakarta.
- Rendi, A. 2017. The Influence of Service Quality and Institution Image on Community Interest to pay infaq at LAZNAS DPU DT Palembang Branch. Essay. Palembang: Faculty of Economics and Islamic Business, UIN Raden Fatah.
- Romdhon, M. R S. 2014. Influence of Financial Statement Transparency, Zakah Management, and Manager's Attitude to Payer of Zakah Trust Level. Essay. Bandung: Faculty of Economics and Business Education, Universitas Pendidikan Indonesia.
- Rouf, M. A. 2011. Analysis of Factors Affecting the Interest of People Paying Zakah at Rumah Zakah Semarang Branch. Essay. Semarang: Faculty of Syari'ah IAIN Walisongo.
- Ruslan, R. 2008. Management of Public Relations & Media Communications. Jakarta: PT Rajagrafindo Persada.
- Safrizal. 2015. Influence of Accountability and Transparency of Zakah Institution on Payer of Zakah Trust Level and Its Impact on Desire to Pay Zakah at Baitul Mal in Regency of East Aceh. Thesis. Banda Aceh: Post-Graduate Program of Syiah Kuala Darussalam University.
- Satrio, E. & D. Siswantoro. 2016. Analysis of Revenue, Trust and Religiosity Factors in Affecting Payer of Zakah's Interest to Pay Zakah of Earnings Through Amil Zakah Institution. Journal of the National Symposium on Accounting.
- Septiarini, D. F. 2011. Influence of Transparency and Accountability on Zakah, Infaq and Shodaqoh Fund Collecting at LAZ in Surabaya. Accounting Journal. 2 (2): 172-199.
- Setiawan, F. 2017. The influence of Religiosity, Trust and Reputation on Payer of zakah's Interest in Paying Zakah on Profession. Thesis. Surakarta: Master Program Management of Muhammadiyah University of Surakarta.
- Sugiyono. 2016. Educational Research Methods. Bandung: Alfabea.
- Tjiptono, F. 2012. Servive Management. Issue 2 Yogyakarta: Andi.
- Law of the Republic of Indonesia Number 23 Year 2011. Management of Zakah. 25 November 2011. State Gazette of the Republic of Indonesia Year 2011 Number 115.
- Wibowo. 2006. Change Management. Issue 1 Jakarta: PT Raja Grafindo Persada.

- Wikipedia. 2018. Understanding of Explanatory Research. Jakarta
- Al-Falah Social Fund Foundation. 2017. YDSF Profile. <http://ydsf.org/>
- Yuliafitri, I. & A. N. Khoiriyah. 2016. The Effect of Payer of Zakah's Satisfaction, Transparency and Accountability at Amil Zakah Agencies toward Payer of Zakah's Loyalty. *Journal of Islamic Economics*.7 (2): 205-218.

## **Agropolitan Development Strategic of Local Resources Base to Enhance the Leading Commodities**

### **Study at South Central Timor Region East Nusa Tenggara Province of Indonesia**

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#### **Abstract**

The purpose of the study is to develop the local resources base existing in the South Central of Timor to enhance the leading commodities in that region. Due to the agropolitan development strategic will increase its economy of the eighth existing growth region in this region. The study found that agropolitan development have an impact on the economic progress of the region. Since the region has such potential resources both in agricultural and tourism sectors. However, the absence of supporting facilities will certainly lower the quality of farming. In addition, the uncontrolled urbanization process also will impact to this agropolitan region. The result of this research has been increased the regional economic performance leading for food crops. Oenino region has eleven leading commodities with Location Quotient ( $LQ > 1$ ). The pumpkin is the most superior commodity, because it has value reaching  $LQ = 9,119$ . For fruit commodities such as avocado, mango, orange and banana are the commodities which produced increasingly year by year. Apparently, for candlenuts and cashews are the main important commodities to be exported from this region. The impact of this study is to place agropolitan concept as a solution to develop the countryside in south central Timor as an urban region. We strongly expect a strong interaction between the center of region within the sub-region through the development of agropolitan region. This paper is an original work which also be the first study about agropolitan region in the South Central Timor, a district of East Nusa Tenggara, Indonesia.

**Keyword : Agropolitan region, Development strategic, leading commodities, local resources.**

#### **Introduction**

The issue of inter regional disparity and economic inequality in Indonesia has serious concerns by scholars, policy makers and experts in this country. The gap among rural-urban, agricultural and industrial sectors also occurs in eastern Indonesia. The rural areas as agricultural production centers are lagging behind and the urban as the center of economic growth is experiencing rapid development. Rural areas are deprived of resources due to resource flows to unbalanced urban areas, be they natural resources, labor and capital resources.

According to Indonesia Law Number 26 Year 2007, Agropolitan is an area consisting of one or more centers of activity in rural areas as a system of agricultural production and management of certain natural resources which is shown with a unit of settlement system and agribusiness system. So that agropolitan is a development strategic through community development. It is a developing integrated and sustainable agriculture based economy in selected area through development of infrastructure capable of encouraging agricultural growth in the surrounding area.

The rural areas as agricultural production centers are lagging behind and the urban as the center of economic growth. The urban is experiencing rapid development. Rural areas are deprived of resources such as natural resources, labor and capital resources because they had leaved to urban areas.

South Central Timor Regency is a part of East Nusa Tenggara, Province Indonesia. which it contributes the most to the establishment of Gross Regional Domestic Product Province of 50.08% of agricultural products (BPS 2015). In its development is to integrated the development of national activities centers and the central system of activities at provincial level. Based on the Regional Regulation of South Central Timor District Number 10 Year 2012 about Regional Spatial Planning of South central Timor Regency Year 2012 to 2032, there are eight sub-districts as agropolitan area in South Central Timor. The sub-district are North Mollo, Central Mollo, South Mollo, Tobu, Oenino, Kuatnana, Polen and East Amanuban.

The implementation of agropolitan in South Central Timor region has not developed well, because the lack of capital, lack of facilities and it has not been able to play an agribusiness role. In terms of facilities and infrastructure the main obstacle is the path of farming is very simple and limited and access to agropolitan location. The community is less oriented to post-harvest technology, so the value added of agricultural products is less.

Based on the data of this district has a high potential especially in the agricultural sector can be seen from the contribution of this sector to the Gross regional domestic product of 50.67% in 2014. However, it is not supported by adequate facilities, capital and technology. The absence of this supporting facility will certainly reduce the quality of agriculture in the region. It can be seen from the small growth in the sector is only 0.91% from 2013 to 2014. These problems will cause the development of agropolitan area is not going well.

The region's development can not be separated from the development of national centers and activities center system both at provincial and district level.

The agropolitan area in South Central Timor District has not been well developed, due to lack of capital, and facilities inadequate. So that, the community is less oriented to post-harvest technology. The growth in agriculture is only 0.91% in year 2011 to 2014. To overcome these problems, innovations and strategies are needed to develop agropolitan areas to increase people's income.

### **Literture Review**

Agropolitan was introduced by Friedman and Douglass (1976) through the concept of agropolitan district. Agropolitan term comes from words agro and polita (polis). Agro means agriculture and politan means urban. Agropolitan is an agricultural urban that grows and develops due to the running of agribusiness system and business to serve, encourage or attract agribusiness development activities in the surrounding area.

The agropolitan area comprises an agricultural urban, ie, a mid-sized town or sub-district town and the surrounding agricultural production centers, with boundaries not defined by government administrative boundaries but more determined by economies of scale. In principle, agropolitan is an effort of equitable development in the spatial dimension which is expected to be able to contribute to the growth of the region. Agropolitan acts as a center in rural areas that support agricultural development activities ranging from farming, processing and post-harvest activities and also marketing.

Regional development is defined as all efforts undertaken to create regional growth. It is characterized by equitable distribution of development in all sectors and in all parts of the region. Economic growth can occur simultaneously in all places and sectors of the economy. Investments are prioritized in key potential sectors and can increase revenue in a relatively short period of time (Glasson, 1990).

### **Economic Theory.**

The theory of economic base view is that the economic growth rate of a region determined by the large increase in exports from the region. The growth of industries using local resources, including labor and raw materials for export, will generate local wealth and job creation opportunities (Arsyad, 1999). This assumption provides an understanding that an area will have a leading sector if the region can win the competition in the same sector with other regions so that it can generate regional exports.

The leading sector is the sector that becomes the backbone of the regional economy because it has a competitive advantage. In the context of regional development, the leading sector is a potential owned by the region. Therefore ideally to be a priority in development the region. Development of leading Sector as Regional Potential Economic development with reference to impacting to the acceleration of economic growth will also affect the fundamental changes in economic structure.

The definition of the leading sector is basically associated with a comparison to, be it international, regional and national comparative. On a national scale, a sector can be categorized as a leading sector if the sectors in a particular region are able to compete with

the same sector produced by other regions, both in national and domestic markets. The determination of the leading sector becomes an important thing as the basis of regional potential. In accordance with the current era of regional autonomy the regions have its opportunity and authority to make policies in accordance to accelerate the regional economic development for the improvement of the people's prosperity.

Location Quotient is a tool to calculate the output share of an economic sector in the district with the share of its output sector in the province. This method of analysis can be used to project the economic growth of a region and as an analytical tool in rural development research (Tarigan, 2005). This tool is also used to analyze sub-district contributions to districts and sectors that have progressed year to year. The result of shift share analysis is also able to show competitive advantage of a region.

There are three sources cause of the shift share: 1)The share component, indicating the contribution of the total sector shift in the broader total aggregate region. 2)The proportional shift component shows the total sector shift in the larger aggregate region. 3)The differential shift component, indicating the shift of a particular sector in a particular region.

If the differential shift component is positive, then a region is considered to have a competitive advantage because it still has the potential to grow despite the components share and proportional shift does not support.

To this end, this research questions as follows: 1) how much is the potentially of the resources base of South Central Timor District area, 2) How is the strategy of developing Agropolitan area in South Timor Tengah Regency. To answer these research questions, this paper has been specified a conceptual framework with the analytical tools which are: 1) Location Quotient and 2) Shift Share Analisis. The tools are used to know the changes and shifts of the region's economic sector in South Central Timor District.

### **Conceptual Framework**

Furthermore, the conceptual framework has developed to identify and account all local resources base existing in the South Central of Timor. Beside that, it has also enhanced the leading commodities in that region. Then, the agropolitan development strategic will increase the eighth existing growth region, especially its region's economy.

### **Research Metodology**

Data used in this research are primary data and secondary data. Primary data is data obtained directly through field observations or obtained from direct sources. While secondary data is data that is obtained from the government reports and data has been collected by other parties. Primary data used in this research is obtained through observation and interview. Observations conducted to capture the phenomenon that occurs on the object of research such as community activities. While the interview used to obtain the depth information. The secondary data that is quantitative data in the form of numbers.

Data sources are obtained from official publications such as the Central Bureau of Statistics, the Office of Food Crops, Horticulture, and Plantations.

To answer the research question that it have been specified in the formulation of the problem then used the analytical tools are: 1) Location Quotient and Growth Ratio are used to analyze the economic potential in determining the base and non-base sectors in the economy of region. 2) Shift Share Analysis is used to identify changes and shifts in the economic sector of the region in South Central Timor District.

Location Quotient (LQ) Analysis of base sector is to explain the potential of specialization of a region to main economic activity or to know its leading sector. Location Quotient is the ratio of the role of a sector in a region to the role of the province sectors.

**LQ formulation :**

$$LQ = \frac{PDRB_{ik} / \sum PDRB_k}{PDRB_{ip} / \sum PDRB_p}$$

note:

*LQ* : Location Quotient;

*PDRB<sub>ik</sub>* : Product domestic regional brutto i sector in district;

: Product domestic regional brutto i sector in province;

: Product domestic regional brutto total in district;

: Product domestic regional brutto total in province.

### **Shift Share Analysis (SSA)**

This analysis is used to determine the changes of sector shifts in the economy of the region. The result of shift share analysis is able to show competitive advantage of the region through sector performance in gross regional product compared to the province output. Then the analysis of deviations based on the comparison. If the deviation is positive then the region has a competitive advantage. The data used for this shift-share analysis took from statistics Buerau of Indonesia. Shift share analysis uses three basic information that are interconnected with one another, namely: (1) national reference economic growth, showing the effect of national economic growth on the region. (2) A shift in proportion, indicating the relative change of performance of a sector in the region towards the same sector in the province. (3) The differential shift, indicating how far the competitiveness of regional industries compares to the economy of the province.

The equation formula of SSA is as follows: 1) Significant impacts on the economic growth of district economic growth or the sum of the effects of provincial growth. 2) Effect of provincial economic growth. 3) Proportional shifts or industrial mix influences. 4)The influence of competitive advantage. The equation rule as follows:

The impact of economic growth of province to the region.

$$D_{ik} = N_{ik} + M_{ik} + C_{ik}$$

The Province effect

$$N_{ik} = E_{ik} \cdot r_p$$

Industry mix effect to Proportional shift

$$M_{ik} = E_{ik}(r_{ip} - r_p)$$

Effect of competitive advantage

$$C_{ik} = E_{ik}(r_{ik} - r_{ip})$$

Notes:

$D_{ik}$  : Significant change of economic growth economic sector

$N_{ik}$  : Province share

$M_{ik}$  : Proportion shift of industry mix

$C_{ik}$  : competitive advantage (*differential shift*)

$E_{ik}$  : Product domestic regional sector

$E_{ip}$  : Product of economic sector

$r_p$  : The growth of production of all Province sector

$r_{ip}$  : The growth of production of each Province sector

$r_{ik}$  : The growth production of each region sector

## Results

Based on Location Quotient and Shift share analysis, all sub-district has good growth and contribute to the District of South Central Timor. The Shift share value of some economic sectors of South Central Timor indicating that the sector has a higher competitiveness level. All sectors in the region have positive values, higher competitiveness compared with the same sector at province. Overall, during the period of 2012-2016, the output of domestic product observed an increase in absolute value. Results of LQ based on Industry of South Central Timor Region during The Year 2012 to 2016 is shown in table 1

Agriculture, forestry, fishery is the basic sector because of it has  $LQ > 1$ , which it has the average of 1,598, followed by mining and quarrying sector, gas electricity procurement sector, and real estate sector having  $LQ > 1$ . It means that the role of the four sectors in this region is more prominent than the role of the four sectors in the Province.  $LQ > 1$  means the sector is the base sector to export. It is surplus and can be export to other areas. The potential side of the region has an economic scale as agropolitan area.

**Table 1 Results of LQ based on Industry of South Central Timor Region  
The Year 2012 to 2016**

NO.	Industry	Years					Average
		2012	2013	2014	2015	2016	
1	Agriculture, Forestry And Fishing	1,583	1,588	1,595	1,602	1,621	<b>1,598</b>
2	Mining & Quarrying	1,352	1,361	1,354	1,358	1,366	<b>1,358</b>
3	Manufacturing	0,576	0,574	0,577	0,569	0,565	0,572
4	Electricity Ang Gas	0,503	5,053	0,501	0,505	0,505	<b>1,413</b>
5	Water Supply, Sewerage, Waste Management, And Remediation Activities	0,334	0,327	0,325	0,331	0,335	0,331
6	Construction	0,713	0,717	0,728	0,736	0,733	0,725
7	Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles	0,622	0,611	0,613	0,608	0,600	0,611
8	Transportation And Storage	0,352	0,347	0,337	0,332	0,322	0,338
9	Accommodation And Food Service Activities	0,162	0,159	0,158	0,156	0,144	0,156
10	Information And Communication	0,932	0,958	0,952	0,949	0,950	0,948
11	Insurance Activities	0,698	0,702	0,740	0,744	0,767	0,730
12	Real Estate	1,120	1,139	1,162	1,177	1,196	<b>1,159</b>
13	Business Activities	0,271	0,274	0,274	0,275	0,282	0,275
14	Public Administration And Defance; Compulsory Social Security	0,959	0,983	0,991	1,003	1,026	0,993
15	Education	0,660	0,661	0,651	0,654	0,654	0,656
16	Human Health And Social Work Activities	0,799	0,774	0,759	0,729	0,694	0,751
17	Other Services Activities	0,503	0,495	0,480	0,472	0,463	0,483
	<b>Total</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>

Sources: Location Quotient Analysis

The shift share analysis separates the element of growth those are internal and external. So the proportional shifts are influence by external elements but differential shifts are influence by internal factors. The Result of Shift-Share of South Central Timor Region during the year 2012 to 2016 is shown in table 2

**Tabel 2 Result of Shift-Share Analysis of South Central Timor Region  
The Year 2012 to 2016**

<b>Industry</b>	<b>Nij</b>	<b>Mij</b>	<b>Cij</b>	<b>Dij</b>
Agriculture, Forestry And Fishing	1.336.382.067	409.343.901,09	2271724040,324	4017450007,96
Mining & Quarrying	51.239.391	22.955.550,72	95564950,588	169759891,83
Manufacturing	19.862.094	8.338.990,06	33605289,155	61806373,69
Electricity Ang Gas	710.773	558.255,38	859809,720	2128837,75
Water Supply, Sewerage, Waste Management, And Remediation Activities	660.022	290.324,10	1048796,544	1999142,15
Construction	197.715.897	100.844.559,59	395276795,433	693837252,13
Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles	186.466.861	93.670.083,03	315996030,561	596132974,45
Transportation And Storage	48.628.317	-41.496.552,60	71769582,352	78901347,10
Accommodation And Food Service Activities	2.606.965	1.304.217,90	4353688,169	8264871,23
Information And Communication	201.950.664	107.074.841,29	356219844,944	665245350,52
Insurance Activities	58.932.510	42.692.431,39	132346350,591	233971291,51
Real Estate	82.478.212	33.907.854,56	146758939,333	263145006,03
Business Activities	2.107.242	979.707,08	4005330,510	7092279,51
Public Administration And Defance; Compulsory Social Security	294.774.234	160.343.411,04	638960623,546	1094078268,94
Education	164.229.476	78.721.041,95	297983294,817	540933813,07
Human Health And Social Work Activities	50.148.712	22.119.182,46	82918421,057	155186315,34
Other Services Activities	30.170.908	10.362.670,58	54529564,212	95063142,97
<b>Jumlah</b>	<b>2.729.064.345</b>	<b>0,00</b>	<b>4914441456,553</b>	<b>7643505801,23</b>

Sources: Shift share analysis

The influence of provincial economic growth to the economy of South Central Timor is positive on each sector. The proportional shift shows the output resulting from the industrial mix in the economy as a result of interaction between industrial activities. Sectors that have negative industrial mix impact are indicated by negative namely: the transportation and warehousing sectors. While sectors that have a positive industrial mix impact indicated by positive economy of Regency are sixteen sectors. Differential Shift economic sector of the region during the period of year 2012 to 2016 is positive. It is indicating that the sector has a higher competitiveness level. All sectors in the South Central regency positive.

## **Managerial implications**

The Agriculture output for each sub-district based on Location Quotient  $> 1$  is food crop subsector. There are 12 sub-districts of 32 Sub-districts that have leading for rice crops commodities. Oenino Sub-district has 11 leading commodities which its  $LQ > 1$ .

So the agropolitan development has an impact on the economic progress of the region. Since the region has such potential resources both in agricultural and tourism sectors. However, the absence of supporting facilities will certainly lower the quality of farming. In addition, the uncontrolled urbanization process also will impact to this agropolitan region.

Finally, It has been increased the regional economic performance leading for food crops. Oenino region has eleven leading commodities with Location Quotient ( $LQ > 1$ ). The pumpkin is the most superior commodity, because it has value reaching  $LQ = 9,119$ . For fruit commodities such as avocado, mango, orange and banana are the commodities which produced increasingly year by year. Apparently, for candlenuts and cashews are the main important commodities to be exported from this region.

## **Conclusions**

The impact of this study is to place agropolitan concept as a solution to develop the countryside in south central Timor as an urban region. We strongly expect a strong interaction between the center of region within the sub-region through the development of agropolitan region.

This paper is an original work which also be the first study about agropolitan region in the South Central Timor, a district of East Nusa Tenggara, Indonesia.

## Selected References

- Arikunto, S. 1998. *Prosedur Penelitian, Suatu Pendekatan Praktek*, Jakarta.: PT. Reneka Cipta.
- Arsyad, Lincolin. 1999. *Ekonomi Pembangunan*, Edisi Keempat. Yogyakarta: Bagian Penerbitan STIE YKPN.
- Glasson, John. 1990. *Pengantar Perencanaan Regional*, Terjemahan Paul Sitohang. Jakarta : Lembaga Penerbit FE-UI.
- Kartasasmita, Ginanjar. 1996. *Pembangunan Untuk Rakyat: Mamadukan Pertumbuhan dan Pemerataan*, Jakarta : Cetakan I. PT. Pustaka CIDESINDO.
- Kuncoro, Mudrajat (2002). Analisis Spasial dan Regional: Studi Aglomerasi dan Kluster Industri Indonesia. Yogyakarta : UPP AMP YKPN.
- Kuncoro, Mudrajat. 2004. *Otonomi Dan Pembangunan Daerah*, Jakarta : Penerbit Erlangga .
- Kustiawan dan Iwan (1997). Permasalahan Konvensi Lahan Pertanian dan Implikasinya Terhadap Penataan Ruang Wilayah (Studi Kasus Wilayah Pantura Jawa Barat). *Jurnal PWK*. Vol.8. No.1.
- Rachbini, Didik J. 2001. *Pembangunan Ekonomi & Sumber Daya Manusia*, Jakarta: Gramedia Widiasarana Indonesia.
- Rustiadi, E, dkk. 2007. *Agropolitan Membangun Ekonomi Perdesaan*. Bogor : Crestpent Press.
- Soenarno. 2003. *Pengembangan Kawasan Agropolitan dalam Rangka Pengembangan Wilayah*. Gorontalo : Disampaikan dalam Seminar Nasional di Universitas Negeri Gorontalo 15 Mei 2003.
- Tambunan, Tulus T. H, 2001. *Transformasi Ekonomi di Indonesia: Teori & Penemuan Empiris*, Jakarta : Salemba Empat.
- Undang-undang Nomor 26 Tahun 2007. Tentang Penataan Ruang. Sekretariat Negara 2007.
- Tarigan, Robinson. 2005. *Ekonomi Regional : Teori dan Aplikasi*. Jakarta: Bumi Aksara
- Widodo, Tri. 2006. *Perencanaan Pembangunan: Aplikasi Komputer (Era Otonomi Daerah)*, Yogyakarta : UPP STIM YKPN.
- . 2017. *Laporan Perekonomian Provinsi NTT : Nusa Tenggara Timur*. BPS Provinsi NTT.
  - . 2013. *TTS dalam Angka : Kabupaten Timor Tengah Selatan*. BPS Kabupaten TTS.
  - . 2014. *TTS dalam Angka : Kabupaten Timor Tengah Selatan*. BPS Kabupaten TTS.
  - . 2015. *TTS dalam Angka : Kabupaten Timor Tengah Selatan*. BPS Kabupaten TTS.
  - . 2016. *TTS dalam Angka : Kabupaten Timor Tengah Selatan*. BPS Kabupaten TTS.
  - . 2017. *TTS dalam Angka : Kabupaten Timor Tengah Selatan*. BPS Kabupaten TTS.

# Household Income and School Transitions : Does Gender Matter? Evidence from Indonesia

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## Abstract

This paper investigates the role of household income and gender against the school transition in Indonesia. The data used are from Indonesian Family Life Survey. The results of fixed effect logit show that no evidence of transitory income affected school transition at basic and senior secondary education level. Compared to boys, girls have a higher probability of attending school at junior secondary than senior secondary education. Furthermore, girls tend to be used as one of the coping strategies when the household is faced with borrowing constraints and credit market imperfections. It is not separated from the presence of gender disparity between boys and girls. Government policies that can be done to increase the transition schools are giving scholarship and policies that prioritize girls to be given wider access to education so that gender bias in education can be minimized. This study contributes an empirical measurement and identification of transitory income.

**Keyword:** Household Income, Gender, School Transition, Fixed Effect Logit, Junior Secondary Education (SMP), Senior Secondary Education (SMA).

## INTRODUCTION

School transition is important as a benchmark for education progress in many developing countries, including Indonesia (World Bank, 2006). Meanwhile, the school transition has been identified as a crucial turning point in school progress in Indonesia. Human capital investment in education is one essential component for the economic and social development of a country as education is one of the vital strategies to overcome poverty in most developing countries. If there is a decrease in the quality of human capital, it will be likely to have both direct and indirect consequences to the level of social welfare, poverty and economic development of a country. One of the problems of the decline in human capital investment in developing countries, including Indonesia, is the vulnerability of various risks associated with the shocks leading to high levels of volatility in income resulting in low levels of school enrolment, school transition and high level of dropout.

Generally, household options regarding education investment in addressing negative income shock can be divided into two. First, when households are faced with negative shocks, then the parents will encourage their children to be involved directly in activities that can generate income for the family making time allocated for education relatively small (Jacoby & Skoufias, 1997). In this case, if the time allocation can be done optimally, it can reduce the level of school attendance without increasing dropout rate. Second, the presence of negative shocks will have an impact on the level of participation in education, either temporarily or permanently forcing parents not to send their children to school (Sawada, 2003).

Some of the events in Indonesia with risks associated to negative income shocks on human capital investment are El Nino disaster, the Indonesian mid-1997 economic crisis, the death or the prolonged illness of the household head or household members, the loss of household business due to natural disaster, the loss of jobs and the decline of household incomes caused by natural phenomena such effects of weather, locust, etc. Furthermore, another issue of concern in many developing countries associated with negative income shocks is the widening

gender disparities among boys and girls to school participation rates, including school transition. Finally, another critical issue is the presence of resource competition among siblings in the household when it comes to borrowing constraints condition and credit market imperfections.

Several studies on the effect of negative shocks to investment in human capital, especially in the field of education, involves a variety of different empirical results. Sawada (2003) showed that permanent and transitory incomes affected schooling decision process for school entrants and dropouts in Pakistan. Subsequently, schooling response to transitory income is consistently larger for daughters than sons; followed by resource competition. Chevalier (2013) showed that permanent income had a significant effect on children schooling in the UK, with stronger effects on sons than daughters. Several empirical studies in Indonesia, among others, performed by Thomas et al. (2004) identified that during the economic crisis in Indonesia, the participation rate of young children's education is relatively low if it had older siblings. Cameron and Worswick (2001) showed that the coping strategy taken by farming households during income shocks was to reduce children education expenditure, especially girls of school age.

Many empirical studies show different results about the effect of income on the school attendance. McKenzie (2003) showed that the rate of school attendance was increasing during the crisis in Mexico. King (2009) received results indicating that the per-capita education expenditures declined in Indonesia following the crisis in the late 1990s, but the dropout rate did not increase. Meanwhile, the rate of high school graduation and participation rose during the Great Depression in the United States. (Goldin, 1999; Black and Kenneth, 2006). Several studies showed contradictory findings of the impact of negative income shocks to the level of child's education, with one side having a negative effect, but in some cases, also positive effect. In addition, there is still the debate on the issue of gender inequality in school transition, therefore, this study aims to analyze the role of income, gender against the school's transition in Indonesia.

This study contributes an empirical measurement and identification of transitory income. The previous study used rainfall deviation as a transitory variable. Meanwhile, transitory income shocks measurements in this study include the death of the head of household or household members, crop loss, prolonged illness of the household head or household members that require hospitalization or continuous need of medical care, loss of business and household sectors (due to fires, earthquakes and other disasters), unemployed household head or business failure, and the decline in household income due to falling prices or quantity of goods produced.

## **RESEARCH METHODOLOGY**

Estimation models in this research were conducted in two phases. In the first phase, income was divided into two components: permanent and transitory income. In the second phase, it is done to estimate the binary variable regressions as the dependent variable with permanent and transitory income as independent variables. Theoretically, a household's income at time  $t$  can be decomposed into permanent income and transitory income as:  $Y_t \equiv Y_t^P + Y_t^T$ , where  $E(Y^T) = 0$ . In identifying the income, this writing employ Paxson (1992).

$$Y_{ht} = b_h + X_{ht}^P b_1 + X_{ht}^T b_2 + b_t + u_{ht} \quad (5)$$

$\beta_h$  is household fixed effects and  $X_{ht}^P \beta_1$  denote the components of permanent income of physical and human asset variables. For example, demographic structure of the household, the household characteristics by level of education, occupation, number of household members, assets of households, the asset value of work in agriculture and not the agricultural sector which is owned by the household, the household use of electricity, households with televisions, household

owning its own home, the household with its own toilet, poultry value and the value of land managed by the household. In addition,  $X_{ht}^T \beta_2$  represents transitory income and  $\beta_t$  are the time specific fixed effects treated as another component of the transitory income, since these capture effects of aggregate shocks. Meanwhile, the residual is unobserved components of permanent income and transitory income. Next, second step uses a model with a binary dependent variable is the school transition. The model is a discrete response model with household fixed effects, assuming that  $F(\cdot)$  is logistic distribution function estimated by conditional logit.

Conditional logit models have several advantages; among others, it can control the unobserved heterogeneity that is fixed over time or time-invariant with a dependent variable that is binary. Furthermore, to determine the exact model Hausman testing was done (Bergstrom et al., 2003). The next stage is identifying the existence of imperfect credit markets and borrowing constraint using Wald Test (Sawada, 2003). The data used are from the 1997 and 2000 Indonesian Family Life Survey to capture the occurrence of several events in Indonesia with the risk associated with income shocks against investment in education, especially school transition.

Various components are included in the permanent income (YP) among others, the death or sickness of a household member, non-agricultural business, education of head of household, number of household members, number of household members squares, the total rental / leasing income or profit-sharing of non agricultural business (nonfarm business) for 12 months, household assets, total revenue from the rental / leasing or profit sharing households in the form of agricultural land and cattle over 12 months, the employment status of the head of the household, the area or location of households in rural areas, the use of electricity by households and homeownership status and toilets owned by households.

Transitory income ( $Y^T$ ) is divided into several components, among others, crop loss, disease suffered by head or household members who require hospitalization or continuous need for medical care, the decline in household income or business sector as a result of fires and earthquakes and other disasters, unemployment of the head of the household or failure of a business, the decline in household income due to the decline in the price or quantity of goods produced, non-agricultural business interaction with lower household income or business as a result of fires, earthquakes and other disasters, the interactions between crop loss with land values and the 2000 dummy variable to capture the effect of aggregate shocks. Meanwhile, the information regarding the transition from primary to the junior secondary education and from junior to senior secondary education. This is done by examining at the students' who graduated from primary education and continuing or in grade 1 or 7 in the junior secondary education. The same is done to look at the school transition from junior to senior secondary education.

Descriptive statistics in Table 1 shows that the biggest economic shocks during the previous five years were crop loss, which reached 13.7 percent. Meanwhile, the average of the lowest economic shock due to decreased household income or business sector caused by fires, earthquakes, and other disasters was 2.0 percent. The majority of the household head's education is generally a primary school (SD), which reached 54.9 percent with an average family size of between 5 and 6 people, and household with non-agricultural business amounted to 44.5 percent of total income received by the 21.6 percent. Meanwhile, the total household income from agriculture, especially land reached 76 percent, while sourced from livestock on average by 9 percent.

**Table 1**  
**Summary Statistics of Key Variables**

Variables	Mean	Standard Deviation
<b><u>Transitory Shock Variables (<math>Y^T</math>)</u></b>		
Crop loss (yes =1)	0.137	0.344
Sickness (yes =1)	0.129	0.335
Disasters (yes =1)	0.020	0.140
Unemployment (yes =1)	0.042	0.201
Price fall (yes =1)	0.076	0.265
The Interaction between nonfarm business and disasters	0.010	0.101
The Interaction between crop loss and farm land	0.181	1.538
<b><u>Permanent Shock Variables (<math>Y^P</math>)</u></b>		
Death (yes =1)	0.098	0.297
Education of household head		
No school (yes =1)*	0.112	0.315
Primary (yes =1)	0.549	0.498
Junior secondary education (yes =1)	0.128	0.334
Senior secondary education (yes =1)	0.151	0.358
University (yes =1)	0.059	0.235
Household size	5.426	1.897
Household size squared	33.042	24.283
Nonfarm business entirely owned by the household (yes =1)	0.445	0.497
Nonfarm business (log)	0.216	1.703
Household Assets (log)	0.989	3.527
Farm land (log)	0.760	3.096
Livestock (log)	0.088	1.065

Sources: IFLS2 and IFLS3

\* The reference category

## RESULTS AND DISCUSSION

### Variables and Estimation Results of Income Regression

The estimates of various components of transitory income to household income in Table 2 indicates that the shock caused by the decline in household income or business sector due to fires, earthquakes and other disasters have negative effect on household Income amounting to 0.1434 households and was statistically significant at level 5 percent, with the greatest influence in rural areas. This finding is consistent with previous studies in Indonesia which show that household income shock or business sector due to fires, earthquakes, and other disasters negatively affect the welfare of households, especially in rural areas than urban areas (Gignoux and Menéndez, 2012). This condition is largely due to domestic life in the countryside which is inseparable from the unpredictable events leading to adverse consequences. One example is the high volatility of income heavily dependent on the agricultural sector which is vulnerable to climate change or weather. Also, households in rural areas rely heavily on individual businesses and family agricultural business to sustain the economy of the household (Newhouse, 2005).

The interaction between a nonfarm business owned by the household with lower household income or business sector due to fires, earthquakes, and other disasters have a positive effect amounting to 0.2587 against the household income and are statistically significant at the 5 percent level. Furthermore, the interaction of a positive effect is apparent especially in rural

areas compared to urban areas. Thus, households with no business in agriculture are relatively capable and experienced in anticipation of such shocks than those who have a business in the field of agriculture. These results are consistent with previous studies in rural areas of Africa which show that the boost factor such as shock household, seasonal factors in agriculture and surplus labor force in rural areas are the deciding factor of households in rural areas to conduct non-agricultural business (Nagler & Naude, 2014).

Interactions between crop loss and the value of farm land negatively affect the value of agricultural land, especially in urban areas. This result is consistent with previous research that showed the interactions between crop loss and the value of farm land negatively affects household income level (Cameron and Worwick, 2001). Other transitory income components that affect the household income was the period in 2000. Meanwhile, other temporary income components that are crop loss, sickness, and income decline due to falling prices, sick head of the household or its members did not show a statistically significant effect on the level of household income. This reflects that during the period 1997 and 2000, households tend to anticipate the various types of shocks.

Meanwhile, permanent income component showed that the shock of the death of the head of household or household members positively effect household income, but did not show statistical significance. Furthermore, the number of household members negatively affects household income, both in rural and in urban areas. The estimation results indicate that the decline in household income from the number of household members is generally more prevalent in rural areas than urban areas. These findings indicate that the greater the number of household members, the bigger the burden of households due to higher levels of consumption and reduced household income. This result is consistent with previous studies showing that the greater the number of household members, the lower the level of household income (Newhouse, 2005).

The nonfarm business owner had a positive effect on the income level of households, both in rural and urban areas. The estimation results indicate that households with nonfarm businesses have a positive influence on household income, both in rural and urban areas. This finding confirms that nonfarm businesses have an essential role in contributing to household income. These results are consistent with studies in rural Africa which show that the role and contribution of non-agricultural companies, especially in rural areas, is quite significant and impact labor and income growth in rural areas (Haggblade, Hazell, & Brown, 1989).

The total revenue from the rental/leasing or profit sharing that comes from nonfarm business for 12 months showed a positive effect on household income. Estimates indicate that the total income from the rental/leasing or profit sharing of non-agricultural businesses in urban areas has greater influence than the countryside. The total income derived from agricultural lands for 12 months has a positive effect. This confirms that the total income of agricultural land during the 12-month positively affect household income, both in rural and urban areas. Furthermore, the total income derived from livestock, poultry, and fish kept by the households positively affect household income. These results are consistent with previous studies in Indonesia which state that the total income of livestock, poultry, and fish, positively affect household income (Newhouse, 2005).

**Table 2**  
**Estimation of Income Equation**  
**Dependent variable: Log Per Capita Household Income**

Independent variables	Full Sample (1)	Rural (2)	Urban (3)
<b><u>Transitory Shock Variables (Y<sup>T</sup>)</u></b>			
Crop loss (yes=1)	0.0069 [0.0184]	0.0024 [0.0216]	-0.0278 [0.0377]
Sickness (yes= 1)	0.0059 [0.0219]	0.0099 [0.0366]	-0.017 [0.0242]
Disasters (yes=1)	-0.1434** [0.0625]	-0.1902** [0.0885]	-0.0486 [0.0960]
Price fall (yes = 1)	0.0128 [0.0243]	0.0178 [0.0310]	0.0376 [0.0329]
Unemployment (yes= 1)	-0.0143 [0.0343]	-0.0439 [0.0501]	0.0038 [0.0414]
Crop loss * Farm land	-0.001 [0.0056]	0.0055 [0.0073]	-0.0140* [0.0075]
Nonfarm business entirely owned by the household * Disasters	0.2587*** [0.0777]	0.3957*** [0.1326]	0.1479 [0.1092]
Year dummy (2000=1)	0.0296*** [0.0112]	0.0336** [0.0168]	0.0194 [0.0142]
<b><u>Permanent Shock Variables (Y<sup>P</sup>)</u></b>			
Death (yes=1)	-0.0075 [0.0199]	0.0210 [0.0299]	-0.0413 [0.0286]
Household size	-0.1371*** [0.0088]	-0.1610*** [0.0125]	-0.1251*** [0.0096]
Household size squared	0.0007*** [0.0001]	0.0009*** [0.0001]	0.0006*** [0.0001]
Nonfarm business entirely owned by the household (yes=1)	0.0899*** [0.0173]	0.1093*** [0.0286]	0.0772*** [0.0217]
Nonfarm business (log)	0.0105** [0.0042]	0.0116 [0.0089]	0.0093** [0.0038]
Household assets (log)	0.0004 [0.0020]	-0.0036 [0.0045]	0.0014 [0.0021]
Farm land (log)	0.0100*** [0.0033]	0.0086* [0.0046]	0.0109** [0.0043]
Livestock (log)	0.0125** [0.0056]	0.0099 [0.0063]	0.0197*** [0.0071]
Constant	7.8575*** [0.2646]	8.3582*** [0.3733]	7.6657*** [0.3452]
R <sup>2</sup>	0.6968	0.703	0.7129
N	16020	8689	7331
F	114.8465	70.4437	67.3528

Note : Robust standard errors in parentheses. Estimation includes household fixed effects, head employee (unpaid family worker, government worker and private worker), education of household head (primary, junior secondary education, senior secondary education and university), household have a television (yes=1), home ownership status (self-owned =1), household head has its own toilet (yes =1 ), household utilize electricity (yes =1)

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

### School Transition Model

In determining the right model for school transition, the Hausman test is done. The test results of Hausman against school transition in Table 3 show unobserved heterogeneity contained in the model. Thus, if the estimation is done using the logit, it is not appropriate because it would produce a biased, inefficient and inconsistent result. Therefore, the right model estimates are

conditional logit or fixed effect logit. Also, the results of other Hausman test shows that the fixed effect logit models are more precise than the random effect logit models to estimate the school transition. In identifying the existence of perfect credit markets and borrowing constraints, the Wald test is done. The Wald test showed that the school transition occurs lending constraints and imperfect market presence.

**Table 3**  
**Estimations of School Transition**

Independent variables	Dependent Variable : School Transition, yes =1, 0 = no					
	Transition from Primary to Junior Secondary Education			Transition from Junior to Senior Secondary Education		
	Logit	RE Logit	FE Logit	Logit	RE Logit	FE Logit
	(1)	(2)	(3)	(4)	(5)	(6)
<b><u>Income Variables</u></b>						
Transitory Income	3.2888*** [0.9181]	3.3580** [1.6946]	1.071 [2.0045]	3.2699*** [0.9113]	3.6158** [1.6428]	1.4033 [1.9211]
Permanent income	0.0372* [0.0216]	0.2133*** [0.0469]	0.3602*** [0.0945]	0.0364* [0.0214]	0.2052*** [0.0452]	0.3208*** [0.0913]
Residual Income	0.0674 [0.0833]	0.1317 [0.1361]	0.0471 [0.1613]	0.0545 [0.0831]	0.0981 [0.1318]	0.0073 [0.1625]
<b><u>Gender Variable</u></b>						
Sex (girls=1)	-0.0176 [0.0470]	0.1396 [0.0875]	0.2303** [0.1036]	0.0129 [0.0466]	0.1735** [0.0848]	0.2524** [0.1009]
<b><u>Number of Siblings</u></b>						
Number of younger sibling	-0.1567*** [0.0344]	-0.2184*** [0.0710]	0.0451 [0.1022]	-0.1777*** [0.0336]	-0.2410*** [0.0682]	0.0018 [0.0983]
Number of older sibling	-0.0303 [0.0338]	-0.0375 [0.0686]	0.1393 [0.1097]	-0.0306 [0.0335]	-0.0459 [0.0664]	0.0858 [0.1066]
<b><u>Control Variables</u></b>						
Number of children working	-0.4729*** [0.0295]	-0.6887*** [0.0624]	-0.3096*** [0.0802]	-0.4778*** [0.0294]	-0.6870*** [0.0603]	-0.3206*** [0.0773]
Father's education (year)	0.0724*** [0.0069]	0.1030*** [0.0150]	0.0183 [0.0227]	0.0702*** [0.0068]	0.0962*** [0.0143]	0.0190 [0.0215]
Mother's education (year)	0.1297*** [0.0080]	0.2552*** [0.0183]	0.2241*** [0.0280]	0.1270*** [0.0079]	0.2446*** [0.0175]	0.2142*** [0.0265]
Constant	-9.6433*** [2.5723]	-10.5233** [4.7517]		-7.0235*** [2.5514]	-6.8024 [4.6050]	
Total number of observation	16020	16020	7572	16020	16020	7656
Prob>Wald Statistic	0.0004***	0.0000***	0.0006***	0.0004***	0.0000***	0.0017***
Hausman $\chi^2$ : Logit vs FE Logit			0.0000***			0.0000***
Hausman $\chi^2$ : RE Logit vs FE Logit			0.0013***			0.0000***

Note : Standard errors in parentheses. Estimation includes household fixed effects, child age, rural dummy, year dummy (2000=1)

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

School transition is important as the level of progress in education in Indonesia. Estimates in Table 3 show that permanent income has a positive effect on the probability of a child to attend school from the primary (SD) to junior secondary education (SMP) of 0.3602 and are statistically significant at the 1 percent level. This means that an early permanent income shock will have a larger effect upon parental investment (and therefore child outcomes) than one realized later in the child's lifetime and the effect of permanent household income shocks is significant and decreases in older childhood, as predicted by the permanent income hypothesis (PIH) (Chevalier et al, 2013; Tominey, 2010). The same thing happened in secondary education, where permanent income has a positive effect on the transition rate from junior to

senior secondary education. This indicates that the permanent household income is vital to the probability of a child to attend school or school transition than transitory income.

Girls have a positive effect on the probability of attending school at junior secondary education (SMP) and senior secondary education (SMA). Estimates show that girls experienced an increase in continuing education, especially at senior secondary education level. It is not separated from the presence of gender disparity in proceeding from primary to junior secondary education between boys and girls which is greater than the transition rate from junior to senior secondary education. This finding is consistent with studies in Indonesia, which states that girls have a low probability to continue their education at junior secondary education than boys (Suryadarma, Sumarto & Suryahadi, 2006). The number of children working in a household has a negative effect on the probability of children in school, both to junior or high secondary education. This condition indicates that the child's school transition rate will decline in line with the parent's decision to involve their children to work. These findings indicate that children who spent more time to work, including helping parents to raise household income, will have little chance to get an education, so it is likely to be lower in school. The mother's education has a positive influence on the probability of transition from primary to junior secondary education, even to senior secondary education. Meanwhile, the father's education positively affects the level of transition or to continue school, but did not show a statistically significant mark. This indicates that the role of the mother's education is important to a child's education transition process. Based on estimates indicate that the mother has the bargaining power position than the father in the decision of children to schools in the basic education level. This finding supports studies conducted in Indonesia, where the mother's education is more dominant in deciding their children to school at the primary level.

**Table 4**  
**Estimations of School Transition With Gender Interaction**

Independent variables	Dependent Variable : School Transition, yes =1, 0 = no	
	Transition from Primary to Junior Secondary Education	Transition from Junior to Senior Secondary Education
	FE Logit	FE Logit
	(1)	(2)
Transitory Income * Sex (girls=1)	-0.2213 [1.1413]	-1.0196 [1.1073]
Permanent income * Sex (girls=1)	0.1963* [0.1078]	0.1947* [0.1052]
Residual Income * Sex (girls=1)	0.2313 [0.3888]	0.2071 [0.3819]
Transitory Income	1.2597 [2.0628]	1.9065 [1.9739]
Permanent income	0.2849*** [0.1057]	0.2468** [0.1014]
Residual Income	-0.0078 [0.2031]	-0.0430 [0.2028]
Total number of observation	7572	7656
Prob>Wald Statistic	0.0004***	0.0009***

Note : Standard errors in parentheses. Estimation includes household fixed effects, child age, rural dummy, year dummy (2000=1), sex (girls=1), number of younger sibling, number of older sibling, number of children working, father's education (year), mother's education (year)

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Meanwhile, in Table 4 show that in (1) and (2), permanent income has a positive effect and statistically significant at the 10 percent level. This indicates that as permanent income increases, the probability of girls continuing education will increase and vice versa. These

findings indicate that when household income is faced with shocks constraint conditions of loans and credit market imperfections, girls tend to be used as a coping strategy to support private consumption in doing consumption smoothing, especially transition from primary to junior secondary education. This is consistent with earlier studies showing that in the event of shocks, households try to reduce the expenditure of the children's education, especially girls to make consumption smoothing (Cameron & Worswick, 2001). This implies a low probability of girls with school enrollment compared to boys. These results are in line with Dreze & Sen (2011) which showed that households generally prioritize the education of boys than girls in difficult conditions or situations.

### **CONCLUSION AND POLICY IMPLICATION**

There are several findings from this research that can be inferred. First, on an ongoing basis, permanent income households have long-term consequences of the decision-making process in the school transition from primary to junior secondary education (SD to SMP) and from junior to senior secondary education (SMP to SMA). Second, girls have a positive effect on the probability of attending school at junior secondary education (SMP) and senior secondary education (SMA). Furthermore, when household income is faced with shocks constraint conditions of loans and credit market imperfections, girls tend to be used as a coping strategy to support private consumption in doing consumption smoothing.

Government policies that can be done to increase the transition schools are giving scholarship program for basic and senior secondary education, particularly from households lacking or not able to pay for school supplies so that students do not drop out of school due to economic difficulties. Thus, students have more opportunities to stay in school and continue their education to the next level. Policies that prioritize girls to be given wider access to education so that gender bias in education can be minimized. However, government efforts can be achieved if there is a change of household perception about the role and position of girls in the family and society because of socio-cultural and economic factors. Thus, there is also a need for public policies through government transfer programs to enhance the role of women empowerment and to participate in school decision-making in the household or family. Finally, the limitations of this study are the variety of economic shocks reported or self-reported as transitory components. The weakness of the use of self-reported economic shocks as transitory component is the emergence of its own reporting bias. Thus, further studies are expected to take into account information from rainfall as transitory components for more exogenous economic shocks than the self-reported.

### **REFERENCES**

- Alderman, H.A et al. (1997). "The Income Gap in Cognitive Skills in Rural Pakistan". *Economic Development and Cultural Change* 46 (1997): 97-122.
- Bergstrom, et al (2003). "Use of Chamberlain Fixed Effects Approach To Estimate Willingness-To-pay For Little Tennessee River Basin Management Alternatives". Selected Paper, *Southern Agricultural Economics Association Meeting*,
- Black, S.E., & Kenneth L. S. (2006). "Long-Term Trends in Schooling: The Rise and Decline of Public Education in the United States." *Handbook of the Education of Economics, Volume 1*, Eric Hanushek and Fins Welch, eds., Elsevier.
- Cameron, L & Worswick, L (2001). "Education Expenditure Responses to Crop Loss in Indonesia: A Gender Bias. University of Chicago.

- Chamberlain, G. (1980): "Analysis of Covariance with Qualitative Data," *Review of Economic Studies*, 47(1), 225-238.
- Chevalier, A et al (2013). "The Impact of Parental Income and Education on the Schooling of Their Children". *IZA Journal of Labor Economics*. Springer Open Journal.
- Dreze, J & Sen, A. (2011). "Hunger and Public Action. *WIDER Studies in Development Economics*". Oxford: Oxford University Press.
- Gignoux, J., & Menéndez, M. (2012). "Critical Periods and The Long-Run Effects of Income Shocks on Education: Evidence From Indonesia". Paris School of Economics 48, boulevard Jourdan 75015 Paris, France
- Goldin, C (1999). "Egalitarianism and the Returns to Education during the Great Transformation of American Education." *Journal of Political Economy*, 107(6): S65-S94
- Haggblade, S., Hazell, P., & Brown, J. (1989). Farm-Non-Farm Linkages in Rural Sub-Saharan Africa. *World Development*, 17 (8):1173–1201.
- Jacoby, H., & Skoufias, E. (1997). "Risk, Financial Markets, and Human Capital In A Developing Country". *Review of Economic Studies* LXIV, 311 – 335
- King, E. (2009). "The Global Economic Crisis, Education, and Development Partnerships ". Keynote Presentation at the HDN-WBI Course on Innovations in Partnerships, September 21, 2009, Washington DC.
- Levhari, D., & Weiss, Y. (1974). "The Effect of Risk on the Investment in Human Capital" *American Economic Review* 64, 950-963
- McKenzie, D.J. (2003). "How do Households Cope With Aggregate Shocks? Evidence From the Mexican Peso Crisis". *World Development*, Vol. 31, No. 7, pp. 1179-1199
- Newhouse, D. (2005), "The Persistence of Income Shocks: Evidence from Rural Indonesia", *Review of Development Economics*, 9(3), 415-433
- Paxson, C. H. (1992) "Using Weather Variability to Response of Savings to Transitory Income in Thailand. *American Economic Review*, Vol 82 No.1 (Mar. 1992).
- Sawada, Y. (2003). "Income Risks, Gender and Human Capital Investment in a Developing Country", *CIRJE Working Paper F-98*
- Suryadarma, D., Sumarto, S., & Suryahadi, A (2006). "Causes of Low Secondary School Enrollment in Indonesia". Jakarta: SMERU
- Thomas et al. (2004). "Education in a Crisis." *Journal of Development Economics* 74(1)
- Tominey, E. (2010). "The Timing of Parental Income on Child Outcomes: The Role of Permanent and Transitory Shocks". Centre for the Economics of Education London School of Economics. Houghton Street. London WC2A 2AE

World Bank. (2006). *“World Development Report 2007: Development and Next Generation”*.  
The World Bank, Washington DC

# Measuring Nation Branding as Perceived by SMEs

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## **Abstract**

The purpose of this paper is to test the proposed modified hexa-dimension of Anholt Nation Brand (ANB) as perceived by small medium-sized enterprises (SME), namely, export standard products, governance, living condition, cultural differences, tourism and investment condition. Whilst ANB focuses on the dimensions of politics, culture, people and commercial assets, investment and tourism potential that shape the brand of a nation; this study has explored the different elements that build the brand of a nation as perceived by SMEs. This paper is one of the very few empirical examinations that tests a multiple-item scale using structural equation modeling to measure nation branding. The validity and reliability tests have shown that the nation branding as perceived by SMEs is a six-factor construct. This paper also signifies an additional step in improving nation-branding measurement for capturing the attractiveness of the nation as part of building the nation branding

**Keywords:** *nation branding, Anholt Nation Brand, measurement*

## **INTRODUCTION**

Having a strong brand in the minds of consumers is the dream of all companies. However, having a strong brand for a nation as a reflection of nation branding is a challenge. A strong product brand is not always supported by a strong nation branding. Building a nation branding requires a very comprehensive approach. However, Anholt (2006) said that a very strong brand embedded in the minds of consumers for a product can give effect to build city branding, regional branding and even nation branding. Building nation branding is important for a wide range of stakeholders, such as academics, intellectuals, businessmen, government officials, the public and politicians (Rufaidah, 2007). This issue has become an interesting topic to be studied and developed from various perspectives on a multidimensional basis since the last two decades.

Positive nation branding is one element that can move a country's economy (Zeineddine, 2017). A nation branding campaign can affect the image of a country and have a positive impact on the tourism industry and form a positive perception of the country (Anca-Georgiana Andrei, 2017). Developing countries take advantage of mega-sporting events to build their nation branding (Knott, Fyall & Jones, 2017). Nation branding influences travelers' travel plans and purchase intentions. Research shows that a positive nation branding forms a customer commitment, which in turn positively affects consumers' traveling intentions (Wu, 2017). Another unique feature of positive nation branding benefits is that nation branding is a tool used to legitimize the market for the nation's imaging services (Browning, 2016).

However, controversy also occurs, where some opinions say that nation branding is criticized for leading to homogenization and depoliticizing the identity and interests of the nation (Cassinger et al., 2016). A number of benefits gained from a positive nation branding impact on the application of marketing communication techniques to promote the image of the nation (Ahn & Wu, 2015). As an illustration, a visual analysis of marketing campaigns conducted for products and companies has an implication of forming a preferred nation branding (Uçok-Hughes & Bagramian, 2013). The concept of branding aims to create a strong nation branding to enhance national product brands, as well as the image of a positive state that affects the attractiveness of foreign direct investment and increase exports (Raftowicz-Filipkiewicz, 2012). The formation of a nation branding has a challenge, because it is formed through the union of a number of constituents and each demands equal attention (Ntamu, 2011). Another element forming a nation branding, apart from economic, social and cultural elements, is democracy.

A decade ago, it was stated that it is important to understand that nation branding is not only for foreign consumption (Tatevossian, 2008). Tatevossian (2008) sought to explore the often-overlooked interconnectedness between civil society and the formation and projection of national brands. The main

criticism is that while the brand must speak with the voice of the people, and people with the voice of the brand, nation branding does not allow citizens to play an important role in the branding process (Widler, 2007). Finally it can be said that nation branding can be interpreted as a response to a particular problematization of the nation itself and how to lift it into a strong identity as a nation branding (Dzenovska, 2005).

A simple but challenging question inspires Kemming & Humborg (2010), asking whether democracy is a good or bad thing for a nation branding establishment. The question certainly needs an answer, like other questions to explore such as what are the dimensions that can shape a positive nation branding in the minds of its stakeholders. The analysis shows that over the years, the nation's marketers use three types of strategies: focusing on the source, on the message and on the target audience (Avraham, 2009). Based on the three types of nation branding strategy, this research focuses on the target audience of SME's business owners who are asked whether they have perception on a number of Indonesia's nation branding. Nation branding consists of developing images and communicating them, both internally and externally, based on the positive values and perceptions of a country relevant to the development of various activities (Domeisen, 2003). To illustrate, the following activities have been measured to form nation branding by Anholt (2002): exports activities, governance, culture and heritage, investment and immigration, people and tourism.

The following section explains the elaboration of nation branding concept by examining the existing literature. The proceeding section describes the quantitative part in exploring nation branding scale. Lastly, the study provides a conclusion.

## **LITERATURE REVIEW**

### **Definition**

Nation branding is an emerging communication at the convergence of varied field such as management, tourism, and the social and political sciences (Knott, 2017: 900). Nation branding is a contemporary, transnationally circulating practice, the latest feature of imagined nation making in history of nations (Valaskivi, 2017:139). Nation branding is defined as conscious attempt to project a clear, consistent, and ideologically dominate identity of a nation (Olins, 2004 in Hurn, 2016:80).

Nation branding is a process to create, monitor, evaluate, and proactively manage nation's image to improve reputation of a nation among a target international audience (Fan, 2010:10). Nation branding is a country's whole image on the international stage, covering political, economic, and cultural dimensions (Fan, 2010:98). Nation branding is something to determine the most realistic, competitive, and compelling strategic vision for the country, ensuring that this vision is supported, backed up, and enriched by every act of communication between the country and the rest of the world (Anholt, 2003:11 in Knott et al., 2016:106).

Nation branding is depicted as having potentially independent effect by helping to develop nations to gain control over their fates (Browning, 2016:54). Nation branding is something that a country actively does. Countries can try to alter external reputation and image by engaging in a nation branding activities full of goals to improve their reputation (Fan, 2006). Nation branding provides countries with a framework to express their core strengths and values in an effective and concise manner (Anholt, 2002). Nation branding is a process of nation's images to be created or altered, monitored, evaluated, and proactively managed to enhance the reputation of a country among a target audience (Fang, 2008:101 in Ishii and Watanabe, 2015:51).

Nation branding is a process consisting of a long-term building of a country's brand, its reputation and renown as well as an effective management of its value, so that it can foster actions to increase the competitiveness of a country (Raftowicz-Filipkiewicz, 2013:50). Nation branding is often conceptualized as national image management and - similar to many definitions of place branding - image promotion is being identified by central function (Szondi, 2017:334). Nation branding as the reputations of countries are rather like the brand images of companies and products, and equally important (Anholt, 2007). Nation branding is the exceptional multi-dimensional blend of things that support a nation with cultural-based differentiation and relevance to the targeted audience (Dinnie, 2009: 15 in Knott, et al., 2015: 47). Nation branding is a process of creating, monitoring, and controlling nation's images to improve or make the reputation of a country better among the international audience as the target (Fan, 2010:101). Nation branding is a wide set of activities conducted by government and related stakeholder that are designated for marketing and increasing visibility of a place (Papadopoulos, 2004 in Avraham 2018: 2).

This research avoids the controversy of the terms country of origin, country branding, place branding, city branding and regional branding. The research focuses on the analysis of literature that explores thoroughly the dimension of nation branding and its application in research. In particular, this study measures the perceptions of SMEs' business owners based on the dimensions of a modified nation branding from Anholt Nation Brands Index. Furthermore, due to lack of scientific instruments to measure nation branding for the SMEs, this study aimed to propose a modified measurement scale of nation branding for SMEs' business owners.

## **Dimension**

Qobo (2017) examined the regional dimension of brand value and South African leadership. A region can be an important platform for establishing nation branding by projecting their regional ideas, norms and leadership. For example, the ideas, norms and leadership of the mayor of London can be one of the nation branding builders for the UK. Thus, an area can build their brand equity. Qobo (2017) examined the kinds of norms that South Africa projects through the region, and understands how this is perceived. Furthermore, he analyzed the dominant ideas articulated by South Africa. The dimensions of nation branding that became his focus were identity, culture and values. Qobo's research (2017) shows four important points. First, nation branding must explicitly become part of the foreign policy of a country. Second, the lack of awareness in building a nation branding limits the potential benefits that can be extracted from the country. Third, nation branding faces challenges when used as an imaging effort of the nation, which only focuses on the role of leadership and the city brand. Fourth, foreign policy on nation branding can improve the position and role of a country in the world.

Knott et al. (2017) identified the unique characteristics of mega-sporting events that are used to form a nation branding. Their research shows that the dimension of nation branding is stressed by the scale of events that can form: opportunities for transformational development; global appeal, connection and attachment to the event; and the symbolic status of events used to build internal brands and public diplomacy. Their research used interpretive and qualitative methods and explored the insights of stakeholders and national experts, through semi-structured in-depth interviews conducted two to three years after the event's performances.

Research done by Papadopoulos et al. (2016) explored the role of nation branding in attracting foreign direct investment (FDI). The dimensions of nation branding used in their research were the role of decision makers in contributing in the building of nation branding from FDI perspective and the role of decision makers in considering the opportunities and challenges of FDI in establishing a nation branding. Papadopoulos et al. (2016) based their research on a systematic and integrative review of several schools of thought in relevant nation branding literature, from the theory of decision-making in FDI. They subsequently conducted an analysis of the similarities and differences between advertising, promotion, branding and marketing for investment with the establishment of nation branding.

Hurn's (2016) research shows the results of an investigation of the importance of effective cultural diplomacy in increasing the influence abroad, both commercially and politically. His issue has similarities with the formation of nation branding. The formation of influence abroad involves the role of institutions that play a role in cultural diplomacy. It becomes a medium in nation branding as a form of "soft power". Hurn (2016) states that the nation branding dimension consists of the process of designing, planning and communicating the name and identity of a country, while the dimensions of cultural diplomacy are foreign, political and economic.

Valaskivi (2016: 139) compared the Finnish-Swedish branding strategy documents (2005-2013). His research shows that the two countries' strategies have a remarkable resemblance to each other because of the cultural closeness between them. Nation branding by Valaskivi (2016) is a contemporary, transnational practice that circulates the latest feature of the creation of the nation image in the global history of nations. Nation branding is a national imaging paradox, because it provides a way to build the uniqueness or differentiation of a country. This concept was adopted by many countries because other countries have done it. As a practice, nation branding is a mode of governance that circulates a performance needed for modern countries to adopt ways of maintaining their status as a competitive nation in global economic competition.

Browning (2016: 54) argued that according to consultants, nation branding can be formed on the basis of various information such as underdevelopment and inequality of a country on a global level, and at a significant level, nation branding is formed on the negative image of a product offered by a charity and in order for the development of an industry. This practice becomes a barrier to the continuous development of investment in a country. The nation branding strategy actually offers a

much better solution for tackling the problem of a country's backwardness image when done appropriately. The practice of nation branding formation is done in hereditary and oriented status quo. The development of a nation branding requires commodification, which disturbs the identity of a country, not only based on cultural elements but can be associated with a number of identities that can reflect that a country has a 'good governance'. Finally, Browning (2016) argued that the dichotomy which occurs between aid and nation branding can not be separated. The formation of a nation branding in the form of, for example, assistance for a country from a particular country becomes a tool to legitimize the market of a product as a service of a country.

Ishii and Watanabe (2015: 51) explored the relationship between the nation's brand personality and product evaluation. An online questionnaire survey was conducted in Japan using the quota sampling method (N = 880), aimed at evaluating various types of products (leather shoes, smartphones, films, cars, shirts, mineral water and tour preferences) to respondents from China, Germany, India, Italy, the United States, South Korea and Vietnam. Factor analysis was used to generate three dimensions of the nation's brand personality (sincerity, competence and warmth), two of which were predicted by stereotypical content models. Based on the three dimensions of nation's brand personality, all dimensions produce the lowest score for respondents from China, and the Chinese brand personality is most negatively correlated with consumer ethnocentrism among the seven countries. The nation's brand personality is correlated with the evaluation of the product in different ways depending on the product category. Competence is positively correlated with the evaluation of all products, whereas warmth is positively correlated with product and film-related evaluations of fashion. Sincerity is positively correlated with the evaluation of high-tech products and mineral water. The most powerful travel preferences are correlated with the nation's fondness. This article discusses the implications of a nation branding strategy based on these findings.

Szondi's research (2017: 334) aims to contribute to the progress of the theory of nation branding with a particularity as a public relations practice (PR). Building relationships is proposed as a new framework of nation branding, which can replace the current dominant image management of place branding and nation branding. Szondi delivered a critical review of the definition and conceptualization of nation branding. The role of public relations in place branding literature is reviewed, followed by a synthesis of the core model and PR concept of nation branding. Szondi argued that image management contrasts with relationship management in the context of nation branding. Dinnie and Melewar (2013: 5) argued that nation branding research has been done by many experts in this field. Aspects embodied in the concept of nation branding, nation branding personalities, co-branding, indigenous identity and country image are topics of interest to be studied. They explore the role of leadership, mega-events, government competence, tourism and media as part of the nation branding builder.

Gupta et al. (2018) investigated how the attributes of a country through the depiction of cinema form a tourist attraction for the consumer. The contribution of their research is the role of cinema as one of the constituents of place branding. Their research results show that nation branding is influenced by a number of attributes such as infrastructure, culture, politics, social, and environment. The personal characteristics of travelers are used by Gupta et al. (2018) as moderators, and the results show that travelers positively see the attributes of this country through the lens of their own experiences. As a practical implication, these findings are valuable to state managers at the diverse array of companies in various industries responsible for building their country's brand image. Kam and Tse (2018) undertook the most recent research on the unintentional formation of nation branding through the phenomena of the legal system imposed by states. They argued that most of the research on nation branding in the literature focuses on designed-nation-brand. They argue that FDI is one of the decisive factors that make up a nation branding. They classified 193 countries according to Colonial History into 5 legal families. By applying the Generalized of Moments Method (GMM) to a set of panel data, their empirical evidence suggests that legal families play an instrumental role in explaining FDI activities.

Avraham (2015) examined the process of establishing nation branding using marketing strategy through a number of stereotypes associations for a country. He used the "multi-step model for altering place image," which is included in image repair theory, to test strategies used by countries around the world in the face of negative perceptions and stereotypes of a country. His research utilized quantitative and qualitative content analysis of seven ads produced in forty-seven countries, including print ads, TV commercials and YouTube videos. The results of his research indicate that there are three types of strategies that marketers use to combat national stereotypes. First, the source of the message (personal testimony, blaming the media), the message conveyed (broadening narrow imagery, the use of

celebrities) and the audience receiving the message (emphasis on similar values, cultural and geographic symbols, changing the target audience).

Based on the aforementioned discussion about the dimension of nation branding, this study modifies the measurement to form nation branding by Anholt (2002) particularly in the indicators that measured the dimension. The name of five dimensions that shaped the nation branding is maintained (export activities, governance, cultural condition, tourism destinations and investment condition) while the last dimension is named differently than that of Anholt's dimension that is living condition.

## **Measurement**

This study is a small part of an integrated study that examines the role of competitive advantage through market orientation toward nation branding. To validate the proposed nation branding scale, this study adopted the Hinkin's (1995) consideration in the development of measurement scale, which provided solutions to the problems faced in scale development. However, this study also followed several stages of measurement scale development from Churchill (1979). The Churchill's scale development is recognized as one of the most comprehensive methods and has been used by marketing experts (Rufaidah, 2016a, 2016b, 2017a, 2017b). This study modified the dimensions used by the Anholt Nation Brand Index (ANBI), the first analytical rank of the world's nation branding. ANBI is better known as the Nation Brand Hexagon as it consists of six dimension of nation branding components. ANBI provides the measurement information in the form of consumer ratings from all 35 countries based on the character and personality of the country as a brand. Nation brand is the number of people's perceptions of a country in six areas of national competence. ANBI is conducted quarterly, through collecting consumer panels from 35 developed and developing countries. Respondents were asked about their perception of a country based on exports activities, governance, culture and heritage, investment and immigration, people and tourism.

This study used the modified definition in defining the above-mentioned six dimensions of nation branding. Export activities are defined as the public's images of products and services from each country and the extent to which consumers proactively seek or avoid products from each country-of-origin (p. 39). Governance activities as part of the nation branding dimension measure public opinion regarding the level of national government competency and fairness and describe individuals' beliefs about each country's government, as well as its perceived commitment to global issues such as democracy, justice, poverty and the environment (p. 39). Cultural condition reveals global perceptions of each nation's heritage and appreciation for its contemporary culture, including film, music, art, sport and literature (p. 39). People are defined as the population's reputations for competence, education, openness and friendliness and other qualities, as well as perceived levels of potential hostility and discrimination (p. 39). Investment conditions are the power to attract people to live, work or study in each country and reveal how people perceive a country's economic and social situation (p. 39). Tourism is the level of interest in visiting a country and the draw of natural and man-made tourist attractions (p.39).

The first ANBI dimension is measured through exports activities conducted by a country. This dimension explains consumer perceptions based on their level of satisfaction with products and services of each country. This dimension also measures consumer perceptions of the contribution of each country in accelerating science and technology. This study measures the dimensions of export activities based on three indicators namely: Whether the respondent agreed on the opinion that Indonesian-made products such as fashion products are known as export-quality products (NB-E-1); Indonesia is known as a country capable of producing quality branded products, e.g. Nike Shoes known as US brand products manufactured in Indonesia (NB-E-2); Products made in Indonesia are not inferior to its image with similar products from other countries (NB-E-3).

The second ANBI dimension is measured through the rating of the country's governance assessed by respondents. This dimension explains state ranking according to how competent and fair they are governed, how much they respect the human rights of their own citizens, the extent to which they trust them to make responsible decisions that uphold international peace and security, and what contribution their international relations make to environment and poverty reduction. ANBI provides information that best describes the government in each country based on respondents' assessment. While in this study, governance dimension is measured based on three indicators namely: whether the respondent agreed on the opinion that Indonesia is a democratic country (NB-G-1); Indonesia is perceived as an open country (NB-G-2); Indonesia is perceived as a country that can uphold justice well (NB-G-3).

The measurement of cultural and heritage as the third ANBI dimension is done by measuring perceptions of the country's cultural heritage, as well as people's appreciation of contemporary culture such as film, music, art, and literature. In addition, measured perceptions of the country's sporting excellence and cultural activities are most expected to exist in every country.

The third dimension of this study, i.e. cultural condition, measures the perception of small-scale business owners to the extent that Indonesia is perceived as a country rich in arts and culture (NB-CC-1), Indonesia is perceived as a country that preserves diverse customs (NB-CC-2); and Indonesia is perceived as a country tolerant of cultural differences (NB-CC-3).

The fourth ANBI dimension, i.e. people, is measured through the views of respondents about people in the country which will make them feel welcomed; the country's reputation for openness and friendliness; and fear in the face of prejudice and discrimination. While in this study, the fourth dimension namely living condition, measures respondents' perceptions based on their level of agreement on whether the cost of living in Indonesia from day to day is more expensive (NB-LC-1), whether Indonesians are known for being easy to provide assistance when needed (NB-LC-2); and whether Indonesia is known as an ideal country to live (NB-LC-3).

The fifth ANBI dimension, i.e. tourism, is often the most prominent aspect of forming a nation branding. The dimension has a disproportionate influence on people's perceptions of the nation as a whole. This dimension is measured by asking questions about tourism potential: how likely people will visit a country if money is not an issue; if the nature is beautiful and if the historical heritage is rich. Then, the respondents are asked the selection of words to describe the experiences they thought they would have when visiting each country.

While in this study, the fifth dimension, i.e. tourism, is measured by asking the respondent's opinion about the level of their impression about: whether the tourism destinations in Indonesia are as classy travel destinations (NB-T-1); Indonesia is perceived as a pleasant tourism destination (NB-T-2); and whether Indonesian people are known as a friendly people (NB-T-3).

The last ANBI dimension is the power of the state to attract people and economic capital. This dimension is measured by asking respondents to give scores or assessments of their willingness to live and work for long periods of time in the country they assessed. In addition, people's attitudes toward immigration are measured; these factors are characterized by various factors as well as the possibility of finding employment in the country and the overall appeal of the country as a residence.

The last dimension of this research is the investment condition. This dimension is measured through the perception of business owners by asking whether Indonesia is an ideal country to invest for other countries (NB-IC-1); whether Indonesia is a country that offers opportunities for entrepreneurship (NB-IC-1); and whether Indonesia's economic condition is stable enough to invest (NB-IC-1).

## **RESEARCH METHOD**

Research methods adopted in this study are descriptive and explorative methods. Descriptive research aims to describe the specific phenomena studied (Malthora, 2010) such as, the description of the perception of SMEs evaluating the elements of Indonesia's nation branding in the perspective of respondents as business owners. Data of research respondents were obtained from the Office of Cooperatives and Small Enterprises (OCSE) of West Java Provincial Government, which fostered business owners of SMEs in 27 cities and districts. Research data were collected by using questionnaires distributed to respondents between the month of February until June 2018. The measurement scale used was Likert scale ranging from one to five, where 5 represented "strongly agree" and 1 represented "strongly disagree".

The sampling procedure used for this research was random sampling. A total of 228 SME business owners were randomly chosen. The number of research samples was determined based on the opinion of Hair et al. (1998): Research that is processed by using structural equation modeling requires at least five observations. To that end, 228 respondents used in this study have exceeded the minimum requirements to produce reliable and substantial statistical results. Full participation of the respondents in the study marks the advantage for this study, as the author was involved as an instructor of training organized by the OCSE in the program of New West Java Entrepreneurship during the period 2014-2018.

During the training session, the author had the chance to present the research plan to target respondents and asked their participation to fill out the questionnaire distributed after the training was completed. The OCSE of West Java gave the author the opportunity to contact the respondents directly.

An appropriate survey yielded a 100% response rate. The high response rate was due to the direct and intensive approach of personal contact by the author. In addition, respondents were given the opportunity to ask questions about the research and connect with their business development. The data collected were examined using both SPSS and LISREL as statistical software.

The characteristics of the respondents studied are explained as follows (Table 1). The number of research participants showed interesting figures with female business owners' dominance (76.32%). The majority of participants were age between 35-44 years old (37.71%). The majority of participants were senior high school graduates (39.47%) and university graduates (33.33%). The majority of SME business owners had been running their business between 2-3 years (57.45%) and between 3-5 years (30.70%).

**Table 1. Descriptive statistics (N= 228)**

Demography		F	(%)
Gender	Male	54	23.68%
	Female	174	76.32%
Age (years)	<18,	0	0%
	18-24,	12	5.26%
	25-34,	63	27.63%
	35-44,	86	37.71%
	45-54,	63	27.63%
	≥ 55	4	1.77%
Education: Graduated from...	Elementary School	6	2.63%
	Junior High School	20	8.77%
	Senior High School	90	39.47%
	College	33	14.47%
	University	76	33.33%
	Other (Postgraduate)	3	1.33%
Length in the business	<1 year	0	0.0%
	Between 2-3 years	131	57.45%
	Between 3-5 years	70	30.70%
	>5 years	27	11.85%

## EMPIRICAL RESULTS AND DISCUSSIONS

According to Hair et al. (2014), the data obtained must pass through the pre-analysis process, which consists of checking the missing value and normality. The assessment results indicate that the data is eligible for analysis. Multivariate normality test results gave Chi-Square, Skewness and Kurtosis values with a very small p-value of 0,000 so that the data concluded did not follow the multivariate normal distribution. Byrne (2001) ensures that one of the most comprehensive methodological approaches to test the validity of multidimensional variables is usually done in the framework of structural equation modeling (SEM) with confirmatory factor analysis (CFA). The CFA is applied to test the theoretical consistency of a nation-branding construct. This study uses SEM to verify the conceptualized model (i.e. a nation branding consisting of six dimensions). This study follows Byrne's (1998) recommendation, which is to confirm that the latent variables tested are correct by using LISREL software. This study also checks whether the entire index results make up a fit model.

To test the validity of the measurement model, this study adopted Segar (1994 in Chau 1997) where he suggested to validate the model with CFA using LISREL. The procedures is performed as follows: (1) develop a priori model based on previous studies and hypothesize the relationship between observed indicators and unobserved constructs; (2) fit the model with the research sample; (3) evaluate the research model in terms of goodness of fit and parameter estimation; and (4) re-specify or modify the models to improve the degree of fit of the research models with data (Segars 1994 in Chau 1997)

Validity and reliability tests show that nation branding is a six-factor construct. According to Aaker et al., (2011: 269) "a measure of attitudes has validity when measuring what is supposed to be measured". This research uses two types of validity test, namely, content validity and construct validity (Malhotra 2010: 320). Someone experienced in the field of branding is invited to perform content validity test (Kane 2001: 320). In this case, three experts in branding review the research instrument. After the content validity is done and declared valid, then the next stage is examining validity through construct validity test. Construct validity analyzes the questions that contain the characteristics of a dimension (in this study, the six dimensions of nation branding) that indirectly builds that dimension.

**Table 2. The results of the study**

<b>Dimension, TVE and CR</b>	<b>Nation Branding</b>	<b>CODE</b>	<b>Validity</b>	<b>Cronbach's alpha if item deleted</b>	<b>Factor Loadings</b>
Dimension-1	<b>EXPORT</b>				
Export (NB-C) $\alpha = 0.720$ TVE = 53.92% CR =0.775	1. Products made in Indonesia such as fashion products are known as export quality products	NB-E 1	0.530	0.897	0.64
	2. Indonesia is known as a country that is capable of producing quality products with global brands (e.g. the US's Nike Shoes are manufactured in Indonesia)	NB-E 2	0.532	0.896	0.65
	3. Products made in Indonesia are not inferior to its image with similar products from other countries	NB-E 3	0.646	0.892	0.73
Dimension-2	<b>GOVERNANCE</b>				
Governance (NB-G) $\alpha = 0.711$ TVE = 61.67% CR =0.826	1. Indonesia in my opinion is a democratic country	NB-G 1	0.601	0.894	0.66
	2. Indonesia is perceived as an open country	NB-G 2	0.672	0.891	0.76
	3. Indonesia is perceived as a country that can uphold justice well	NB-G 3	0.538	0.896	0.69
Dimension-3	<b>LIVING CONDITION</b>				
Living Condition (NB-LC) $\alpha = 0.632$ TVE = 56.02% CR =0.778	1. The cost of living in Indonesia from day to day is more expensive	NB-LC 1	0.371	0.902	0.31
	2. Indonesians are known for being easy to provide assistance when needed	NB-LC 2	0.692	0.891	0.68
	3. Indonesia is known as an ideal country to live / occupy	NB-LC 3	0.655	0.892	0.74
Dimension-4	<b>CULTURAL CONDITION</b>				
Cultural Condition (NB-CC) $\alpha = 0.730$ TVE = 78.51% CR =0.916	1. Indonesia is perceived as a country rich in art and culture	NB-CC 1	0.639	0.893	0.81
	2. Indonesia is perceived as a country that preserves various customs	NB-CC 1	0.664	0.892	0.82
	3. Indonesia is perceived as a country tolerant to cultural differences	NB-CC 3	0.659	0.892	0.66
Dimension-5	<b>TOURISM</b>				
Tourism (NB-T) $\alpha = 0.677$ TVE = 74.70% CR =0.898	1. Tourist destinations in Indonesia are perceived as a classy travel destinations	NB-T 1	0.591	0.894	0.67
	2. Indonesia is perceived as a pleasant tourism destination	NB-T 2	0.673	0.891	0.75
	3. Indonesian people are known as a friendly people	NB-T 3	0.653	0.892	0.64
Dimension-6	<b>INVESTMENT CONDITION</b>				
Investment Condition (NB-IC) $\alpha = 0.735$ TVE = 68.30% CR =0.864	1. Indonesia is an ideal country to invest for other countries	NB-IC 1	0.643	0.892	0.61
	2. Indonesia is a country that offers opportunities for entrepreneurship	NB-IC 2	0.662	0.892	0.70
	3. Indonesia's economic condition is stable enough to invest	NB-IC 3	0.545	0.896	0.63

Construct validity is used to reflect the theory of variables used. Standard in determining the validity of research instrument is by comparing the results of Pearson correlation with the table at 95% confidence level ( $p = 0.05$ ). This research uses correlation technique, because the significance of total score correlation result of an item is tested to determine the validity of an item to its factor. According

to Taylor (2010: 67), in the validity test, the correlation shows the linear relationship of an item to the overall item score, so that items that are positive and greater than  $r$  table can be said to be valid. The validity test score showed the smallest score of 0.371 (item NB-LC-1) and all other validity coefficient scores ranged from 0.5 to 0.6. In relation to the measurement of the perception of small-scale business owners of nation branding is quite a new study, and then the minimum value of the above-mentioned validity coefficient is acceptable.

Reliability test provides an information that the instrument is capable to produce consistent results if the instrument has to be repeatedly tested to the homogeneous group of respondents. In other words, the tested instrument is a consistent measure. A measure of reliability that is often used to establish the reliability of a measuring instrument is one of them is the internal consistency method. This method is considered the most commonly used and most common form of reliability estimation (Nunnally, 1988). The reliability of the measuring instrument in this method is operationalized as internal consistency. Internal consistency is the level of intercorrelation between items that make up the scale (Nunnally, 1988). Internal consistency uses a reliability coefficient called Cronbach's alpha (Cronbach, 1951). Minimum scores considered to be acceptable for indicating internal consistency of new scale and scale determined respectively are with alpha values between 0.60 and 0.70 (Nunnally, 1988). The Cronbach alpha values are shown in Table 2. These results show that all values exceed the minimum requirements. Based on these results, it can be interpreted that all scales are internally consistent and have acceptable reliability values in their original form.

Reliability test results are shown by Cronbach alpha score. This study uses internal consistency to evaluate the consistency of responses to each item used to measure the nation branding set forth in the research instrument. Cronbach alpha scores for all dimensions meet the requirements to proceed as a measuring tool, with the smallest Cronbach alpha score for Living Condition dimension of 0.632. Nunnally and Bernstein (1994 in Klaus & Maklan, 2012) mentioned that the Cronbach Alpha values for factors satisfy at more than the required level of 0.7. This study applies CR (Construct Reliability) to get the reliability of each item. Said, Badru & Sahid (2011: 1099) state that Construct Reliability (CR) is intended to determine the consistency of the construct validity indicator.

In order to confirm the most dominant factors in the national branding group, a confirmatory factor analysis is applied, which is evaluated on the validity and reliability of the measurement model. Each variable is stated to have good validity to the latent variable if the factor load is  $\geq 0.3$ . While the reliability in Structural Equation Modeling (SEM) uses composite reliability (CR) measure and variance extracted measure (VE). Variables are stated to be reliable if  $CR \geq 0.70$  and  $VE \geq 0.5$  (Wijayanto, 2008: 149). The results of the study showed that all dimensions that measure nation branding resulted in CR's and VE's scores more than the specified values. Based on the data shown in Table, all manifest variables (indicator) to latent variables (dimension) have factor-loading ( $\lambda$ )  $\geq 0.6$  (except item NB-LC-1). This shows that all manifest variables are valid so it can be said that the manifest variable used is meaningful in measuring latent variables.

In next step, the fit of the model is tested against various Goodness of Fit (GOF) criteria and the structural relationship in the model is examined. The GOF shows how well the model produces the observed covariance matrix between the indicator items. Hair et al. (1998) suggest that there are several parameters to test the GOF including (Table 3): (1) Chi-square, degrees of freedom (df) and normed chi-square; (2) absolute fit parameter; (3) incremental fit parameter; (4) Goodness of Fit parameter; and (5) badness of fit parameter.

**Table 3 GOF Testing Results for the Variable of Nation Branding**

$X^2/df$	GFI	AGFI	RMSEA	NFI
1128.19	0.76	0.81	0.091	0.93
CFI	PNFI	PGFI	RFI	IFI
0.95	0.78	0.65	0,91	0,95

It can be inferred that based on the results of the study, when considered from the loading factor of each indicator and dimension, all these dimensions and indicators are valid in measuring the research variables with a value greater than 0.60 (excluding items with the code NB-LC-1). So the selection of indicators and dimensions in measuring nation branding is proper. Based on the test of the fit indexes model, almost all indexes meet the minimum requirement to state that the nation-branding model is a good model. Such a condition allows to be used in further research.

## CONCLUSIONS

The research results provide an important opportunity in establishing a positive nation branding based on the perspective of small-scale business owners, particularly in optimizing the performance of a nation through the dimensions of nation branding. As an illustration, the Indonesian government needs to enhance the performance of export activities, governance, living conditions, cultural conditions, tourism destinations, and investment conditions to create a nation branding.

A brand is a complex mix of a number of attributes both tangible and intangible. If the brand is seen from the tangible elements only, then the brand can be seen from the packaging used to wrap the product. The tangible attribute becomes its visual identity. If the brand is seen from the intangible elements only, then the brand can be perceived from the behavior of officers serving their customers. However, a brand is not only reflected from the tangible and intangible elements only, when the brand measurement is done on a variety of objects. Measurements on different objects will produce different dimensions and indicators, such as measuring products (product branding), corporations (corporate branding), cities (city branding), places (place branding), destinations (destination branding), regions (regional branding) and nations (nation branding). This research focuses on the measurement of nation branding.

A nation known for its special attributes in the minds of the public certainly has advantages. Even a nation can yield a number of advantages from its ability to produce something, as Japan is known as a nation capable of producing world-class automotive products at competitive prices – which becomes the base capital to compete in the global marketplace. Global competition occurs when countries compete with each other to gain the trust of their stakeholders, such as investors, tourists, consumers, donors, immigrants, the media, and other governments. So a strong and positive nation branding embedded in the minds of its audience provides a very important competitive advantage for a nation. Countries are vying for having positive image in the eyes of the public around the world, one of them is through the formation of a strong nation branding.

This study provides evidence of the vigor of the scale of nation branding based on the perspective of small-scale business owners. In other words, the measurement of nation branding based on the perspective of small-scale business owners is a valid construct. Based on these results, the size of this nation branding can be used in the context of SMEs, especially in measuring nation branding. Most importantly, this study is one of the studies that comprehensively examines the scale of nation branding based on the typical indicators of the six dimensions of nation branding. The eighteen indicators found in this study are appropriate measures for shaping the six dimension of nation branding and are supported by the data collected. The main objectives of this research are fulfilled in developing nation branding measure based on the perspective of small-scale business owners. Furthermore this new measure can be used for the final survey to test the role of competitive advantage through market orientation towards nation branding.

## REFERENCES

- Ahn, M. J., & Wu, H. (2015). The art of nation branding. *Public Organization Review*, 15(1), 157-173.
- Anca-Georgiana Andrei. (2017). The impact of nation branding campaigns on country image. case study: Romania. *Management & Marketing*, 12(2), 222-236.
- Anholt, S. (2002). Nation branding: A continuing theme. *Journal of Brand Management*, 10(1), 59-60.
- Anholt, S. (2003), *Brand New Justice: The Upside of Global Branding*, Butterworth-Heinemann, London.
- Anholt, S. (2007). Brand Europe—What Next? Place Branding and Public Diplomacy., 3(2), 115-119.
- Avraham, E. (2018). Nation branding and marketing strategies for combatting tourism crises and stereotypes toward destinations. *Journal of Business Research*, 1-10.
- Browning, C. S. (2016). Nation branding and development: Poverty panacea or business as usual? *Journal of International Relations and Development*, 19(1), 50-75.
- Cassinger, C., Merkelsen, H., Eksell, J., & Rasmussen, R. K. (2016). Translating public diplomacy and nation branding in Scandinavia: An institutional approach to the cartoon crises. *Place Branding and Public Diplomacy*, 12(2-3), 172-186.
- Domeisen, N. (2003). Is there a case for national branding?, *International trade forum*, Iss.2, p.14
- Dzenovska, D. (2005). Remaking the nation of Latvia: Anthropological perspectives on nation branding. *Place Branding*, 1(2), 173-186.
- Fan, Y. (2010), “Branding the nation: towards a better understanding”, *Place Branding and Public Diplomacy*, Vol. 6 No. 2, 97-103.
- Gupta, S., Foroudi, M.M., Väättänen, J., Gupta, S., & Wright, L.T. (2018). Nations as brands: Cinema’s place in the branding role., *Journal of Business Research*., article in press.

- Hurn, B. J. (2016). The role of cultural diplomacy in nation branding. *Industrial and Commercial Training*, 48(2), 80-85.
- Ishii, K., & Watanabe, S. (2015). Nation brand personality and product evaluation among Japanese people: Implications for nation branding. *Place Branding and Public Diplomacy*, 11(1), 51-64.
- Kemming, J. D., & Humborg, C. (2010). Democracy and nation brand(ing): Friends or foes? *Place Branding and Public Diplomacy*, 6(3), 183-197.
- Klaus, P.P and Maklan, S (2012) 'EXQ: a multiple-item scale for assessing service experience', *Journal of Service Management*, 3(1), 5-33.
- Knott, B., Fyall, A., & Jones, I. (2016). Leveraging nation branding opportunities through sport mega-events. *International Journal of Culture, Tourism and Hospitality Research*, 10(1), 105-118.
- Knott, B., Fyall, A., & Jones, I. (2017). Sport mega-events and nation branding. *International Journal of Contemporary Hospitality Management*, 29(3), 900-923.
- Knott, B; Fyall, A; Jones, I. (2017), "Management & Marketing; Bucharest", *International Journal of Contemporary Hospitality Management: Bradford*, 29(3), 900-923.
- Malthora, K.N. (2010) *Marketing Research an Applied Orientation*, 6th ed., Pearson Education Limited, Harlow, UK.
- Melewar, T. C., Gupta, S., & Dinnie, K. (2013). Nation branding: Issues, insights and impacts. *Corporate Reputation Review*, 16(1), 5-6.
- Ntamu, F. O. (2011). Nigeria branding: A case in nation branding (rhetoric & reality). *The ISM Journal of International Business*, 1(3), 17-(1G-17G).
- Qobo, M. (2017). Africa's Foreign Policy And Nation Branding: Regional Leadership And Its Discontents. *Strategic Review for Southern Africa*, 39(1), 9-28.
- Papadopoulos, N., Hamzaoui-Essoussi, L., and Banna, A.E. (2016). Nation branding for foreign direct investment: an integrative review and directions for research and strategy., *Journal of Product and Brand Management.*, 25/7, 615-628.
- Raftowicz-Filipkiewicz, M. (2012). Nation branding as an economic challenge for the countries of the Middle and East Europe on the example of Estonia. *Equilibrium; Torun*, 7(4), 49-59.
- Rufaidah, P. (2006) 'Corporate identity management: the relationship between top management vision, corporate identity policy, corporate identity mix and corporate reputation', Dissertation, The University of New South Wales, Sydney, Australia.
- Rufaidah, P. (2016a). Testing branding strategy development model, *Academy of Strategic Management Journal*, 15(3), 275-290.<sup>[1]</sup><sub>SEP</sub>
- Rufaidah, P. (2016b). Dynamic capability in branding strategy development, *International Journal of Economics and Management*, 10(1), 183-196.<sup>[1]</sup><sub>SEP</sub>
- Rufaidah, P. (2017). Branding strategy development based on innovative behaviour, *International Journal of Business and Globalisation*, 18(3), 396-416.
- Rufaidah, P. (2017). The Determinants of Marketing Capability for the SMEs. *Journal of Global Business for Advancement.*, 10(6), 671-700
- Said, H., Badru, B.B. and Shahid, M. (2011) 'Confirmatory factor analysis (CFA) for testing validity and reliability instrument in the study of education', *Australian Journal of Basic and Applied Sciences*, Vol. 5, No. 12, pp.1098-1103.
- Szondi, G. (2017). From image management to relationship building: A public relations approach to nation branding. *Place Branding and Public Diplomacy: Basingstoke*, 6(4), 333-343.
- Tatevossian, A. R. (2008). Domestic society's (often-neglected) role in nation branding. *Place Branding and Public Diplomacy*, 4(2), 182-190.
- Uçok-Hughes, M., & Bagramian, R. (2013). Nation branding in emergent markets: A visual analysis of ukrainian marketing campaigns. *Journal of Global Business Issues*, 7(1), 17-23.
- Valaskivi, K. (2016). Circulating a fashion: Performance of nation branding in Finland and Sweden. *Place Branding and Public Diplomacy*, 12(2-3), 139-151.
- Van Ham, P. (2008) 'Place Branding: The State of the Art', *Annals of the American Academy of Political Science.*, 616 (1): 126-49.
- Widler, J. (2007). Nation branding: With pride against prejudice. *Place Branding and Public Diplomacy*, 3(2), 144-150.
- Wu, L. (2017). Relationship building in nation branding: The central role of nation brand commitment. *Place Branding and Public Diplomacy*, 13(1), 65-80.
- Zeineddine, C. (2017). Employing nation branding in the Middle East - United Arab Emirates (UAE) and Qatar. *Management & Marketing*, 12(2), 208-221.

# The Model of Brand Image in the Digital Media Industry

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## ABSTRACT

The purpose of this paper is to propose the model of brand image in the digital media industry in Indonesia. Whilst past studies have focused on tangible and non-tangible dimension to measure brand image, the proposed model used the seven dimensions of brand image that match with the character in the digital media industry, namely, brand associations, brand identity, brand personality, brand attitude and behavior, brand benefit, brand competence, and brand dynamism. The paper develop several propositions in relation to measure the aforementioned conceptual model of brand image by capturing the strengths of the digital media industry. This paper is the only study that is done in the digital media industry that measures the dimension and indicator that shape brand image amongst players in the industry. This paper also represent a further step in refining brand image concepts for building a stronger character of the firms in the tougher competition.

**Keyword:** brand associations, brand identity, brand personality, brand attitude and behavior, brand benefit, brand competence, and brand dynamism

## INTRODUCTION

The digital disruption phenomenon gains its momentum when data and facts show that it actually has a big implication towards digital media industry. It is then supported by the outcome of the research done by Grossman (2016) in his article titled The Industries That Are Being Disrupted the Most by Digital. In this article, Grossman (2016) explains that digital disruption is going to have quite enormous implications, at least for the next twelve months. In Indonesia, the data released by research firm AC Nielsen in 2016 elucidates the year's increase of the data service traffic, up to 300 Peta Byte until the fourth Quarter of 2016. The utilizations of data service is then also identified with the rise of mobile connection, internet user and active social media user penetrations for 142%, 51% and 40% respectively (source: GSMA, 2017). Curiously, the penetration of digital service users in Indonesia is only number 14 among other Asian countries. It is rather astonishing if one compares the actual data, considering Indonesia has the third biggest population in Asia.

The above phenomenon then becomes a big question to find out what actually is the real main principal for the growth of the penetration of digital service users in Indonesia. A research conducted by AC Nielsen in 2017 then reveals the fact that brand image becomes a power zone as future provision to improve the penetration of digital service users in Indonesia. Theoretically, Kotler (2006) also states that a strong and positive brand image is believed to be able to create a preference in the midst of the absence of other distinctions.

This theory is then responded similarly by Park, Jaworski, and MacInnis (1986), Dobni and Zinkhan (1990), Ind (1997), Iversen and Hem (2008), and Lee and Wu (2011).

Considering the empirical gap above, the present study has two main purposes: first, to bring empirical insights on why companies should identify dimensions and indicators on brand image in digital media industry, how they use them and what they expect from them; and second, to investigate – in the firms' point of view – what benefits users get from using such pages.

The paper is organized as follows. First, the concepts of brand image is introduced. Second, the methodology of the field study is presented, followed by a presentation of the findings. We conclude by discussing the results, limitations, and directions for future research.

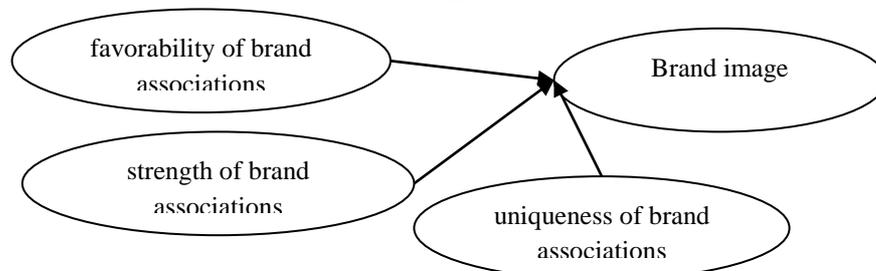
## LITERATURE REVIEW

The notion of brand image definition has long been discussed as an important study in the marketing field (Gardner and Levy, 1955). However, there are only a few definition concepts on brand image that are agreed upon by the experts (Dobni and Zinkhan, 1990). The implementation of the brand image concept that is defined as the perception of a brand reflected on the brand association in the consumers' memory, consistently understood by Keller (1993). Brand image is clearly illustrated as consumers' thoughts and feelings towards the brand (Roy and Banerjee, 2007; Hung, 2008; Ike-Elechi and Tan, 2009; Lee and Wu, 2011; Hsiang-Ming, Ching-Chi, Chou-Chen, 2011, Mete and Davies, 2017; Mogaji, 2018; Mahandy and Sanawiri, 2018). Brand image represents private symbolism which the consumers associate with the brand that consists of all descriptive and evaluative information related to the brand (Iversen dan Hem, 2008; Lee and Wu, 2011; Wijaya, 2013; Huang and Ku, 2016). From the previous brand image definitions, it can be concluded that brand image is a set of impressions on the consumers' mind about a brand that is gathered from their memories about the brand.

The discussion on dimensions and indicators of brand image has been done many times by preceding studies. However, there are only a small number of studies that discuss about its application on the digital media industry. One of them is the study done by Järvinen, Tollinen, Karjaluoto, and Jayawardhena (2012) which attempts to explore the brand image dimensions and indicators identifies through the examination they did on 145 B2B firms from various industries reveals that despite the interest in social media. It was also done by Hudson, Roth, Madden, and Hudson (2015), Perera and Perera (2018), Mogaji (2018), Camilleri (2018), and Belasen and Belasen (2018) who also comprehend the brand image study dimension from social media industry. From a different industry that has similar characteristics with the digital media industry in Indonesia, brand image dimensions and indicators are also discussed by Keller (1993), Hung (2008), Ike-Elechi and Tan (2009), Wijaya (2013), Huang and Ku (2016), and Mahandy and Sanawiri (2018).

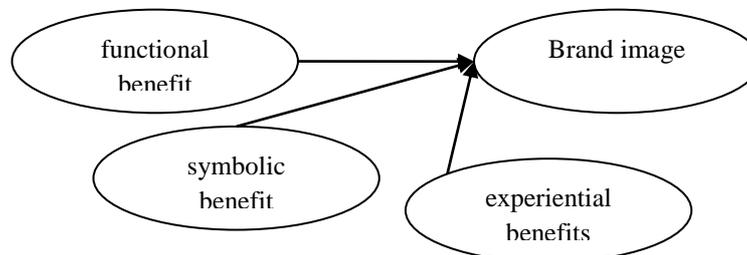
Keller (1993) on his study titled *Conceptualizing, Measuring, and Managing Customer-Based Brand Equity* explains that brand image dimensions may consist of favorability of brand associations, strength of brand associations, and uniqueness of brand associations. The favorability of brand associations dimension is measured using brand indicators with attributes and benefits that can fulfill consumers' needs and desires, so that the whole brand's positive attitudes are formed. Next, the strength of brand associations dimension is measured through the indicator of consumers' memory towards the brand. And the uniqueness of brand associations dimension is described through the brand's association with its competitors (indirect measure) and the level of the brand's uniqueness aspect (direct measure).

**Figure 1**  
**Dimensions on Brand Image (Keller, 1993)**



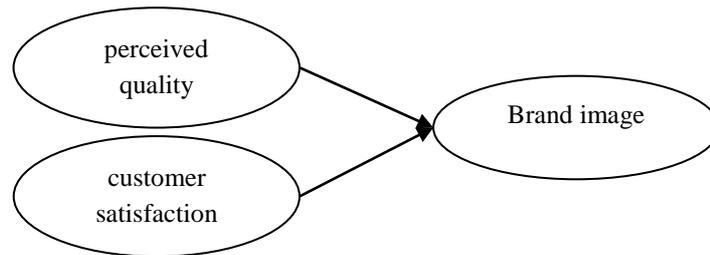
Hung (2008) in his article titled *The Effect of Brand Image on Public Relations Perceptions and Customer Loyalty* also discusses brand image dimensions and indicators through his perspective. According to him, brand image dimension consists of functional benefit, symbolic benefit and experiential benefits. Functional benefits are related to intrinsic features in a product when consumers try to make a purchasing decision. Symbolic benefit is linked to consumers' concept of self, whether the needs for the product will fulfil the self-esteem needs. Experiential benefits are shaped through consumers' experience towards the pleasure of their senses regarding the product they use.

**Figure 2**  
**Dimensions on Brand Image (Hung, 2008)**



Subsequently, Ike-Elechi and Tan (2009) in their article *Exploring the Impact of Brand Image on Customer Loyalty and Commitment in China*, also explore and explicate their understanding on the dimensions to mould brand image on mobile phone industry, such as perceived quality and customer satisfaction. The indicators forming perceived quality can be explained using the whole quality or superior eminence of a product or service in connection with the purposes of the product or service that have been established by its company. Meanwhile, customer satisfaction can be described by means of indicators relating to experience or the act of comparing the perceived performance of the product with the consumers' expectations towards the product. Customer satisfaction also denotes how far the consumers feel satisfied or unsatisfied the product's business, or certain aspects of the product or service provided by the business.

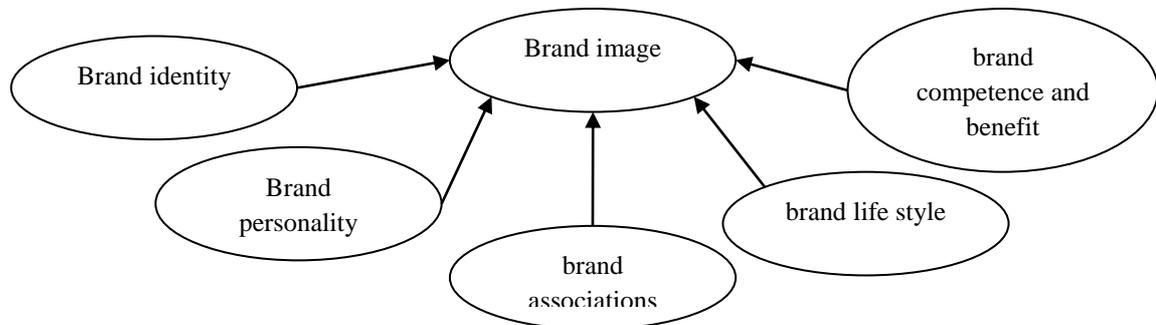
**Figure 3**  
**Dimensions on Brand Image (Ike-Elechi and Tan, 2009)**



Wijaya (2013) also identifies brand image dimensions and indicators in his article. Brand image dimensions comprises brand identity, brand personality, brand associations, brand life style, brand competence and benefit. Indicators in each dimension can then be explained as follows:

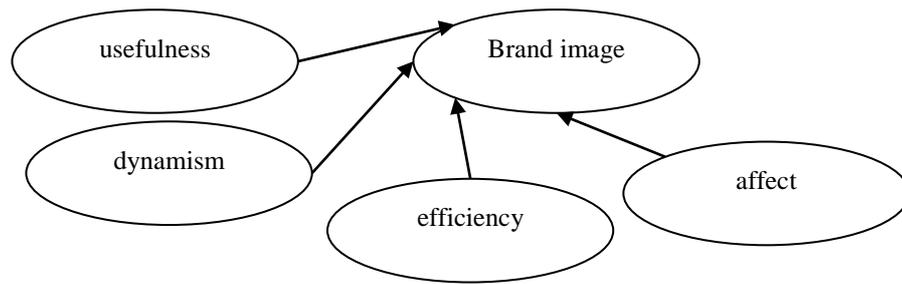
1. Brand identity refers to physical or real identities relating to the brand or product, making it easy for consumers to identify and differentiate one brand/product with another, for example: logo, color, sound, smell, packaging, location, company identity and catchphrase.
2. Brand personality is the brand’s distinct characteristics that shape certain personalities like humans so consumers and easily tell the difference between one brand and another in the same category such as firm, rigid, dignifies, noble, friendly, warm, compassionate, socialistic, dynamic, creative and independent.
3. Brand association is certain things that are suitable or always affiliated with a brand, which surfaces from the product’s unique offerings.
4. Brand lifestyle is the attitude and behaviour of a brand when it communicates and interacts with consumers when it puts forward its benefits and values.
5. Brand competence and benefit are values, excellence and difference of competence proposed by a brand to solve consumers’ problems, so they can reap the benefits due to needs, desires, expectations and obsessions that are materialized by the brand’s offerings.

**Figure 4**  
**Dimensions on Brand Image (Wijaya, 2013)**



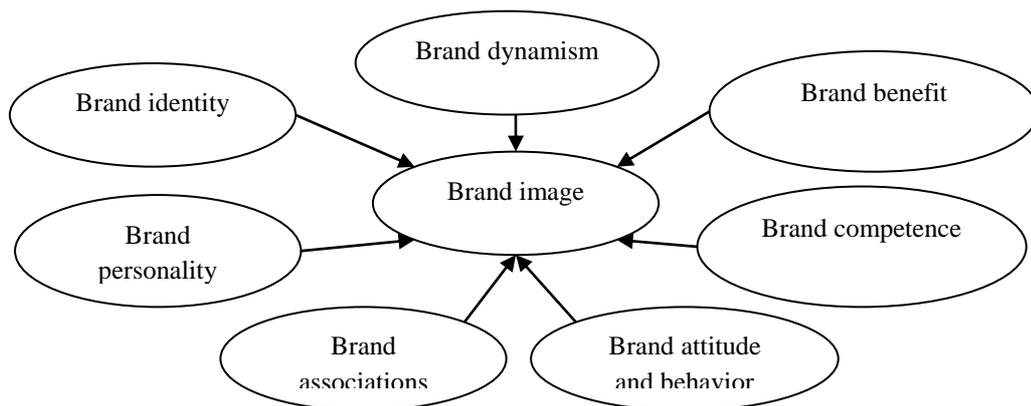
The concepts described by Huang and Ku (2016) in their article *Brand Image Management For Non-Profit Organizations: Exploring The Relationships Between Websites, Brand Images and Donations* also contribute in shaping the brand image dimensions and indicators. According to them, brand image dimension comprises usefulness, dynamism, efficiency and affect. Usefulness dimension consists of the following indicators: indispensable, useful, and civic-minded. Modern and innovative becomes the only indicators capable of forming dynamism dimension. Furthermore, efficiency includes efficient, serious, well-managed, provides an excellent service to beneficiaries, uses assets wisely. Finally, affect dimension comprises friendly, generous, warm, engaging.

**Figure 5**  
**Dimensions on Brand Image (Huang and Ku 2016)**



From the previous discussions on brand image dimensions and indicators there are a number of concept similarities about brand image dimensions and indicators. Earlier findings identifies and agreed to propose that brand image could consist of brand associations, brand identity, brand personality, and brand attitude and behavior, and brand benefit and competence (Aaker, 1991; Aaker,1997; Arnould, et al., 2005; Brexendorf and Kernstock, 2007; Wijaya, 2013; Mahandy and Sanawiri, 2018). However, in regards to the digital media industry in Indonesia, the above-mentioned dimensions still require an addition where dimensions that can be connected with the digital media industry is brand dynamism that allows a brand to always have a modern and innovative nature so it will not get obsolete along in the ever-changing time (Huang and Ku, 2016).

**Figure 6**  
**Dimensions on Brand Image**



## MEASURING THE DIMENSIONS

### Measuring Brand Associations

Keller (1998) defines brand associations as informational nodes linked to the brand node in memory that contain the meaning of the brand for consumers. Studies on ways to measure brand associations have been revealed by Gardner and Levy (1955), Aaker (1991; 1996a; 1996b), Aaker and Jacobson (1994), Aaker (1997), Keller (1993), and Low and Lamb (2000). However, none of them possesses a linkage. The most identical and precise measurement on brand association is done by Wijaya (2013). He explains that brand associations can be determined by certain things that are suitable to or always connected to a brand, and it appears from the product's unique offerings. The measurement presented by Wijaya (2013) is quite relevant with the characters of the digital media industry in Indonesia. Apart from that, the measurement concept has also been statistically supported on the research conducted by Low and Lamb (2000). Referring to the opinion stated in the previous study, a product's unique offerings, consistent and continuous activities regarding sponsorship, and consistent and

continuous activities regarding social (CSR) are capable of shaping the dimension of brand associations.

Proposition 1: Brand image is shaped by the dimension of brand associations attached to a product.

### **Measuring Brand Identity**

In many studies, experts agree that brand identity is capable of giving a significant influence on certain brands (Wheeler, 2009; Kapferrer, 2012; Filkovskaia, 2017). Filkovskaia (2017) firmly expounds in his study about how brand identity should be the answer to the question “Who are you?”. Through his study, Keller (1993) identifies the measurement scheme that can be applied in brand image dimensions on brand identity may consists of physical or real identity connected to brands or products that can make consumers easy to identify and differentiate a brand/product with other brand/product, such as logo, color, sound, smell, packaging, lokation, company identity and dan catchphrase. The opinion given by Keller (1993) is also approved by other studies by (Brexendorf and Kernstock, 2007). Referring to the opinion stated in the previous study, simplicity in identifying a brand, and simplicity in differentiating one brand or product with another are capable of shaping the dimension of brand identity.

Proposition 2: Brand image is shaped by the dimension of brand identity attached to a product.

### **Measuring Brand Personality**

Brand personality refers to the set of human characteristics associated with a brand (Aaker, 1997). *Brand personality* can be determined by the distinct characters of a brand that shape a certain personality, just like in humans, so that consumers can easily tell the difference between one brand to another in the same category, such as: firm, rigid, dignified, friendly warm, compassionate, socialistic, dynamic, creative and independent (Wijaya, 2013). The measurement done to brand personality by Wijaya (2013) is also supported by Aaker (1997). Referring to the opinion stated in the previous study, brand personality can be measured using sincerity characteristics of a brand, excitement characteristics of a brands, ruggedness characteristics of a brand, and sophistication characteristics of a brand.

Proposition 3: Brand image is shaped by the dimension of brand personality attached to a product.

### **Measuring Brand Attitude and Behavior**

Brand attitude and behavior is defined as consumers' overall evaluation of a brand whether good or bad (Mitchell and Olson, 1981). Up until now, there have been more than 67 publications that are able to identify the measurement towards brand attitude and behavior. However, Wijaya (2013) can identify the correct indicators in order to measure brand behavior and attitude, which is through the manners and conducts of a brand when it communicates and interacts with consumers in order to offer the benefits and values it owns. The measurement states by Wijaya (2013) is statistically reinforced by earlier studies by Arnould, et al. (2005) and Brexendorf and Kernstock (2007). Referring to the opinion stated in the previous study, a brand communicates and interacts with consumers in offering its benefits; and a brand communicates and interacts with consumers in offering its values are capable of shaping the dimension of brand attitude and behavior.

Proposition 4: Brand image is shaped by the dimension of brand attitude and behavior attached to a product.

### **Measuring Brand Benefit**

There are many studies conducted in order to establish the correct measurement for brand benefit (Arnould, et al., 2005; Brexendorf and Kernstock, 2007; Wijaya, 2013). Wijaya (2013) then specifically discusses brand benefit that can be measured through values and excellence difference offered by a brand in solving a consumer's problem, so that they can

gain benefits because their needs, desires, hopes and obsessions are realized by the brand's offerings. This measurement is suitable to be applied on the digital media industry in Indonesia. Referring to the opinion stated in the previous study, values difference offered by a brand to solve consumers' problem and excellence difference offered by a brand to solve consumers' problem are capable of shaping the dimension of brand benefit.

Proposition 5: Brand image is shaped by the dimension of brand benefit attached to a product.

#### **Measuring Brand Competence**

There are many studies conducted in order to establish the correct measurement for brand competence (Aaker, 1991; Aaker, 1997; Arnould, et al., 2005; Brexendorf and Kernstock, 2007; Wijaya, 2013, Mahandy and Sanawiri, 2018). Mahandy and Sanawiri (2018) then specifically discusses brand competence that can be measured through product competence in accordance to consumers' expectations and an effective product performance gives the benefits that consumers need. Referring to the opinion stated in the previous study, product competence in accordance to consumers' expectations and an effective product performance gives the benefits that consumers need are capable of shaping the dimension of brand competence.

Proposition 6: Brand image is shaped by the dimension of brand competence attached to a product.

#### **Measuring Brand Dynamism**

The dimension measurement of brand image is indeed very broad, but it has not been able to fully identify its application on the digital media industry in Indonesia correctly. The dimension of brand dynamism is considered as being capable of stimulate the closing of the dimension hole that has been required for a more comprehensive measurement for the digital media industry in Indonesia. Huang and Ku (2016), explain through their study that brand dynamism can be estimated through the brand's capability in identifying with modern and innovative disposition so it will not become obsolete (Huang and Ku, 2016). The characteristics of the digital media industry in Indonesia make this dimension become significant as an effort to increase the penetration of the amount of subscribers in Indonesia (Source: AC Nielsen's Research Release in 2017). Referring to the opinion stated in the previous study, capability to identify with modern disposition and capability to identify with innovative disposition are capable of shaping the dimension of brand dynamism.

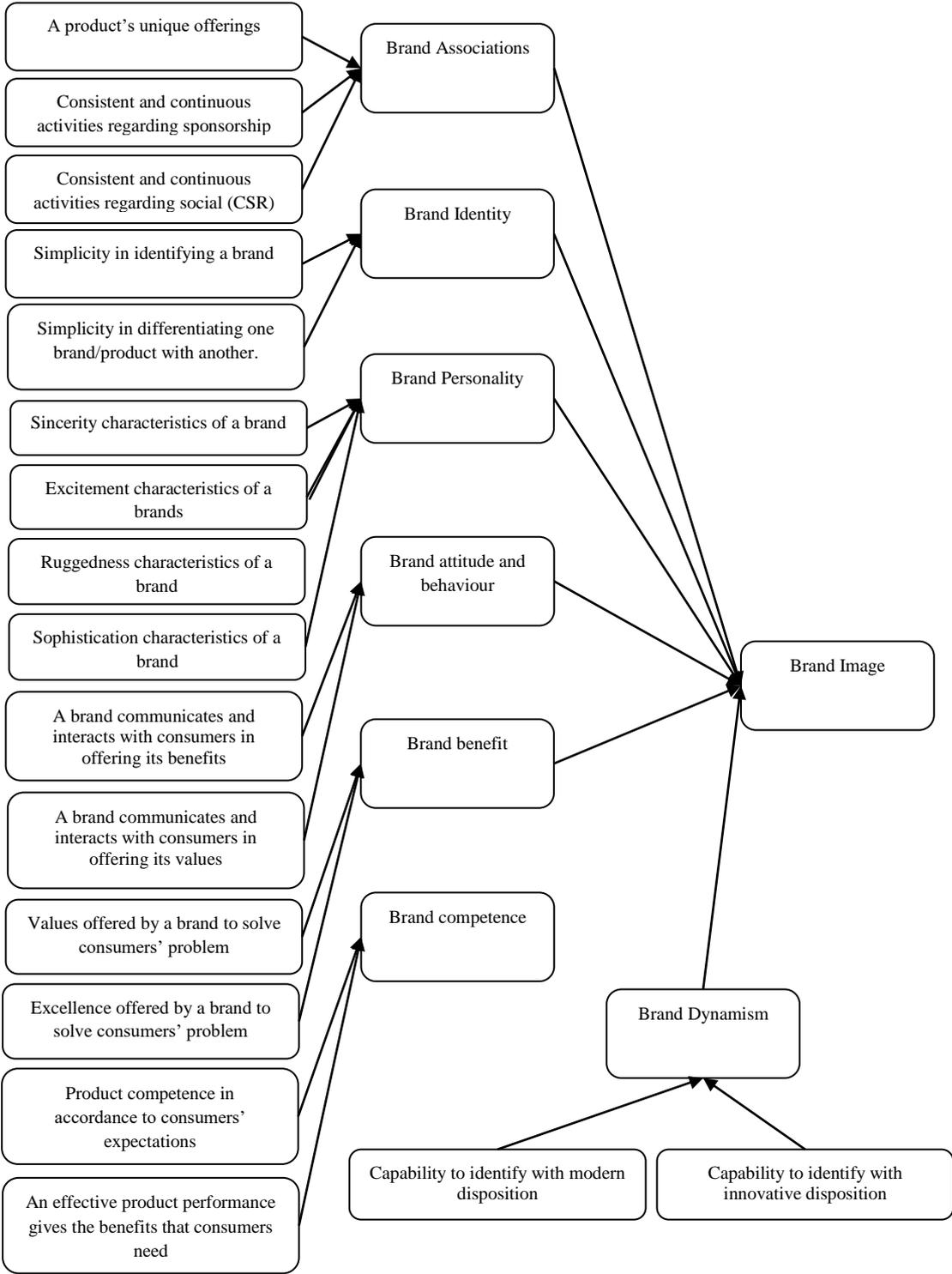
Proposition 7: Brand image is shaped by the dimension of brand dynamism attached to a product.

### **CONCLUSIONS**

This research produces findings relating to the correct dimensions and indicators to form a brand image in the digital media industry in Indonesia. Such dimensions consist of brand associations, brand identity, brand personality, brand attitude and behavior, brand benefit, brand competence, and brand dynamism. This finding also becomes the next step forward for practitioners of digital media industry in Indonesia to accelerate the penetration of digital service users. Brand associations can be measured through a product's unique offerings, consistent and continuous activities regarding sponsorship, and consistent and continuous activities regarding social (CSR). Brand identity can be measured through simplicity in identifying a brand, and simplicity in differentiating one brand or product with another. Brand personality can be measured through sincerity characteristics of a brand, excitement characteristics of a brands, ruggedness characteristics of a brand, and sophistication characteristics of a brand. The right indicators to measure brand behavior and attitude are through a brand communicates and interacts with consumers in offering its benefits; and a brand communicates and interacts with consumers in offering its values. Brand benefit can be determined through values difference offered by a brand to solve consumers' problem and

excellence difference offered by a brand to solve consumers' problem. Brand competence can be determined through product competence in accordance to consumers' expectations and an effective product performance gives the benefits that consumers need. Lastly, in regards to brand dynamism, it can be measured by capability to identify with modern disposition and capability to identify with innovative disposition.

**Figure 7**  
**Brand Image Dimensions and Indicators in the Digital Media Industry in Indonesia**



## **SUGGESTION FOR FUTURE RESEARCH**

This research is still based on literature review to explain the dimensions and indicators that are capable of forming a brand image. It is hoped that the future researches could be undertaken through statistic data to find out which dimensions and indicators that have the most influence in shaping a brand image in the digital media industry in Indonesia.

## **REFERENCES**

- Aaker, D.A. 1991. *Managing Brand Equity: Capitalizing on the Value of a Brand Name*, The Free Press, New York, NY.
- Aaker, D.A. 1996a. *Building Strong Brands*. The Free Press, New York, NY.
- Aaker, D.A. 1996b. Measuring brand equity across products and markets. *California Management Review*, Vol. 38, Spring, pp. 102-20.
- Aaker, D.A. and Jacobson, R. 1994. The financial information content of perceived quality", *Journal of Marketing Research*, Vol. 31, May, pp. 191-201.
- Aaker, J.L. 1997. Dimensions of Brand Personality. *JMR, Journal of Marketing*.
- Arnould, E. J., and Thompson, C. J. 2005. Consumer culture theory (CCT): Twenty years of research. *Journal of consumer research*, 31(4), 868-882.
- Belasen, A. T., and Belasen, A. R. 2018. *Integrated Corporate Communication: A Competing Values Perspective*.
- Brexendorf, T. O., & Kernstock, J. 2007. Corporate behaviour vs brand behaviour: Towards an integrated view?. *Journal of Brand Management*, 15(1), 32-40.
- Caylar, Paul-Louis, and Menard, Alexandre. 2016. *How Telecom Companies Can Win In The Digital Revolution*. Digital McKinsey.
- Camilleri, M. A. 2018. *Integrated Marketing Communications*. In *Travel Marketing, Tourism Economics and the Airline Product*(pp. 85-103). Springer, Cham.
- Davis, S. M. 2000. *Brand Asset Management: Driving Profitable Growth through Your Brand*. California: Jossey-Bass, Inc., Publishers
- Dobni, D., and Zinkhan, G. M. 1990. In search of brand image: A foundation analysis. *ACR North American Advances*.
- Filkovskaia, Juliia. 2017. *Influence of Visuals in Digital Brand Identity Case company: PIIK*. Bachelor's thesis March 2017 International Business Degree Programme in International Business
- Gardner, Burleigh B. and Sidney J. Levy 1955. The Product and the Brand, *Harvard Business Review*, 33 (March April), 33-9.
- Grossman, Rhys. 2016. *The Industries That Are Being Disrupted the Most by Digital*.
- Huang, S., and Ku, H. 2016. *Brand Image Management for Non-Profit Organizations: Exploring The Relationships Between Websites*.
- Hudson, S., Roth, M. S., Madden, T. J., and Hudson, R. 2015. The effects of social media on emotions, brand relationship quality, and word of mouth: An empirical study of music festival attendees. *Tourism Management*, 47, 68-76.
- Hung, C. 2008. The Effect of Brand Image on Public Relations Perceptions and Customer Loyalty. *International Journal of Management*, 25, 2, 237-246.
- Hsiang-Ming, Lee., Lee, Ching-Chi, and Wu, Chou-Chen. 2011. Brand Image Strategy Affects Brand Equity After MdanA. *European Journal of Marketing*, 46, 78, 1091-1111.
- Ind, N. 1997. The corporate brand. In *The Corporate Brand* (pp. 1-13). Palgrave Macmillan, London.
- Ike-Elechi, Ogba and Tan, Zhenzhen. 2009. Exploring the Impact of Brand Image on Customer Loyalty and Commitment in China. *Journal of Technology Management in China*, 4, 2, 132-144.

- Iversen, Nina M., and Hem, Leif, E. 2008. Provenance associations as core values of place umbrella brands: A framework of characteristics. *European Jo.*
- Järvinen, J., Tollinen, A., Karjaluoto, H., and Jayawardhena, C. 2012. Digital And Social Media Marketing Usage In B2B Industrial Section. *Marketing Management Journal*, 22(2).
- Kapferer, J. N. 2012. *The new strategic brand management: Advanced insights and strategic thinking*. Kogan page publishers.
- Keller, K.L. 1993. Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57, 1-22.
- Kotler, P., and Armstrong, G. 2005. *Principles of Marketing*. 4th European edition, Essex, Pearson Education Limited.
- Lee, Hsiang-Ming, Lee, Ching-Chi, and Wu, Chou-Chen. 2011. Brand Image Strategy Affects Brand Equity After M and A. *European Journal of Marketing*, 46, 78, 1091-1111.
- Low, G. S., and Lamb Jr, C. W. 2000. The measurement and dimensionality of brand associations. *Journal of Product & Brand Management*, 9(6), 350-370.
- Mahandy, S. R., and Sanawiri, B. 2018. Pengaruh Customer Engagement Terhadap Kepercayaan Merek (Survei Pada Followers Social Media Instagram@strudelmalang). *Jurnal Administrasi Bisnis*, 57(2).
- Mete, M., and Davies, G. 2017. A Comparative Study on Brand Image Measurements. In *Global Conference on Services Management (GLOSERV 2017)* (p. 330).
- Mitchell, A.A. and Olson, J.C. 1981. Are product attribute beliefs the only mediator of advertising effects on brand attitude?. *Journal of Marketing Research*, Vol. 18, August, pp. 318-32.
- Mogaji, E. 2018. Surprise me with your ads! The impacts of guerrilla marketing in social media on brand image. *Asia Pacific Journal of Marketing and Logistics*.
- Park, C. W., Jaworski, B. J., and MacInnis, D. J. 1986. Strategic brand concept-image management. *The Journal of Marketing*, 135-145.
- Perera, G. R., and Perera, I. 2018. Influence of Social Media Marketing on the Brand Image of Organizations in the Hospitality Industry of Sri Lanka. In *Media Influence: Breakthroughs in Research and Practice* (pp. 371-383). IGI Global.
- Roy, D., and Banerjee, S. 2007. CARE-ing strategy for integrating of brand equity with brand image. *International Journal of Commerce and Management*, Vol. 17 no ½, P. 140-148.
- Solomon, M.R 2009. *Consumer behavior buying, having and being*, 8th edition, Upper Saddle River (N.J.), Pearson education, Inc.
- Wheeler, A. 2009. *Designing brand identity*. Canada: Wiley.
- Wijaya, B.S. 2013. Dimensions of Brand Image: A Conceptual Review from the Perspective of Brand Communication. *European Journal of Business and Management*, 5, 31, 55-65.

# Impact of Financial Variables on Common Stock Systematic Risk

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## **Abstract**

The ultimate goal of firms' financial management is to increase market value of shareholders' equity. The concept of systematic risk is a major factor that should be consider for making decisions regarding the common stock investments. Therefore, it is important for the financial managers of a company to get awareness about the factors which are affected for the systematic risk of common stock for making right investment decisions. By considering the significance of systematic risk in common stock, the goal of the study is to examine the impact of financial variables on systematic risk of common stock. To achieve the goal of the study, selected 50 companies from Colombo Stock Exchange including manufacturing sector, beverage food and tobacco sector and hotel sector companies for the period of 2009-2016 and selected profitability, dividend payout, liquidity and leverage as financial variables. Financial variables have been tested by descriptive statistics, correlation analysis and multiple regression analysis. In this study, according to regression results showed that dividend payout had a negative significant relationship with systematic risk while profitability, liquidity and leverage had a positive relationship. Pearson Correlation analysis showed that all the variables are insignificantly affected for beta. Also, profitability and liquidity had a positive relationship with systematic risk and the dividend payout and leverage represented a negative correlation with beta. These findings are material for the investors and all decision makers for the purpose of right decision making.

**Key Words: Financial Variable, Systematic Risk, Common Stock and Market Value**

## **Introduction**

This research considered about the impact of financial variables on systematic risk of common stock of companies listed in Colombo Stock Exchange (CSE). In estimation of financial securities, a very important aspect associated to risk is systematic risk, which has been discussed in financial theories and also examined empirically in previous studies. Therefore, major risk associated with common stock is systematic risk. The systematic risk, also known as "un-diversifiable risk" is due to the influence of external factors on an organization. Such factors are normally uncontrollable

from an organization's point of view. It cannot be avoided through diversification. Systematic risk is estimated through beta. Risk associated with investment defines the return that an investor seeks from his investment. There is a direct impact on risk and expected return. It means that if uncertainty on any investment is higher it will also increase the expected return of that particular investment. Therefore, financial variables affect for the systematic risk of common stocks are most significant information for company to enhance the shareholder's wealth. A large body of evidence suggests that various financial and accounting variables directly affect for differential betas among common stock. The effects of financial variables on systematic risk would make the financial managers understand about how changes in the financial decisions influence the systematic risk of their common stocks and affects the shareholders' wealth. It is useful for investors also. If investors would be able to forecast systematic risk probably, they will be able to construct efficient portfolios. For that purpose, an investor should have a better understanding about the systematic risk on common stock. Systematic risk of a company is vital because it indicates the risk of the company in relation to the market risk. Therefore, to understand the determinants of systematic risk is vital for companies' financial managers to increase shareholders value, keep company away from bankruptcy and to attract investors. So, this research work is aimed at answering the what kind of impact placed by financial variables on systematic risk of common stock in firms listed in CSE

### **Literature Review**

Portfolio and capital market theories have focused to the development of a basic concept of systematic risk, which is also known as the beta or the un-diversifiable risk or the market risk. It measures the sensitivity or volatility of a firm's common stock relative to the overall market. The risk measure for a given portfolio of assets was first developed by Markowitz in 1952 and 1959. In his portfolio model, the variance of the portfolio's rate of return was demonstrated to be a significant determinant of the portfolio's risk under a logical set of assumptions. Many researchers in the past have focused on empirical relations among the systematic risk and various financial and accounting variables. In some studies, liquidity, leverage, operating efficiency, profitability, dividend payout, firm size, growth, tax rate, market value of equity and financial risk has been used to determine the systematic risk.

### **Goal of Business Venture**

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is measured with income and expenses. Income is money generated from the activities of the business. Expenses are the cost of resources used up or consumed by the activities of the business. (www.investopedia.com)The dividend payout ratio is the percentage of earnings paid to shareholders in dividends. The ratio is used to determine the ability of an entity to pay dividends, as well as its reliability in doing so. The ratio also reveals whether a company can sustain its current level of dividend payouts. (www.investopedia.com). Liquidity can be defined as the capacity of stocks trades without high price spread and in a minimum time (Abdelwahed et al., 2010).Systematic risk is related with market while unsystematic risk is related with the individual firm. Further, the systematic risk is a decider for the market's evaluation of any firm's financial production and marketing policies (Rowe & Kim, 2010).A study followed by Gupta & Gurjar(2014) investigated the systematic risk involved in the stock of selected companies listed in National Stock Exchange. Study conducted for the period from 03.02.2014 to 28.02.2014. Beta and average return are the variables included in this study and beta has been calculated using regression analysis. Results showed beta is greater than one; it indicates the systematic risk is higher than the average. Due to that, asset with a greater beta implies a greater systematic risk as well as greater expected return.By considering the prior studies followed by researchers, most of the research's concluded that systematic risk is a very important concept to invest the funds in stocks or portfolios. Inversely, the return of stocks is change due to the change in market situation and uncontrollability of industry factors. Thus, investors should pay more attention to the risk and return from their investments while considering industry factors.

### **Systematic Risk and Profitability**

A study done byLogue and Mervile(1972), showed that success of any firm depends upon profitability and in profitable firms the chances of systematic risk reduce. In this study concluded a negative relationship with beta and profitability. Similarly, previous findings of Schemer & Mathison(1996), Gu & Kim(2002), Lee & Jang(2006) and Rowe & Kim (2010)indicated a negative relationship between profitability and systematic risk. In another study Alaghi(2013), aimed to find the factors that are determine the systematic risk. Data covered for the period from 2001 to 2011 and including a sample of 457 non- financial companies in Teheran Stock Exchange

(TSE). In here, results indicate that profitability have a positive relationship with beta. A study put forward by Iqbal & Ali Sha(2012), investigated the relationship among financial variables and systematic risk for the period from 2005 to 2009 from 93 non-financial firms listed in Karachi Stock Exchange by considering liquidity, leverage, operating efficiency, dividend payment, market value of equity, firm size, growth and profitability. The results from the regression analysis, descriptive analysis and common effect model showed that profitability is positively associated with the systematic risk. A study followed by Carter & Schmidt(2008), focused on how dividends affect a firm's level of systematic risk. Observation was based for the period from 2002 to 2006 including 88 firms from the Standard & Poor's 500 Index. The results revealed inverse relationship between dividend payout ratios and the systematic risk of the firm. Another study conducted by Adhikari(2015), aimed at advancing empirical evidences on financial factors determining systemic risk and data considered for 2009 to 2013, from 15 listed companies in Nepal Stock Exchange. Findings concluded that firm size and profitability are positively associated with the systemic risk, while the dividend payment is negatively related to the risk. Former studies followed by Breen & Lerner(1973), Borde(1998) and Gu & Kim(2002) have concluded negative impact of dividend payout on systematic risk. According to the prior researches, most research's indicated that dividend payout ratio and firm's beta has a negative relationship. Reason can be concluded as, if the firms paying high dividend due to their high profits, the uncertainty of returns diluted. Therefore, beta and dividend payment have a negative relationship. A study conducted by Salari(2014), for the purpose to investigate the relation between systematic risk of common stock and financial ratios of accepted companies in Teheran Stock Exchange. Data considered for four years' period of 2006 to 2009 and selected 226 companies as the sample. Results investigated that financial ratios especially working capital ratio to total asset, current ratio and quick ratio have significant and positive impact on systematic risk. In this context, empirical finding is limiting to four years. Therefore, to mitigate that limitation current study based on seven years.

## **Financial Information**

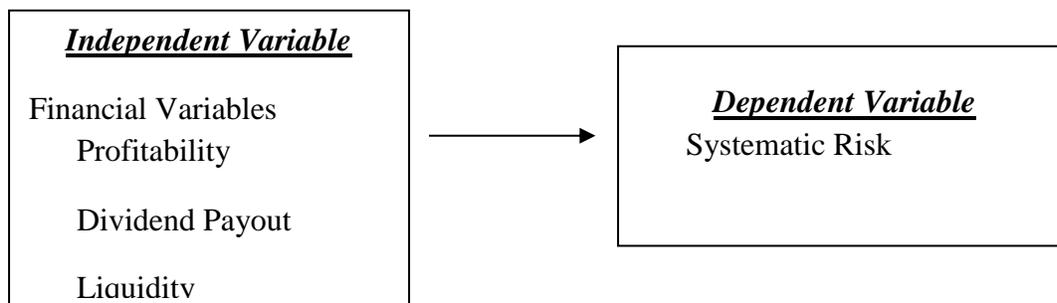
According to Rowe & Kim(2010), expected to analyze which financial ratios are significant predictors of beta in casino industry for the period from 2005 to 2008 by using 19 public traded gaming companies financial information. Findings reveal that quick ratio is insignificant determinant of beta during the recession and non-recession period. However, most studies have found out a negative relationship between systematic risk and liquidity. Logue and Mervile(1972); Moyer & Chatfield(1983);Gu & Kim(1998) and Lee & Jang(2006)found negative relationship among systematic risk (beta) and liquidity. In here, researchers mentioned the reason for negative relationship as, systematic risk is decreased due to the increase of liquidity. As cited byGu & Kim(2002), found positive and nonlinear relationship between leverage and systematic risk. Frequent studies followed by Lee and Jang(2006), Bowman(1979), Logue and Mervile(1972) and Borde(1998) suggested that leverage is negatively correlated with beta. Another study conducted by Tan et al., (2015), concerned to find the overall impact of financial leverage and other determinants of systematic risk followed through the years from 2007 to 2013 using data set of 50 non- financial publicly listed companies in the Philippine Stock Exchange. It founded that financial leverage have a significant positive relationship with systematic risk.

## **Methodology**

The present study is intended to examine the impact of financial variables on systematic risk of common stock. The design of the methodology is based on prior researches. The study employed data from companies listed in CSE and covered 50 companies in manufacturing sector, beverage food and tobacco sector and hotel sector. The study is covered a period of 2009-2016. The population of this study consists 287 companies listed in CSE under the base year is 2016. In this study, the sample include 50 companies in manufacturing sector, beverage food and tobacco sector and hotel sector which are listed in CSE over the period from 2009 to 2016 and it cover 8 years. This study investigates the influence of four financial variables in assessing the systematic risk of common stocks of listed manufacturing companies, beverage food and tobacco companies and hotels listed in CSE in the period 2009 - 2016. In this research data selected from secondary sources. Those selected from published financial statements in CSE web site of that 50 companies listed in CSE. The analysis of descriptive statistics, correlation analysis and regression analysis statistical techniques selected to analyze the study. The study independent variable was systematic

risk and independent variable was Financial Variables according to that study developed following conceptual framework.

**Figure 1: Conceptual Framework**



Following hypotheses developed based on the above conceptual framework

- H<sub>1</sub>: Profitability has a negative impact on the systematic risk of common stock.
- H<sub>2</sub>: Dividend payout ratio has a negative impact on the systematic risk of common stock.
- H<sub>3</sub>: Liquidity has a negative impact on the systematic risk of common stock.
- H<sub>4</sub>: Leverage has a positive impact on the systematic risk of common stock.

In this study quantitative research methods were used by the researcher. The quantitative approach involves gathering and analyzing numerical data. This study has been supplied sample of financial data for essentially requires a certain mathematical and statistical techniques. The nature of research area is very important when deciding methodology and this research methodology should be very practical. As well as several numbers of period selecting for accurate representation of this study. In order to carry out this research, descriptive statistics, model analysis (regression analysis) and correlation analysis are used.

## **Result and Discussion**

The study used selected companies' CSE published financial statement's information for this analysis. According to simple random sampling study selected 50 companies of manufacturing, beverage food and tobacco and hotel sectors companies are used and seven year's average values has used for this study. SPSS 20 package have used for analysis data. Mainly consider descriptive statistics method, Pearson correlation coefficients, regression and R squares in this research.

Relationship between independent and dependent variables have measure by used correlation coefficients, regression and R squares.

### *Descriptive Statistics*

Descriptive statistics are useful to make general conclusions about collect data. According to this study mainly identified the independent variables descriptive statistics and dependent variables descriptive statistics separately. Mean value of beta (SR) was 1.129. This means that the systematic risk on average of the selected companies is greater than market risk that is always equal to 1, which implies that the listed companies are moderate risky than market. Profitability measures indicate that average rate of return on investment was 9.2%. Then the dividend payment has a mean value of 0.052 and the variability of standard deviation was  $\pm 0.026$ . Liquidity has average score of 1.218 with std. deviation of  $\pm 0.634$  which indicates the listed companies on average have enough cash and receivables to cover their current liabilities. Finally, Leverage has mean of 0.379 with deviation of  $\pm 0.132$  indicating that on average 13.2% of the assets are financed by debt. The descriptive statistics reveal that there is high variability in liquidity of the selected listed companies of CSE.

### *Correlation Analysis*

Correlation Analysis is used to measure the significance between the independent and dependent variables. Variable association refers to the wide variety of coefficients which measure the strength of a relationship. According to theoretically, higher value of correlation between two variables, the more related these variables are to each other.

**Table 1: Correlations Analysis**

	<b>SR</b>	<b>PF</b>	<b>DIV</b>	<b>LQ</b>
Systematic Risk (SR)	1			
Profitability (PF)	0.204	1		
Dividend Payout (DIV)	-0.189	0.226	1	
Liquidity (LQ)	0.228	0.057	0.356**	1
Leverage (LV)	-0.006	0.206	-0.109	-0.489**

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*.. Correlation is significant at the 0.01 level (2-tailed).

The result for multiple linear correlations between the systematic risk and four financial variables shows in table 1. The significant value of 0.204 for correlation coefficient of ROA (Total Return on Assets) suggested that systematic risk had an significant positive correlation with the profitability. This result was compatible with the previous findings of Logue and Mervile(1972), Gu & Kim(2002), Rowe & Kim(2010), etc. The Pearson Correlation of dividend payout ratio was -0.189 this means the dividend payout ratio is negatively affected with beta. The empirical findings of Carter & Schmidt(2008) and Adhikari(2015) showed that dividend payment is negatively correlated with beta. Findings of current study also found that inverse relationship. The correlation coefficient of 0.228 in liquidity (quick ratio) is indicated that the quick ratio had a significant positive correlation with systematic risk at the desired levels. Leverage had -0.006 in Pearson Correlation and significant value was less than 0.05 which indicated that the leverage had insignificant negative correlation with the systematic risk.

### ***Regression Analysis***

Regression analysis used to identify the relationship between independent variables and dependent variables. According to this study mainly consider the correlation amount, R square value of model summary table, significant F value in ANOVA table, and Regression equation built by Standardized coefficient amount for identified the relationship between independent variables and dependent variables.

The results of regression analysis of systemic risk per share on return (profitability), dividend payout, liquidity and leverage for the sample companies over seven years of data for a total of 50 observations are shown in below tables.

**Table 2: Model Summary – Regression**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	0.459 <sup>a</sup>	0.520	0.140	0.502

a. Predictors: (Constant), LV, DIV, LQ, PF

*Source: Data Analysis*

The above table 2 represents the model summary of systematic risk and financial variables. According to the regression model summary, R square value is 0.52 and it reveals that the 52% of independent variables effect for the variance of dependent variable.

**Table 3: ANOVA<sup>b</sup>**

	<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	3.021	4	0.755	2.998	0.028 <sup>a</sup>
	Residual	11.336	45	0.252		
	Total	14.357	49			

a. Predictors: (Constant), LV, DIV, LQ, PF

b. Dependent Variable: SR

Source: Data Analysis

The P value denoted by “Sig.” is 0.028. This means that if the population mean values are exactly equal, the model only has a 2.8% chance of finding differences that can be observed in the sample. In the present study ANOVA test obtained the significant value is less than the 0.05, therefore there is a significant effect of financial variables on the systematic risk (beta value). The F ratio measure how different the means are relative to the variability within each sample. Theoretically, if F ratio is greater than 1 it mentioned that there are no real effects and it shows the model is appropriate. In this current results, the F value is 2.998 conclude that there were no more real effects and the regression ANOVA model is appropriate for current study.

**Table 4 Coefficients<sup>a</sup>**

	<b>Model</b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
1	(Constant)	0.874	0.363		2.410	0.020
	PF	1.248	0.713	0.246	1.750	0.087
	DIV	-7.947	3.083	-0.375	-2.578	0.013
	LQ	0.336	0.139	0.394	2.417	0.020
	LV	0.390	0.648	0.095	0.601	0.551

a. Dependent Variable: SR

Source: Data Analysis

The results of impact of profitability (ROA), dividend payout ratio, liquidity (quick ratio) and leverage on systematic risk are reported in Table 4. Multiple linear regression was run in the form of model developed. The unadjusted coefficient of constant factor (0.874) implied that the independent variables in the model explained 87.4 percent of variations in the systematic risk. Profitability (total ROA ratio) showed a regression coefficient of 1.248 and its attached significant value of 0.087 confirmed that the variable was insignificant at the 5 percent level. It showed that profitability is positively and insignificantly effect for the beta.

Dividend payout ratio had a regression coefficient of -7.947 and its attached significant value of 0.013 indicating that the variable was significant at the 5 percent level, which the dividend payout is a major financial variable of systemic risk of stock of the sample companies. Because of the dividend payment is significant and negatively affect for systematic risk. Then the liquidity (quick ratio) had a 0.336 regression coefficient with a significant value of 0.020 which is less than 5 percent level. Therefore, liquidity had a positive significant impact on beta value of common stock. And finally, leverage had a regression coefficient of 0.390 and its significant value is 0.551. The leverage variable was not significant. Because of the P value denoted by “Sig.” was largely greater than the 0.05. According to the regression coefficient and significant value, leverage is positively correlated with beta and concluded that it was insignificant due to larger P value.

According to the results obtained, the regression equation can be presented as follows.

$$SR = \alpha + \beta_1 PF + \beta_2 DIV + \beta_3 LQ + \beta_4 LV + \epsilon \dots\dots\dots Eq1$$

$$SR = 0.874 + 1.248 PF - 7.947 DIV + 0.336 LQ + 0.390 LV + 0.363 \dots\dots\dots Eq2$$

The above regression coefficient represents the amount of change in the independent variables when one unit of constant factors increases or decrease. If one-unit increase, profitability increased at 1.248 and dividend payout decreased at 7.947. likewise, liquidity is increased at 0.336 and leverage at 0.390. The significant values attached to all the regression coefficients were found to behave as expected, except that of the profitability and liquidity variables. Because of the direction of impact from dividend payout and leverage were theoretically supportive. The sign attached to the regression coefficient of profitability and liquidity variables was positive.

**Conclusions**

The main goal of a company is to increase shareholders' value. The total risk of the investment is measured by the variance or, most commonly the Standard deviation of the return. To understand the factors related to systematic risk is very useful for investors and company managers. This study examined the link between systematic risk and profitability, dividend payout, liquidity and leverage variables. On the basis of previous studies four hypotheses have assumed to test the above mentioned variables. Descriptive statistics, correlation and regression analysis used for estimation. Study included 50 non-financial companies listed in CSE for the period of 2009 to 2016. According to regression analysis, there is an insignificant positive relationship between profitability and beta, significant negative relationship of dividend payment and beta, significant positive relationship with liquidity and systematic risk and finally a positive insignificant relationship with leverage and beta were obtained as results. Based on Pearson Correlation all the variables are insignificantly affect for systematic risk. Findings represented that there is positive relationships of profitability and liquidity with the dependent variable beta. Similarly, confirmed that a negative relationship lies between beta with dividend payout and leverage variable of firms listed in CSE. Managers can estimate these factors to control systematic risk and to improve financial performance of a firm. The findings of the current research support previous researches. Financial variables do play significant role in determining systematic risk. The conclusion resulting from this study is that systematic risk is significantly determined by financial variables of the listed companies. Based on the findings study recommended all financial managers and investors should be aware of systematic risk of common stock of various sector companies to do financial investments more securely and financial managers should have a better awareness of how the systematic risk of their firms are affect for investors. This study is essential for investors and finance managers to understand what kind of relationship exist between financial variables and systematic risk. Following are some suggestions for future researches. The sample size of the study is small and considered only three sector companies listed in CSE without the financial firms. So suggest to conduct researches by considering more sectors of CSE and a large sample. In here analyzed only four financial variables, so request to analyze more additional determinants of systematic risk for improving the overall level of explanation.

## **Reference**

- Adhikari, N. (2015). Determinants of Systemic Risk for Companies Listed on Nepal Stock Exchange.
- Alaghi, K. (2013). Determinants of Systematic Risk of the Listed Companies in Tehran Stock Exchange.
- Borde, S. (1998). Risk diversity across restaurants. *Cornell Hotel & Restaurant Quarterly*, 4,, 64-69.
- Bowman, R. (1979). The Theoretical Relationship Between Systematic Risk and Financial (Accounting) Variables.
- Breen, J., & Lerner, M. (1973). Corporate Financial Strategies and Market Measures of Risk and Return. *The Journal of Finance*, 28(2), 339-351.
- Carter, M. S., & Schmidt, B. H. (2008). The Relationship Between Dividend Payouts and Systematic Risk: A Mathematical Approach.
- Gu, Z., & Kim, H. (1998). Casino Firm's risk Features and Their Beta Determinants. *Proress in Tourism and Hospitality Research*,4,, 357-365.
- Gu, Z., & Kim, H. (2002). Determinants of Restaurant Systematic Risk: A Re-examination. *The Journal of Hospitality Financial Management*, 10(1), 1-13.
- Gupta, N., & Gurjar, A. S. (2014). A Study of Systematic Risk with Reference of Selected Companies.
- Lee, S., & Jang, C. (2006). The systematic risk determinants of US airline industry:. *Tourism Management*, No.28, 434-442.
- Logue and Mervile. (1972). Financial Policy and Market Expectations. *Financial Management*, 1(3),, 37-44.
- Iqbal, M., & Ali Sha, S. Z. (2012). Determinants Of Systematic Risk.
- Moyer , R., & Chatfield, R. (1983). Market Power and Systematic Risk. *Journal of Economicsand Business*, 35 (1), 123-130.
- Rowe, T., & Kim, J. (2010). Analyzing the Relationship Between Systematic Risk and Financial Variables in the Casino Industry. *UNLV Gamming & Research Journal Vol. 12 No.2*.
- Rowe, T., & Kim, J. (2010). Analysing the Relationship Between Systematic Risk and Financial Variables in the Casino Industry. *UNLV Gamming & Research Journal Vol. 12 No.2*.
- Salari, L. (2014). Analysis of Systematic Risk Impact of Common Stock on Financial Ratios of Accepted Plants in Teheran Stock Exchange.
- Schemer, P., & Mathison, T. J. (1996). Investment strategies for REIT investors. *Real Estate Review*, 26 (1), 5-10.

[www.investopedia.com](http://www.investopedia.com).



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### ***Abstract***

*Product performance satisfaction is no longer the ultimate objectives, since intense competition has required product to become valuable to surprise the customer. Unexpected values were imagined by the customer and charmed them. Emotional reactions were perceived by consumers from both sides: (1) psychological aspects and (2) non-psychological aspects of the consumers. Both cosmetics and consumers have an emotional bonding between them, yet the pleasure of consumers (consumer delight) in using cosmetic products is determined by various factors. The purpose of this paper is to propose the model of consumer delight in the Indonesian cosmetics industry. The model used five main modified dimensions of consumer delight: justice, security, self-esteem, trust, and variety. Twenty online diaries of cosmetic users were conducted and used in to measure the dimensions and indicators shaping consumer delight. This paper also denotes further opinion in clarifying consumer delight concepts to understand the emerging cosmetic industry in Indonesia.*

**Keyword:** customer delight, beauty, emotion, cosmetics industry

### **INTRODUCTION**

Customer were the key driver of a brand longevity. The ideas of creating, designing, and evaluating a brand would have to be customer based. On this digital era, customers were creative and they are open-source eyed, therefore, in order to be success, a brand should start with the insights first then company produce. Targeting customer satisfaction has long been identified as the heart of the marketing concept. Customer satisfaction has been believed to be the ultimate goal. A plethora of Practitioners and academics alike have argued that an essential strategy for success and survival in today's marketplace is the creation of and maintenance for satisfied and loyal customers. Many positive effects were gained from a satisfied customer. Through intense competition, customer satisfaction were adjusted from time to time. In a simple meaning, customer satisfaction is a situation when a product or service fulfills customers' needs. Customer satisfaction yields positives effects. We have also seen a number of important outcomes of this positive effects of customer satisfaction, including increased market share, usage rates, the benefits associated with positive word-of-mouth effects (Fornell and Wernerfelt, 1987; Anderson et al., 1994; Zeithaml, 2000), repeat purchase (Szymanski and Henard, 2001), retention (Bolton, 1998), loyalty (Anderson and

Sullivan, 1993), and even profitability (Anderson, Fornell, and Lehmann, 1994; Bernhardt, Donthu, and Kennett, 2000).

But later on, being merely satisfied (Deming, 1986, p.141; Skogland and Siguaw, 2004) is not necessarily being a loyal or committed customer (Voss et al., 2008), it has to be beyond the satisfaction—“customer delight” is required (Schlossberg, 1990). Some scholars have postulated that customer emotions and customer experiences will have a contribution in customer delight. The purpose of this paper is to examine the concept of customer delight in beauty cosmetic setting. Specifically, the present study seeks to explore the factors that lead to the customer delight experience in beauty cosmetic. The sources of delightful experiences are explored and through the use of a qualitative methodology.

## LITERATURE REVIEW

### Customer Satisfaction and Delight

Customer satisfaction is more onto a static process that focuses on the present and deals with known circumstances and known variables. “*On the other hand, providing customer delight is a dynamic, forward-looking process, that takes place primarily in the unknown environment, and going beyond satisfaction to customer delight will provide a distinct advantage to the company that does it first and does it well consistently*” (Chandler, 1989, p. 30). Customer delight is fundamentally different from customer satisfaction, and it is focusing on what is currently unknown or unexpected by the customer. The implication is to gain customer satisfaction, and the “zero defects” strategy should be highlighted; satisfaction may be induced by avoiding problems, but delight requires more. To survive in the current market, customer delight will help to determine the prolong of product or service in the market, because customer satisfaction was not capable to determine the linear relationship between satisfaction and loyalty intentions, and not able to determine the linear relationship between satisfaction and repurchase. Somehow, there is strong evidence that delight and satisfaction share common characteristics. In relevance to the expectancy-disconfirmation model (Oliver, 1980), customers are expected to compare pre-purchase expectation with the actual experience of product or service. Thus, when perceived performance fails expectation, dissatisfaction or outrage will occur. When perceived service quality exceeds expectation, then positive responses such as satisfaction or delight will arise. Therefore, delight and satisfaction are unified by their nature as positive emotions. Delight entails a pleasant surprise which satisfaction lacks. It is noted that the emotional state of being delightful is a blend of happiness and surprise (Kumar et al., 2001; Berman, 2005). This is in line with Oliver et al.’s (1997) proposition that surprise acts as an antecedent for delight to occur. Trip advisor blog postings were recently analyzed, and found that surprise is an essential component of the delight construct. Compared to satisfaction, delight also stresses on the state of emotional attachment and is more strongly associated with customer loyalty, positive word of mouth, and repeat purchase intent (Torres and Kline, 2006). Practice of customer satisfaction has been done for years, and it has been used as the benchmark of success in managing customer relationships. In recent years, however, customer delight has been studied as the new standard of managing guest relations.

### Customer Delight

There are so many benefits of having customer delight applied in a brand, i.e. repeated buying, remaining loyal for a longer period, less price sensitive, good words of mouth, low service cost, less attention to competitor’s product/service—in favor of a company. On the

contrary, a dissatisfied customer can do much harm to a company. In fact, another study reveals that a dissatisfied customer gripes to 11 people, against a satisfied customer who talks favorably to three people only. Clearly, the bad word of mouth runs around four times faster than good word of mouth. Realizing the importance of delighting customers, constitute the company's relationship capital. It requires strategy and best effort to attract/capture delighted customers to switch away from other companies. A plethora of practitioner and scholars alike have argued that emotion theory as an essential basic emotion of customer delight have been developed in many studies across industries. Customer delight of Plutchik (1980) have been mentioned and developed in product or service studies. Realizing the nonlinear customer satisfaction to loyalty intentions or to repurchase; and merely satisfaction will not guarantee the long term of business success, hence in recent years the concept of customer delight has raised the interest of researchers.

The progress of the concept has been shown using the emotion combination, like Joy and Surprise (Kumar et al., 2001), or Joy (Finns, 2012), and Surprise (Magnini 2011). From that time forth, many researchers have postulated Customer Delight as customer emotions and customer experiences (Laureiro et al., 2014). The concept of delight has recently been gaining attention among researchers and practitioners. Nevertheless, there is limited research on concept and the limited literature has inconsistencies in defining it. Finn (2005) and Torres and Kline (2006) consider delight an emotion that is a combination of high levels of pleasure (joy, elation) and arousal. Pleasure refers to the degree to which a person feels good, joyful or happy in a situation, while arousal refers to the extent to which a person feels stimulated and active. However, researchers have also stated that the element of surprise is not essential for customer delight: it can occur simply as a result of joy (Barnes, Beauchamp, & Webster, 2010). Some scholars proposed another conceptualization of customer delight: an extreme level of satisfaction (Berman, 2005).

Based on the literature review, this study prefers the conceptualization of customer delight as an emotional response during consumer experience on beauty products consumption (Finn, 2005; Kwong and Yau, 2002). Since scholars have defined the concept of delight in various ways, they employ different scales to measure the concept. Some scholars have measured delight using scales of emotions (Finn, 2005; Loureiro, 2010, 2014). Others, such as Oliver (1997) and Kumar, Olshavsky, and King (2001), have used a single item, 'feel delighted', which certain researchers have later criticized as it does not measure the complexity of customer delight. Finn (2005) improved the measurement scale for delight by proposing three items: 'delighted', 'gleeful' and 'elated'. Loureiro (2010) used two items, 'enchantment' and 'delighted'. Kwong and Yau (2002) conducted a study in customer experience in consumption to best represent delight from customer point of view. Regardless unlimited human's needs in life, the fulfillment of human's needs may not be ultimately met but the process might runs continuously corresponding to pleasure and delight (Schneider and Bowen, 1999). Thus, another dimension, 'trust', has been added (Hart and Johnson, 1999) and so does another additional dimension, 'variety' (Berlyne, 1970; McAlister and Pessemier; 1982). This study adopts consumer psychology emotions framework (Plutchik, 1980) to describe the most linked emotions of consumer experience as a result of combinations of emotions adjacent to the 'dyads' in the Plutchik theory. Hence as a justification of human emotions psychology, this study leads to derived insights that best represent customer delights based on their experience consumption in cosmetics industry. Therefore, customer delight would be classified into three major classifications: (1) theoretical foundations of customer delight, (2) customer delight based the emotion literature, and (3) customer delight based on human or customer expectation.

Foundations of customer delight.

This is meant to create a customer repeat patronage, where satisfaction should not be moderate, it should be reaching the top level of satisfaction. Brand should learn well the paradox of why satisfied customer defects, through satisfaction continuum (Keiningham et al., (1999); Anderson and Mittal (2000); Ngobo (1999); Schneider and Bowen (1999)). Keiningham and Vavra (2001) said there are three major thresholds along the continuum of satisfaction: the zone of pain, the zone of mere satisfaction, and the zone of delight. Moving consumers from the zone of mere satisfaction to the zone of delight may result in significantly better outcomes such as increased retention and sales, positive word-of-mouth, and share-of-wallet (Oliver, Rust, and Varki, 1997; Keiningham et al., 1999). In symmetry, we posit that moving consumers to the zone of pain will cause consumer outrage and exceptionally negative outcomes. In other words, consumer delight and outrage form the two extreme emotional states of the satisfaction-dissatisfaction continuum. Overall theoretical foundation of customer delight is crafted base on the nonlinear relationship between satisfaction and loyalty.

#### *Customer delight based on Human Emotion*

Customer experience would define the customer evaluation on a delightful experience or its negative counterpart, termed as disgust. Delight can occur as a result of the positive feeling that forms when the customer enters a store, interacts with salespeople, consummates the transaction, leaves the store, and receives a pleasant surprise at some point in buying/selling process (Oliver, Rust and Varki, 1997). Customer delight comes from doing the little things that customers do not expect, but will certainly remember. Berman (2005) said that delight requires out-of-the-ordinary service or product performance, and is more memorable than satisfaction. The emotion literatures suggested that delight is a positive effect (Plutchick, 1980; Wierzbicka, 1992). The central idea is that emotions are not preset but are the constructions of the brain, as it tries to interpret the outside world (Barrett, 2007). Emotions are like perceptions in the way that they are formed. Out perceptual systems do not only include the senses, but also interoception (the monitoring of our internal systems) and nociception (the body's system for evaluating pain). Emotions are just another facet of our interpretation and experience of the world around us—constructed so the brain changes the prediction. Our experience is mostly a prediction of reality, and not reality itself. Emotions are short-term (and in many cases fleeting) and reflect our successes or failures in achieving goals that we have in the context of our current environment. For many psychologists and biologists, emotions are tools that our embodied mind uses to adapt our behavior to the world around us. Emotions and motivations are unconscious and intuitive; they are felt or experienced more than they are the result of thinking, and although expressed through behaviors, they are often unknown to us. As in the emotion literature, delight was classified into having two basic dimensions of emotions: inaction/arousal and pleasantness/unpleasantness toward consumer previous experiences of a product or services (Russells, 1980). The difference of satisfaction and delight depends on the level of arousal.

#### *Customer Delight based on Human / Customer Expectation*

In this era of modern marketing, there is more emphasize on human than on product. Many brands would apply 'process out to in' than 'process in to out' as in traditional marketing. Hence customer expectation will be put as priority, and as a result, costs of business would have an additional sum of amount (Gurney, 1999). Getting customer delight can be done by selecting their customer, and acquiring the insight of their behavior without their notice. In Ritz-Carlton's, "if you go to a good hotel and ask for something, you get it. If you go to a

great hotel, you do not even have to ask.” Ritz-Carlton’s credo has the goal of fulfilling “even the unexpected wishes and needs” of its guests.

However, there are some pitfalls that might occur to have a successful delight program, e.g. brand consistency in delivering delight might change customer expectations so that they expect delight; delivering delight might have difficulties for some product, like mundane products; delivering delight correlate to delivering additional cost and creating a delight program that is totally different in its industry. Delights do not have to be a big or expensive things, they can come from doing the little things based on their expectation. In contrast, customer becomes so rational and always expect better and better product performance against their expectation. In general, they set higher standard upon, despite needs objectives. Explaining ‘satisfied’ or ‘merely satisfied’ is not good enough, since brands would have to achieve the highest level of maximum satisfaction, besides customer loyalty is expected to ascend. Thus quality of customer delight - customer satisfaction has always been treated as an important issue in the marketing field.

## **METHOD**

To identify the delighted customer in cosmetic industry, through qualitative study method and emotional journeys from woman’s beauty routines in Jakarta as the objective. The data is acquired through twenty online diary platforms of Jakarta Beauty Community in cooperation with ABN Impact Indonesia and Tapestrywork Singapore, an international market research agency. The number of participants’ online diaries are twenty members of Jakarta Beauty Community, with qualification of all woman, age twenty to thirty years old, SEC A to C. There is no specific brand usership criteria, but they are aware and have interest in beauty products, a decision maker of choosing and buying a beauty product, daily active consumer as in personal regular usage of beauty product, and have become a brand loyal customer of a beauty product for at least two years before the fieldwork for this study. These recruitment criteria were used to screen the participant, where the chosen were invited to participate. The twenty participants are Indonesian, speaking Bahasa Indonesia and the interview use Bahasa Indonesia, living in Jakarta and were recruited by referral from five areas of the Special Capital Region of Jakarta. Participants were from all walks of life, i.e. teacher, fulltime housewife, student, clerk, secretary, administration officer, customer relation. Ideas were freely flowing among participants and all seventeen activities were measured in the online diaries. The moderator probed on their background story. Participants were a mixed composition of fulltime housewife with children, worker, student, maternity mother, single status, career woman, and a ‘weekend mother’.

Through the online diary, the participants were asked the following:

*In Activities 2, What Do You Think About Beauty?*

Beauty are considered to boost confidence, for a woman should take care of herself; inner beauty and woman should look beautiful; it is a unique face; it is a “healthy” skin and body, positive thinking and smart; it is a clean face – clean body; it is natural – health – balance between inner and outward beauty; it is charm and aura radiates from within; it is soul and physic; it means unique, simple and natural without unnecessary accessory, thus it attracts from the first glance; it is a good mindset and attitude; to take care of your body; pretty, good-looking, smart; it is a perfect skin and every woman dream of. Most of them described definition of beauty related to their current skin condition, and perceived as a dream of a woman. Further, on the second place, they consider beauty as the inner beauty, radiating from within that is considered lovely and charming. Overall, the Beauty goals for Indonesian women is the struggle to balance the need to feel Smart and Confident with the need to remain Authentic to themselves, their friends, and their beliefs and values.

### *In Activities 9, Unforgettable Moment With My Beauty Product?*

The commonalities in the online diaries were extracted based on the frequency appearing in dialogues and supplemented by the literatures related to customer delight. Through this experience with the owned beauty product, participants felt emotions as in the “psycho-evolutionary” framework (Plutchick, 1980). From Activities 9, participant emotion can be identified and put in order from the most to the least as such as in the following: Joy as number one, followed by Sadness, Surprise, Acceptance, Anticipation; and the last ones chosen evenly are Fear and Disgust. None of them felt Anger. The participant combinations of emotions or ‘dyads’ also occurred to some participants. Three participants are in the Primary Dyad: “Love” derived from Joy and Acceptance. Through the beauty product, they feel joy from their fresh look appearance or through enhancing their own beauty and being accepted by feeling confident in front of many people. Participants were showing their emotion more toward the positive affect. In the category of Secondary Dyad: “Delight” is derived from Joy and Surprise. Seven participants felt surprise because the situation were unexpected and it exceeds expectation, such as the participants become the ‘center of public attention’. Thus this makes them glad and reach higher level of satisfaction or called as delighted customer. Participants believe that through make up they have positive evidences and have more self-confidence. This notion has been supported by activities 3 (daily beauty routines—morning), for them morning beauty routines can still be complex and time-consuming. The emotional journey of the morning beauty is from listlessness, boredom and lack of energy through self-care to the feeling of creating (or more correctly recreating) a unique individual identity. Morning beauty rituals are very much about lifting herself up for the day ahead. The last, the Third Dyad is “Guilt”, derived from Joy and Fear. Participants felt the joy to wear makeups to have a ‘more look’ beautiful and simultaneously felt fear if they forgot to bring makeup because of embarrassment to face the public with bare face look. To overcome this, participants would rather borrow from someone than to have bare look.

### **ANALYSIS**

This study was designed to look more deeply and to understand how consumer relate to different aspects of women’s daily lives. Women were asked to focus on their beauty routines at different times of day: morning, day, and night beauty routine; and also in special occasions. The products women use at these different times change, but the underlying emotional needs are still questionable. The emotional journey of the morning beauty is from listlessness, boredom, and lack of energy through self-care to the feeling of creating (or more correctly recreating) a unique individual identity. Morning beauty rituals are very much about lifting yourself up for the day ahead. One employed single woman said, “*Before I was like soo lazy and sleepy to start my day, no passion, no willingness.*”, and another housewife said, “*I feel happy after as my skin is getting better and fresher like a mountain. I want to scream out loud and jump around as I’m very happy I no longer have a dull face.*” Another employed single woman put it more simply, “*I’m ready to face the day*”. Beauty routines during the daytime give a feeling of self-care and pampering, leading to a feeling of fun and a sense of feeling free to connect again with herself and with others around—a break from routine that brings back fun to sometimes more tedious work. The starting point for daytime beauty is “touch ups”. One housewife wrote in her online diary, “*I feel bored after doing all those activities since morning, tired, sleepy*”, and a employed single woman wrote, “*Once I touch up my makeup, I feel fresh again.*” Another employed single woman wrote that the end goal is very much about joy, “*When I finish doing it, I can put a big smile on my face again.*” Moving to nighttime beauty rituals, Indonesian women are concerned with cleansing themselves after a hard day at work and possibly many hours in the pollution and stress of

working in and travelling through Jakarta. nighttime routine brings back a feeling of care for themselves, with a sometimes more positive sense of caring for and giving to others as well. Their gift is summarized in their end goals which reflect love and intimacy very strongly. One housewife summarized the pre-routine feeling as, “*I feel dull as my make-up is already fading and dust from the traffic stuck on my face*”, and an employed single woman describes the beauty routine as, “*I feel fresh and relaxed again.*” This guarantees a good night’s sleep as one married working lady said, “*I kiss my husband, it makes me relaxed and reduce wrinkles on my face.*” These daily routines are quite different in their emotional journeys from those outside the working week and especially those special occasions, e.g. parties and weddings where women really feel that they are much more “on show”. On such occasions, natural beauty is not enough and there is a strong need to add another layer of beauty. Special occasions require special preparation, some women will also take the effort to exercise and tone their body. This is reflected in emotions that reflect physical strength but also mental empowerment, with the end goal of feeling glamorous in order to be the center of attention just like a celebrity. Ultimately, every woman wants to be the center of attention, but in Indonesia this is only on specific occasions and still avoiding excessive showiness. The many motivations that were found in our first Jakarta beauty study, reflect the range of emotions that motivate women through the day and at other times in their complicated and hectic lives. In the morning, they want to feel like themselves (again) and while this is not the strongest desire for women, it is a core part of who they are today. In the day time the need is to bring back a little joy to the daily grind, while in the evening beauty is all about reconnecting with loved ones. Thus, daily beauty rituals reflect the goals of feeling Unique, Joyful and Loved. Based on Maslow’s, human needs are unlimited, but those needs cannot be ultimately met but however through continues process of fulfillment associated with pleasure and delight (Schneider and Bowen, 1999). In satisfaction continuum reaching the end of continuum is the zone of customer delight. The proposed model used the five main modified dimensions of consumer delight, namely, justice, security, self-esteem, trust, and variety. The first three dimensions are from Schneider and Bowen (1999), which are justice, esteem, and security are central to delight. Trust is another dimension suggested by Hart and Johnson (1999). Variety is added to be a new delight dimension, which is one of the basic human needs (Berlyne, 1970; McAlister and Pessemier, 1982)

#### Customer Delight and ‘Justice’

Customer wants to be treated well and fair whenever they engage with the product. In that case a firm has to be creative and seriously implement any kind of program or product design based on market needs. This includes product or service improvement. Nowadays many firm have spared some percentage of their profit earnings to reward customer patronage through an excellent loyalty program. Those kind of rewards form in many things, could be product, beauty class, travelling package, or cash, but the value should be worth enough. Justice in Delight does not only mean takeaway only, but the firm can use them also as in sales promotion program with fair deal transaction. This dimension had 5 items on this study, they are: Product quality improvement, Rewarded in different ways, My patronage is highly valued, Worth deals value, Sort of product choices in terms of color.

This lead to the profound proposition:

*Proposition 1: Customer Delight is shaped by the dimension of justice or fairness as perceived by customers.*

#### Customer Delight and ‘Self-esteem’

Self-esteem using customer self-identity is done through the uniqueness point by inserting customer’s ego in the deal. Personalization Marketing might be implemented to delight the

customer, like personalization services or product, limited product for certain customer, design privilege program or priority program. Self-esteem using psychology approach is by giving customer a privilege, then the customer's self-esteem arouse. When customer can replace the buying items without additional charge or T&C applies, this is relevant for self-esteem dimension in delight. This dimension had 6 items on this study, they are: Absorb new trend or product, Open to customer combination of beauty product usage, Appointment available, Limited product edition, Employee is able to kept product order, contactable and communicative store PIC. This leads to the following proposition:

*Proposition 2: Customer Delight is shaped by the dimension of self-esteem as perceived by customers.*

#### *Customer Delight and 'Security'*

Safety shopping, safety buying, and using a safe product would be highly considered by consumers, because safety will maintain customer peaceful mind. It is a mandatory for a firm to create a safe-homy-clean-and easy shopping environment. Security means protection provided from a firm to customer, thus will increase customer trust and confidence of this shopping environment. This can be done through brand claiming to have a lifetime product guarantee; or offering double refund if there is cheaper price from other store; clean cosmetic tester. Those kinds of programs would give great pleasure for the customers. This dimension had 4 items on this study: Cozy shopping environment, Clean and neat product display thus easy eye browsing, Full refund without question ask, Allowing unlimited trials.

This posits the following proposition:

*Proposition 3: Customer Delight is shaped by the dimension of security as perceived by customers.*

#### *Customer Delight and 'Trust'*

This is when one of the cosmetic brands was doing mass marketing communication regarding free of dangerous material or when Clinique Cosmetics store claims their products are safe for maternity. Those kind of trust in delight refers to the best crisis management in which the firm takes full responsibilities over its fault and admits frankly. The firm always keeps its words and the performance is always above the industrial standard. In essence, the firm delights its customers by its exceptionally stable and beyond standards performance, which wins the customer's heart. One participant found she was very surprised of the consistent services level of a firm, even in time of a great demand. The staff were still very energetic and served in every detail. This dimension had 5 items on this study: Taking full responsibility of customer complaint, Providing humanistic follow up, Keeping the word, Performing the best in industry, Good product. Thus profound the following proposition:

*Proposition 4: Customer Delight is shaped by the dimension of trust as perceived by customers.*

#### *Variety*

Variety-seeking behavior is relevant to surprise the customer by getting their interest through impressive product or services. Seeking behavior variety is what customer normally do. By implementing out of the mainstream, a brand would capture consumer's attention. This can be done through delighting customers by changing store design in a periodic of time, impressive seasonal trend, great design, and trendy visual merchandising. This dimension had 6 items on this study and they were: Interesting product packaging, new product concept or seasonal theme, good visual merchandising, Thematic store design, unique or Out of the mainstream, providing customer perks. Hence, this postulates the following proposition:

*Proposition 5: Customer Delight is shaped by the dimension of variety behaviour as perceived by customers.*

## CONCLUSIONS

Twenty online diaries have generated twenty-eight delight items, and propositions from five basic human needs: Justice, Esteem, Security, Trust, and Variety behavior. Through the emotion journey in beauty cosmetics, consumer expectation and emotion to be delighted is hardly felt. The results of this qualitative research can be used for the next steps as an attribute in quantitative study. Future research in delight study can be delivering delight in mundane products, understanding more into topic about the difficulty to copy delight strategy, customer delight and the framing effect on communication, U&A in UX study, and insights of consumer switching behavior or even customer churned by conducting qualitative study—focus group discussion or in-depth interview—by using projective technique in beauty industry or in others. There is more implication to be done in this study since customer delight were the quintessence of customer satisfaction and yet no brand volition on this study.

## References

- Anderson, J. and Sullivan, M. (1993), “The antecedents and consequences of customer satisfaction for firms”, *Marketing Science*, Vol. 12 No. 2, pp. 125-44.
- Anderson, Eugene W., Claes Fornell, and Donald R. Lehmann (1994), “Customer Satisfaction, Market Share and Profitability: Findings from Sweden,” *Journal of Marketing*, 58 (July), 53-66.
- Barnes, D., Beauchamp, M.B., & Webster, C. (2010). To delight, or not to delight? This is the question service firms must address. *Journal of Marketing Theory and Practice*, 18, 275–284.
- Berlyne DE (1970) Novelty, complexity and hedonic value. *Perception and Psychophysics*, 8 (November), 279-286.
- Berman, Barry (2005), “How to Delight Your Customer,” *California Review Management*, University of California Berkeley, 48 (1), 129 – 151.
- Bolton, Ruth N. (1998), “A Dynamic Model of Duration of the Customer’s Relationship with a Continuous Service Provider: The Role of Satisfaction,” *Marketing Science*, 17 (1), 45-65.
- Chandler CH (1989) Quality: beyond customer satisfaction. *Quality Progress*, 22 (February), 30-32.
- Deming, W. Edwards. 1986. *Out of the Crisis*. Cambridge: MIT Center for Advanced Engineering Study.
- Finn, A. (2005). Reassessing the foundation of customer delight. *Journal of Service Research*, 8, 103–116.
- Finn, A. (2012). Customer delight: Distinct construct or zone of nonlinear response to customer satisfaction? *Journal of Service Research*, 15(1), 99–110
- Fornell C, Wernerfelt B. Defensive marketing strategy by customer complaint management: a theoretical analysis. *J Mark Res* 1987; 24: 337-46 [November].
- Gurney P (1999) Influence is the better part of loyalty. *Marketing News*, 33 (21), 40.
- Hart CW and Johnson MD (1999) Growing the trust relationship: businesses begin raising the bar in search of ‘total trust’. *Marketing Management*, 8 (1), 9-22.
- Keiningham TL, Goddard MKM, Vavra TG and Iaci AJ (1999) Customer delight and the bottom line. *Marketing Management*, 8 (3), 57-63.

- Keiningham TL and Vavra TG (2001) *The Customer Delight Principle: Exceeding Customers' Expectations for Bottom-line Success*, American of Marketing Association, Chicago.
- Kenneth L., Naveen Donthu, and Pamela A. Kennett (2000), "A Longitudinal Analysis of Satisfaction and Profitability," *Journal of Business Research*, 47 (February), 161-71.
- Kumar, Anand, and Rajesh Iyer (2001), "Role of Interpersonal Factors in Delighting Customers," *Marketing Management Journal*, 11 (Spring), 49-57.
- , Richard W. Olshavsky, and Maryon F. King (2001), "Exploring Alternative Antecedents of Customer Delight," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 14 (January), 14-26.
- Kwong, Kenneth K., & Yau, Oliver H.M (2002). The Conceptualization of Customer Delight: A Research Framework. *Asia Pacific Management Review*, 7(2), 255-266
- Loureiro, S. M. (2010). Satisfying and delighting the rural tourists. *Journal of Travel and Tourism Marketing*, 27(4), 396-408.
- Loureiro, S. M. C., Miranda, F. J., & Breazeale, M. (2014). Who needs delight? The greater impact of value, trust and satisfaction in utilitarian, frequent-use retail. *Journal of Service Management*, 25(1), 101-124.
- Lisa Feldman Barrett, Batja Mesquita, Kevin N. Ochsner, and James J. Gross (2007) The Experience of Emotion. *Annu. Rev. Psychol.*, 58, 373-403
- Maslow, A.H. (1943). A Theory of human motivation, *Psychological Review*, 50 (4), 370-396
- McAlister L and Pessemier E (1982) Variety-seeking behavior: an interdisciplinary review. *Journal of Consumer Research*, 9 (December), 311-322
- Ngobo PV (1999) Decreasing returns in customer loyalty: does it really matter to delight the customers? in *Advances in Consumer Research*, Vol. 26, Eric J. Arnould and Linda M. Scott, eds. Provo, UT: Association for Consumer Research, 469-76
- Oliver RL. A cognitive model of the antecedents and consequences of satisfaction decisions. *J Mark Res* 1980; 17: 460-9 [November].
- Oliver RL, Rust RT, and Varki S (1997) Customer delight: foundations, findings, and managerial insight. *Journal of Retailing*, 73 (Fall), 311-336.
- Plutchik, Robert (1980), *Emotion: A Psychoevolutionary Synthesis*, New York: Harper and Row
- Russell JA (1980) A complex model of affect. *Journal of Personality and Social Psychology*, 39 (6), 1161-1178.
- Schneider B and Bowen DE (1999) Understanding customer delight and outrage. *Sloan Management Review*, 41 (1), 35-45.
- Schlossberg H. Satisfying customers is a minimum: you really have to delight them. *Mark News* 1990; 24: 10-1 [May 28].
- Skogland, I., Siguaw, J., 2004. Are your satisfied customers loyal? *Cornell Hotel and Restaurant Administration Quarterly* 45 (3), 221-234
- Szymanski, David M. and David H. Henard (2001), "Customer Satisfaction: A Meta-Analysis of Empirical Evidence," *Journal of the Academy of Marketing Science*, 29 (Winter), 16-35.
- Torres, E., & Kline, S. (2006). From satisfaction to delight: A model for the hotel industry. *International Journal of Contemporary Hospitality Management*, 18, 290-301.
- Voss, C., Roth, A.V., Chase, R.B., 2008. Experience, service operations strategy, and services as destinations: foundations and exploratory investigation. *Production and Operations Management* 17 (3), 247-266.
- Wierzbicka A (1992) Defining emotion concepts. *Cognitive Science*, 16 (4), 539-581.
- Zeithaml VA. Service quality, profitability, and the economic worth of customers: what we

know and what we need to learn. *J Acad Mark Sci* 2000; 28: 67–85 [Winter].

**THE IMPACT OF INTEGRATED REPORTING ON VALUE CREATION FOR  
SHAREHOLDERS: THE MODERATING EFFECT OF BOARD EFFECTIVENESS:  
CASE OF SRI LANKA**

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## **1. Introduction**

### **1.1 Background of the Study**

The need for a broader range of business information is clearly demonstrated by the small percentage of market value is now explained by physical assets- down to only 16% in 2015 from 83% in 1975 (CGMA, 2016). The traditional corporate reporting model plays a valuable role with respect to the stewardship of financial capital. However, the traditional corporate reporting was heavily criticized over its sole reliance of historical financial performance, exclusion of non-financial performance and narrow focus of value creation.

The gaps in traditional reporting have become more prominent while the businesses becoming more complex; The new reporting requirements have been added through a patchwork of laws, regulations, standards, codes, guidance and stock exchange listing requirement (IIRC, 2011). This had obviously resulted in increase of information being provided through financial reports; management commentaries; governance reporting; and sustainability reporting. Although, the traditional reporting has been able to accommodate the changing information needs of the users, as a consequence the reporting landscape became confused, cluttered and fragmented. This led to a situation where, much of the information provided is disconnected and critical interdependencies that exist are not made clear, for example, between: strategy and risk, financial and non-financial performance and governance and performance.

So, the time has come to a point to rethink what information is needed to provide a clear, concise picture of performance, impacts and interdependencies. As a response to this, the Prince of Wales established the Prince's Accounting for Sustainability project in 2004 and this movement finally led to the establishment of the International Integrated Reporting Council

(IIRC) in 2010 (SAICA, 2015). The IIRC's most remarkable feature at its incorporation was the extraordinarily high-powered character of its governing body, its Council. Among its 40 members were the heads of the International Accounting Standards Board (IASB): the world's leading standard-setting body, Financial Accounting Standards Board (FASB): the USA's standard-setting body, The International Federation of Accountants (IFAC) represents the accountancy profession at the global level. and The International Organization of Securities Commissions (IOSCO) represents the regulators of securities markets at the global level, the CEOs of the 'Big Four: the four largest private accountancy firms: Deloitte, Ernst & Young, KPMG and PWC, the heads of the major British professional accountancy bodies such as Association of Chartered Certified Accountants (ACCA), Institute of Certified Management Accountants (CIMA) , and the CFOs of major multi-internationals, such as Nestle, Tata and HSBC; The Council was dominated by the accountancy profession, preparers and regulators, who made up more than half its members (Flower, 2015)

The IIRC specifically refers to four different strands of reports provided by firms:

- Traditional financial statements
- Management commentaries
- Governance and remuneration reports
- Sustainability reports

The IIRC's fundamental premise is that these four strands needed to be better integrated (Flower, 2015). Integrated Reporting (IR) combines the most material elements of information currently reported in separate reporting strands in a coherent whole, and importantly shows the connectivity between them and explains how they affect the ability of an organization to create and sustain value in the short, medium and long term' (IIRC, 2011). In December 2013, the IIRC published the International Integrated Reporting Framework (IR Framework) (IIRC, 2013). IR Framework provides a principle based approach for IR. The purpose of the IR Framework is to establish Guiding Principles and Content Elements that decide the overall content of an integrated report, and to explain the Fundamental Concepts that underpin them (IIRC, 2013)

## **1.2 Research Problem**

In 1975, 83% of the market capitalization value of the S&P 500 companies was represented by tangible assets whereas in 2015 it was down to 16% (CGMA, 2016). The balance was attributable to what is termed as 'intangible assets'.

According to the Brand Finance (2016) the world's combined 'enterprise value' rose from \$30 trillion in 2001 to \$90 trillion in 2015: Interestingly, of the \$90 trillion, \$47 trillion was made up of intangible assets. Goodwill accounted for \$8 trillion, disclosed intangibles for \$6 trillion and undisclosed value \$34 trillion.

At January 1<sup>st</sup> 2016, in Apple Inc. tangible net assets accounted for 39% (\$252 billion) compared to intangible assets which accounted for 61% (\$388 billion): an interesting point to note is that out of the total intangible asset value of \$388 billion, \$379 billion was undisclosed, which is 98% of intangible assets.

By April 28<sup>th</sup> 2016, Apple's enterprise value has decreased by 16% to \$536bn: the interesting point to note is the shift in the proportion of intangible assets that make up the value of the business. Intangible assets now account for 49% (\$261 billion) of the enterprise value. This highlights the volatility that is associated with intangible assets.

According to the CGMA (2016) top five value drivers in the digital age are customer satisfaction (76%), quality of business processes (64%), customer relationships (63%), quality of people (human capital) (61%), Reputation of brands (58%): Interestingly all five were intangibles. Unfortunately, the decision-making process in companies is still mostly focused on the tangible components of value (<20%): Thus, the potential value creation of decisions, behaviors, actions and strategies is not being maximized (NIBR, 2016).

The Global Intangible Financial Tracker report 2016 shows the continuing importance of intangible assets as a percentage of market value and how existing accounting rules have proved inadequate to report effectively on intangible assets and thus bridge the gap between market value and book value. Financial reporting applies substantially to physical and financial assets, yet in recent decades the proportion of intangibles has increased exponentially in relation to physical and financial assets (SAICA, 2015). Globally, calls for improved corporate reporting were continuing: as a response to this the International Integrated Reporting Council (IIRC) was established in 2010 (SAICA, 2015).

In December 2013, the IIRC published the International Integrated Reporting Framework (IR Framework) (IIRC, 2013). IR Framework provides a principle based approach for IR. The purpose of the IR Framework is to establish Guiding Principles and Content Elements that decide the overall content of an integrated report, and to explain the Fundamental Concepts that underpin them (IIRC, 2013).

IR is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation (IIRC, 2013). IR not only for communicating effectively with investors and other external stakeholders, but also for supporting the integrated thinking and management that ultimately leads to improved performance (IIRC, 2016). Thus, IR not just communicates the value creation by an organization instead it results in value creation by the organization through the stimulation of integrated thinking within an organization. As per IIRC (2013) IR aims at:

- Improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital
- Promote a more cohesive and efficient approach to corporate reporting that draws on different reporting strands and communicates the full range of factors that materially affect the ability of an organization to create value over time
- Expand the stewardship beyond financial capital to a broad base of capitals (financial, manufactured, intellectual, human, social and relationship, and natural) and promote understanding of their interdependencies
- Stimulate integrated thinking which encompass integrated decision-making and actions that focus on the creation of value over the short, medium and long term.

According to the IIRC (2014) 92% of companies out of a worldwide sample of 27 companies, agreed on improved understanding of value creation: 79% reports on improvements in decision making largely attributed to changes in management information: 96% sees an impact on internal engagement due to the breaking down of silos and increased respect between departments: 91% witnesses an impact on external engagements. Lee and Yeo (2015) argue that better IR quality leads to positive market reactions for a South African sample. Oshika and Saka (2015) observe that organizations operating in a sustainable manner and publishing integrated reports differ from other types of organizations in the distribution of their added value as well as the robustness of their profit levels.

As per the IIRC (2013) IR is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. Integrated thinking is the active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects: Integrated thinking leads to integrated decision making and actions that consider the creation of value over the short, medium and long term (IIRC, 2013). Accordingly, the value creation by an organization through IR is favorably influenced by integrated thinking. IR is a reflection of integrated thinking of an organization.

### **1.3 Research Questions**

The study is expected to raise following research questions.

- 1) What is the level of integrated reporting?
- 2) Does the level of integrated reporting impact the value creation for shareholders?
- 3) How does the board effectiveness moderate the relationship between the level of integrated reporting and value creation for shareholders?

### **1.4. Empirical and Theoretical Gaps**

#### **Theoretical Gap**

The instrumental stakeholder theory argues that the firm will do better if they take proper account of the interests of their stakeholders (Flower, 2015). Jones (1995) argues that the firm's overriding interest in its dealings with stakeholders is the continued prosperity of the firm; the firm has no other interest in the welfare of its stakeholders. According to the instrumental view of stakeholders, the other stakeholders are relevant for investors only to the extent; the prosperity of the firm depends on their continued corporation. Hence it is important that the firm should treat stakeholders properly as it results in higher profits for the investors. The instrumental stakeholder theory proposes a more realistic and effective way in which the firm can maximize shareholder value. The IIRC's approach to corporate reporting is grounded on the instrumental stakeholder theory. The corporate reporting has been used to manage the interests and influences of powerful stakeholders so as to further the interest of the organisation.

IR is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation: integrated thinking leads to integrated decision making and actions that consider

the creation of value over the short, medium and long term (IIRC, 2013). Accordingly the value creation of an organization is also driven by integrated thinking.

According to the SAICA (2015) among organizations that produce high quality integrated reports there is a strong awareness of the concept of integrated thinking and how it benefits the organisation. However, the adoption of integrated reporting by the top 50 companies on the Australian Stock Exchange was found that there was a great degree of variability among companies who have started to adopt an integrated approach to business (ACCA, 2011). European companies are in different stages regarding the conformity with the IIRC requirements (Bratu, 2017). While studying IR practices at international level, there are an increasing number of integrated reports globally and most of these reports have deficiencies in presenting the value creation process (Chersan, 2015). Referring to 30 listed companies in Amsterdam exchange, Deloitte (2015) states that the guiding Principles of IR are developing well while some Content Elements, related to Integrated Thinking, remain a challenge.

Integrated reporting practice is an evolutionary journey for an organisation: Therefore, organizations can be at different levels of reporting (Gunarathne and Senaratne, 2017). Evidence from all around the world, suggests that there are gaps in integrated reporting, which in turn reflects the gaps in awareness of integrated thinking and value creation of an organization through IR.

IR and integrated thinking are decision effect by the board of directors of an organization. Integrated thinking begins with the board and cascades down throughout the organisation to become part of its DNA (SAICA, 2015). As per Deloitte (2015), board commitment is seen as a strong driver for successful IR: Integrated Reporting will only develop to a mature stage when the board is committed and when Integrated Thinking is given the full attention: The full integration of IR and Integrated Thinking will only take place when the board fully supports both the way of thinking and reporting. The board of directors has a fundamental role to orient their companies towards long term sustainable business, promoting integrated governance through changes in Board composition, processes and Directors' culture (NIBR, 2016). Hence it can be suggested that, an effective board can promote the adoption IR and integrated thinking.

According to the instrumental stakeholder theory, IR which is founded on integrated thinking will lead to the value creation for shareholders by an organization. However instrumental stakeholder theory, in explaining the value creation by an organization through IR has failed to

acknowledge the influence of board of directors on the IR. Board of directors is the internal mechanism which drives the IR and integrated thinking. An effective board can ensure a higher level of IR. Thus, the value creation by an organization through IR is contingent on the board effectiveness. In this study, board effectiveness is suggested as a variable to overcome the gaps in IR and integrated reporting. Therefore, this study is designed to fill the knowledge gap exist as to how the board effectiveness moderate the relationship between integrated reporting and value creation.

### **Empirical Gap**

According to the report on ‘Observance of Standards and Codes on Accounting and Auditing’, Sri Lanka has made significant improvements in accounting and auditing practices after 2004 (World Bank, 2015). As a reflection of this, many Sri Lankan companies have embraced IR on a voluntary basis though they are still to be mandated in the country (World Bank, 2015). Currently, in the context of Sri Lanka, 41 listed companies claim that they prepare integrated reports evidenced by applying themselves for an excellence in integrated reporting awards competition organized by one of the leading professional accountancy bodies in Sri Lanka: The Institute of Certified Management Accountants (CMA) (Gunarathne and Senaratne, 2018).

While studying IR practices at international level, there are an increasing number of integrated reports globally and most of these reports have deficiencies in presenting the value creation process (Chersan, 2015). The adoption of integrated reporting by the top 50 companies on the Australian Stock Exchange was found that there was a great degree of variability among companies who have started to adopt an integrated approach to business (ACCA, 2011). European companies are in different stages regarding the conformity with the IIRC requirements (Bratu, 2017). Integrated reporting practice is an evolutionary journey for an organisation: Therefore, organizations can be at different levels of reporting (Gunarathne and Senaratne, 2017). However, it remains still unknown; to what extent the current integrated reporting practice in a developing economy follows Integrated Reporting (IR) as per the IR Framework. Hence, this study aims to assess the level of integrated reporting in a developing economy.

Referring to a worldwide sample, Arguelles et al. (2015) find a positive link between IR quality and the market value of equity. Lee and Yeo (2015) and Martinez (2015) argue that better IR quality leads to positive market reactions for a South African sample. Oshika and Saka (2015) observe that organizations operating in a sustainable manner and publishing integrated reports differ from other types of organizations in the distribution of their added value as well as the robustness of their profit levels.

However no research has been undertaken in the context of Sri Lanka to examine the link between the level of integrated reporting and value creation for shareholders. Further none of the previous studies have emphasized how the board of directors intervene the process of value creation for stakeholders by IR. Hence this study aims to examine how the board effectiveness moderate the relationship between the level of integrated reporting and value creation for shareholders in a developing economy.

### **1.5 Purpose of the Study**

The purpose of this study is to assess the level of the integrated reporting and to examine the impact of the level of integrated reporting on the value creation for shareholders. Further the study is expected to examine the moderating effect of board effectiveness on the relationship between level of integrated reporting and value creation for shareholders.

### **1.6 Objectives of the Study**

- Identify the level of integrated reporting.
- Examine the impact of the level of integrated reporting on shareholder value creation.
- Examine the moderating impact of board Effectiveness on the relationship between the level of integrated reporting and the value creation.

### **1.7 Significance of the Study**

IR is not just another dimensions of corporate reporting rather focuses on improved performance through integrated thinking. IIRC (2013) stresses that the IR is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. The realization of the full potential of IR depends on the extent to which the IR is founded on

integrated thinking. By referring to the worldwide sample, IIRC (2014) the identified benefits of integrated reporting include 71% of participants experienced strategic benefits from implementing integrated reporting, the most important being a change in conversations between the board and management; 79% reported improvements in management information and decision making, and 96% experienced a positive impact from connecting departments and broadening perspectives; and of those organizations that have published an integrated report, 79% have seen an improvement in their board's understanding of how the organization creates value.

However, while referring to the literature on IR, studies are confined to the examination of relationship between IR and value creation. None of the studies have emphasized on the importance of integrated thinking. This might convey a half the story to the practitioners that value creation of an organization is a matter of reporting. An organization can better create value when IR founded integrated thinking or in other words organization report what they practice.

Hence this study aims to bridge this knowledge gap by examining the moderating effect of board effectiveness on the relationship between the level of integrated reporting and value creation for investors.

## 2. Literature Review

### 2.1 Integrated Reporting

Integrated reporting is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation (IIRC,2013). IR Framework provides a principle based approach for integrated reporting. The purpose of the IR Framework is to establish Guiding Principles and Content Elements that decide the overall content of an integrated report, and to explain the Fundamental Concepts that underpin them (IIRC, 2013) (refer Table 1).

**Table 1: IIRC Guidelines**

<b>Guiding Principles</b>	<b>Content Elements</b>	<b>Fundamental Concepts</b>
Strategic focus and future orientation	Organizational overview and external environment	Value creation for the organization and for others
Connectivity of information	Governance	The capitals

Stakeholder relationships	Business model	
Materiality	Risks and opportunities	
Conciseness	Strategy and resource allocation	
Reliability and completeness	Performance	
Consistency and comparability	Outlook	
	Basis of presentation	

**Source: IIRC, (2013)**

Integrated reporting identified various benefits of IR such as identification of interdependencies between financial and nonfinancial performance, improved decision-making processes and improved relationships with stakeholders, lower reputational risks, also catalyzing integrated thinking within a company (Eccles, Krzus and Ribot, 2015). Integrated reporting is an evolutionary journey for an organisation; therefore, organizations can be at different levels of reporting (Gunarathne and Senaratne, 2017). In order to assess the level of integrated reporting, a checklist is needed. Literally, a checklist which reflects the Guiding Principles, Content Elements and Fundamental Concepts of the IR Framework will measure the levels of the integrated reporting. Since integrated reporting is an emerging practice, the literature relating to its various facets is still to appear (de Villiers, 2014; Stent and Dowler 2015). An integrated reporting checklist is not an exception to this.

Among the very few checklists available (such as Setia et al., 2015; Stent and Dowler, 2015; Wild and Staden, 2013), it is expected to use the checklist developed by Herath and Gunarathne (2016) due to its comprehensiveness and clarity (refer Table 2):

### **2.3 Theories Influencing the Integrated Reporting: Research Hypothesis**

#### **Legitimacy Theory**

According to legitimacy theory, an organization has an implicit social contract with the society in which it operates. This social contract (Shocker and Sethi 1973) motivates an organization to comply with a society's specific values, norms and boundaries by implementing adequate structures and processes (Dowling and Pfeffer 1975). Thus, the going concern and long-term survival of an organization is subject to its ability to meet society's expectations through

suitable systems. If a legitimacy gap arises or is detected, an organization will adopt legitimating strategies (Fernando and Lawrence 2014). Legitimacy theory suggests that IR primarily serves to legitimize an organization's activities (Deegan, 2002). However legitimacy theory fails to explain why an organization would make selective IR disclosures or how the specific disclosures are chosen (Velte P. and Stawinoga M., 2016). This is being addressed by normative stakeholder theory.

### **Normative Stakeholder Theory**

The instrumental stakeholder theory argues that the firm will do better if they take proper account of the interests of their stakeholders (Flower, 2015). Jones (1995) argues that the firm's overriding interest in its dealings with stakeholders is the continued prosperity of the firm; the firm has no other interest in the welfare of its stakeholders. According to the instrumental view of stakeholders, the other stakeholders are relevant for investors only to the extent; the prosperity of the firm depends on their continued corporation. Hence it is important that the firm should treat stakeholders properly as it results in higher profits for the investors. The instrumental stakeholder theory proposes a more realistic and effective way in which the firm can maximize shareholder value.

The following section sets out the main hypotheses proposed and that will be examined in the empirical study.

### **Integrated Reporting**

Oshika and Saka (2015) observe that organizations operating in a sustainable manner and publishing integrated reports differ from other types of organizations in the distribution of their added value as well as the robustness of their profit levels.

Lee and Yeo (2015) argue that better IR quality leads to positive market reactions for a South African sample.

In view of the evidence obtained from previous studies forms the basis for the following hypostasis

HI: There is a positive relationship between the level of IR and return on equity

HII: There is a positive relationship between the level of IR and market to book value of equity

### **Board Effectiveness**

As per the Code of Best Practice on Corporate Governance 2017, every public company should be headed by an effective board, which should direct, lead and control the company.

In this study, it is expected to develop a board effectiveness index using 10 board characteristics which are based on the Code of Best Practice on Corporate Governance 2017. The selected board characteristics will reflect the board effectiveness in compliance with Code of Best Practice on Corporate Governance 2017 Section 1.

The selected board characteristics are as follows:

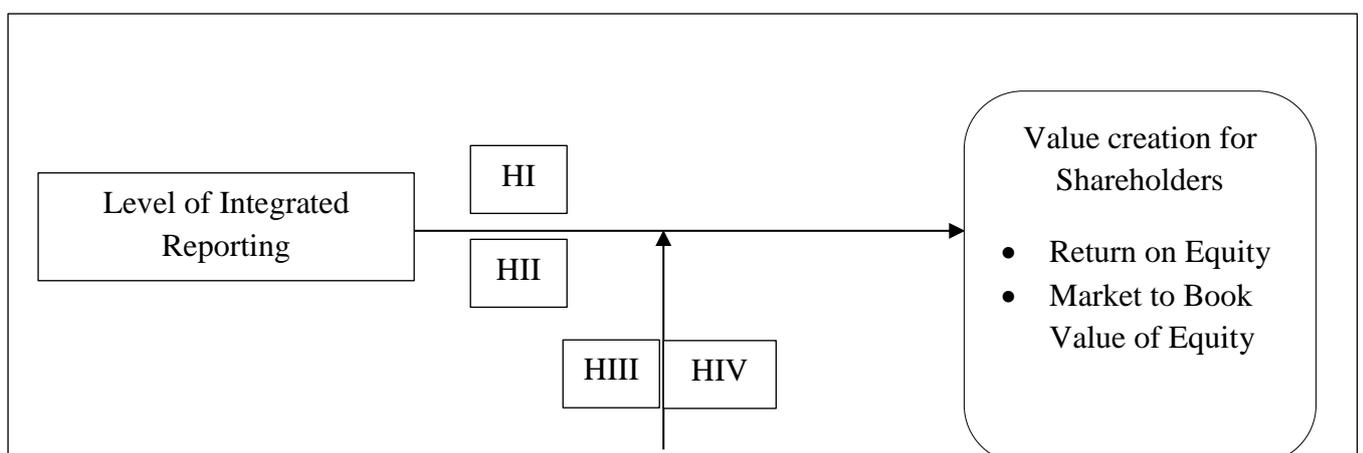
- Number of directors on the board
- Board meetings
- CEO-Chairman duality
- Board gender diversity
- Board geographical diversification
- Board skill base
- Non-executive directors
- Nomination committee
- Remuneration committee
- Audit committee

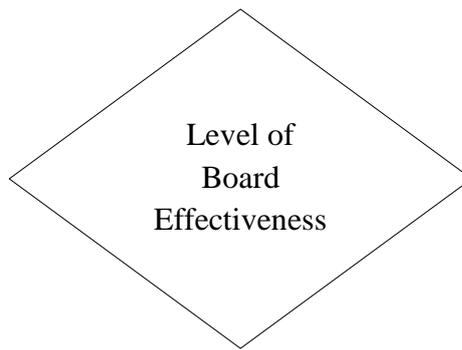
HIII: The level of board effectiveness moderates the relationship between level of IR and return on equity

HIV: The level of board effectiveness moderates the relationship between level of IR and market to book value of equity.

### 3. The Conceptual Framework

The conceptual framework of the study is depicted in the following figure.





*Source: Author*

## **4. Methodology**

### **4.1 Population**

The study population is all the listed companies in the Colombo Stock Exchange (CSE) who adopted the integrated reporting for the reporting period 2014 to 2018. The period of analysis is 2014- 2018. These years were chosen as few companies have adopted IR before IIRC has published the IR framework in December 2013. The unit of analysis is company year and panel data is used in the study.

### **4.2 Research Method and Approach**

The research methodology of the study is quantitative. The level of integrated reporting is assessed using a check list developed based on the IR Framework. The developed checklist is applied against the integrated reports of all the listed companies in the Colombo Stock Exchange (CSE) who adopt the integrated reporting for the reporting period 2015 to 2018. The level of board effectiveness is assessed using an index developed based on Code of Best Practice on Corporate Governance 2017. The index is applied against the cooperate governance-board of directors section of the integrated reports of all the listed companies in the Colombo Stock Exchange (CSE) who adopt the integrated reporting for the reporting period 2015 to 2018. Thereafter the correlation among the level of integrated reporting, value creation for shareholders and board effectiveness are examined.

### **4.3 Operationalization of Variables**

## Level of Integrated Reporting

In order to assess the level of integrated reporting, a checklist is needed. Literally, a checklist which reflects the Guiding Principles, Content Elements and Fundamental Concepts of the IR Framework will measure the levels of the integrated reporting. Since integrated reporting is an emerging practice, the literature relating to its various facets is still to appear (de Villiers, 2014; Stent and Dowler 2015). An integrated reporting checklist is not an exception to this.

Among the very few checklists available (such as Setia et al., 2015; Stent and Dowler, 2015), it is expected to use the checklist developed by Herath and Gunarathne (2016) due to its comprehensiveness and clarity (refer Table 2):

**Table 2: checklist**

<b>Content Element</b>	<b>Maximum Score</b>
<b>Organizational overview and external environment</b>	<b>14</b>
Value, ethics and culture (0= no mention; 1 = general comments on adherence to ethical values; 2 = code of conduct reference, list of values, etc.)	2
Ownership and operating structure (0=no mention; 1 =ownership and operating structure described)	1
Principal activities, markets, products, services (0= no specifics on principal activities; 1 = activities/markets/products services listed)	1
Competitive landscape ,market positioning and positioning within the value chain (1 mark for each)	3
Key quantitative information [employees, revenues, locations, & changes] (1= 1-2 elements; 2 =3-4 elements)	2
Legal, commercial, social, environmental, political (maximum of 5 points, 1 for each context)	5
<b>Business model</b>	<b>15</b>
Key elements of the business model (1 each for input, process, output and outcome)	4
Diagrammatic presentation (1 = diagram, 4= explanation of each element to the organization)	5
Narrative flow based on the business model (0=no flow, 1= moderate level, 2= good flow)	2
Critical stakeholders identification and other dependencies (0= No stakeholder engagement, 1=explicit stakeholder engagement)	1
Connection to information covered [strategy (V & M), risk, opportunities, performance) (0=no connection, 1=1-2 aspects, 2= 3-4 aspects, 3= more than 4 aspects)	3

<b>Risk and opportunities</b>	<b>8</b>
Key risks and opportunities (maximum of 2 points, 1 for describing risks; 1 for describing opportunities)	2
Assessment of the likelihood and impact (1 each =explanation of the risk &opportunity likelihood; magnitude of impacts 1 each for risk and opportunity))	4
Steps to mitigate/manage risk or opportunity (1 each for risk and opportunity)	2
<b>Strategy and resource allocation</b>	<b>6</b>
Short, medium, long term objectives (0= no mention; 1= strategic objectives stated without relevant time frame; 2 = strategic objectives and their time frames are listed)	2
Implementation plans (in relation to business model) (0 =no specific description; 1= specific actions taken/planned are described)	1
Resource allocation plan (0=no plan, 1= plan)	1
Measurement of achievements and outcomes (0= no mention; 1= strategic objectives stated without relevant time frame; 2 = strategic objectives and their time frames are listed)	2
<b>Governance</b>	<b>8</b>
Leadership structure, diversity and skill set of those charged with governance (1 = members of the BoD/committees listed; 2 = their experience and skills are listed as well)	2
Actions taken to monitor strategic direction (0= no actions determinable from narrative; 1 =determinable actions)	1
Reflection of culture and ethical values in use of and effect on the capitals, relationship with key stakeholders (0 = no mention of cultural values/ethics in the given context; 1 = culture and values determinable from narrative; 2 = express statement regarding culture and values in relation to capitals/stakeholders)	2
governance exceeds legal requirements (0=no, 1= yes)	1
Compensation policies and plans (1 =standard minimum disclosure; 2 =elaborate)	2
<b>Performance</b>	<b>13</b>
KPIs (0 =no mixed performance measures; 1 =KPIs or equivalent)	1
KRIs (0 = no key risk indicators described; 1 = KRIs or equivalent)	1
Explanation of KPIs and KRIs of significance, implications, methods and assumptions used in compiling them (1 each)	4
The organisation's effect on the capitals (0=no consideration to the six capitals; 1 =consideration of two capitals; 2 = all material capitals considered)	2
State of key stakeholder relationships (1= mention; 2 = elaborate)	2

Key stakeholder responses (1= mention; 2 = elaborate)	2
Comparison of actual results vs target (0 = no comparison provided; 1 = comparison given)	1
<b>Future outlook</b>	<b>3</b>
Management's expectations (0 = no statement; 1=no time frame only expectation described; expectation described with time frame =2)	1
Potential implications (0= no consideration given; 1 = mention)	1
Organizational readiness (0 = no description provided; 1 = readiness explained)	1
<b>Basis of presentation</b>	<b>9</b>
Material issues/determination, impact on creating/preserving value (0= no discussion of material issues; 1 = description of some elements of material issues disclosure; 2 = determination of materiality described, impact on creating/preserving value considered)	2
Reporting boundary (0= no boundary, 1 = boundary is determinable, 2=boundary determinable and the process explained )	2
significant frameworks and methods used to quantify or evaluate material matters (0= no frameworks or method used, 1= frameworks and methods used)	1
Assurance (0=No assurance, 1= mandatory audit, 2= independent external assurance on non-financial reporting)	3
Conciseness (0= no conciseness, 1= balance between conciseness and completeness and comparability )	1
<b>Totals</b>	<b>76</b>
<b>% of maximum</b>	<b>100%</b>

The level of integrated reporting is measured by applying the selected checklist against the integrated reports of all the listed companies in the Colombo Stock Exchange (CSE) who adopt the integrated reporting for the reporting period 2015 to 2018.

### **Value Creation for shareholders**

IR Framework provides a principle based approach for integrated reporting. Hence it doesn't provide prescription as to the measurement for value creation. As per the IR Framework an integrated report is a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term (IIRC, 2013). The primary focus of integrated report is to communicate the value creation for providers of financial capital. As per

the IR Framework, the existing and potential debt and equity holders can put under the definition of financial capital providers. However, from a financial perspective, the equity holders will expose to a greater business risk while their return are not guaranteed and in turn who can affect the value of the business can seriously get affected through their behavior in the market. Hence the primary focus is confined to the value creation for shareholders in short, medium and long term.

The primary measure used to capture the short term value creation is return on equity (RoE), while medium to long term value creation is measured by market to book value ratio of equity.

### **Level of Board Effectiveness**

To assess the level of board Effectiveness an index will be developed based on Code of Best Practice on Corporate Governance 2017.

## **5. Plan of the study**

The study is expected to do during the period from June to December 2018. I am planning to engage in full during this period to carry out this study.

## **6. References**

ACCA and Net Balance Foundation (2011) Adoption of integrated reporting by the ASX 50, Retrieved on 20 April 2018 from <http://www.accaglobal.com/content/dam/accaglobal/PDF-technical/sustainability-reporting/tech-tp-air2.pdf>.

Bratu, A. (2017), Empirical study regarding the integrated reporting practices in Europe, *Audit Financiar*, vol. XV, no. 4(148), 613-627

Chersan, (2015), Study on Practices and tendencies in integrated reporting, *Audit Financiar* vol. 13 issue 129, p91-101. 10p

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: social values and organizational behavior. *The Pacific Sociological Review*, 18, 122–136.

Deegan, C. (2002). The legitimising effect of social and environmental disclosures - a theoretical foundation. *Accounting, Auditing & Accountability Journal*, 15, 282–311.

de Villiers, C., Rinaldi, L, Unerman, J., 2014, Integrated reporting: insights, gaps and an agenda for future research, *Accounting, Auditing & Accountability Journal*, vol. 27, no.7, 1042-1067.

Eccles, R. G., Krzus, M. P., & Ribot, S. (2015). Meaning and momentum in the integrated reporting movement, *Journal of Applied Corporate Finance*, 27, 8–17.

Frias-Aceituno, J.V., (2014), Explanatory Factors of Integrated Sustainability and Financial Reporting, *Business Strategy and the Environment*, 23, 56–72

Fernando, S., & Lawrence, S. (2014). A theoretical framework for CSR practices: integrating legitimacy theory, stakeholder theory and institutional theory. *Journal of Theoretical Accounting Research*, 10, 149–178.

Flower, G., (2015) The International Integrated Reporting Council: A story of failure, *Critical Perspectives on Accounting*, 27,1-17

Gunarathne, N., Senaratne, S., (2018) Country Readiness in Adopting Integrated Reporting: A Diamond Theory Approach from an Asian Pacific Economy, *Management Audit Journal*

Gunarathne, N., Senaratne, S., (2017) Diffusion of integrated reporting in an emerging South Asian (SAARC) nation, *Management Audit Journal* 32(4/5):524–548

IIRC, (2016), Creating Value: The cyclical power of integrated thinking and reporting, Retrieved on 13 May 2018 from [http://integratedreporting.org/wp-content/uploads/2016/11/CreatingValue\\_IntegratedThinking\\_.pdf](http://integratedreporting.org/wp-content/uploads/2016/11/CreatingValue_IntegratedThinking_.pdf)

IIRC, (2014), Realizing the benefits: The impact of Integrated Reporting Retrieved on 25 April 2018 [http://integratedreporting.org/wp-content/uploads/2014/09/IIRC.Black\\_Sun\\_.Research.IR\\_Impact.Single.pages.18.9.14.pdf](http://integratedreporting.org/wp-content/uploads/2014/09/IIRC.Black_Sun_.Research.IR_Impact.Single.pages.18.9.14.pdf)

IIRC, (2013), International Integrated Reporting Framework, Retrieved on 24 April 2018 from <https://integratedreporting.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf>

IIRC, (2011), Towards Integrated Reporting: Communicating Value in the 21st Century Retrieved on 18 April 2018 from [http://integratedreporting.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011\\_spreads.pdf](http://integratedreporting.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf)

Institute of Chartered Accountants of Sri Lanka, Code of Best Practice on Corporate Governance 2017 Retrieved on 5 May 2018 from [https://www.casrilanka.com/casl/images/stories/2017/2017\\_pdfs/code\\_of\\_best\\_practice\\_on\\_corporate\\_governance\\_2017\\_final\\_for\\_web.pdf](https://www.casrilanka.com/casl/images/stories/2017/2017_pdfs/code_of_best_practice_on_corporate_governance_2017_final_for_web.pdf)

Jones, T.M., Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics, *The Academy of Management Review*, Vol. 20, No. 2, pp. 404-437

Lee, K.W., Yeo, G.H.H. (2015). The association between integrated reporting and firm evaluation, *Review of Quantitative Finance and Accounting*, 45

Marston, C., Polei A., Corporate reporting on the Internet by German companies, *International Journal of Accounting Information Systems*, 5, 285-311

Oshika, T., Saka, C. (2015), Sustainability KPIs for integrated reporting, Working Paper: Tokyo.

Setia, NA, Abhayawansa, S, Joshi, M & Huynh, AV 2015, 'Integrated reporting in South Africa: some initial evidence', *Sustainability Accounting, Management and Policy Journal*, vol. 6, no. 3, pp. 397 – 424

Stent, W. Dowler, T., 2015, Early assessments of the gap between integrated reporting and current corporate reporting, *Meditari Accountancy Research*, vol. 23, no. 1, 92-117.

South Africa Institute of Chartered Accountants (SAICA) 2015, *Integrated thinking: an exploratory survey*, SAICA, South Africa.

Shocker, A., & Sethi, P. (1973). An approach to incorporating societal preferences in developing corporate action strategies. *California Management Review*, 15, 97–105

Stawinoga, M., & Velte, P. (2015). CSR management and reporting between voluntary bonding and legal regulation. *Problems and Perspectives in Management*, 13, 36–50.

World Bank (2015) Report on the observance of standards and codes, accounting and auditing –Sri Lanka

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### **Abstract**

This paper attempt to determine the factors affecting loan repayment performance of Micro Finance Institutions (MFIs) in Sri Lanka by using Small and Medium Enterprises (SMEs) in Anuradhapura District. Sri Lanka is a developing country and most of people are living in poverty because of MFIs plays an important role in improving the livelihood of the low income people. The data used in this study gathered survey on 120 respondents in Anuradhapura District. The data was analyzed through Descriptive Statistics, Correlation analysis and Regression analysis by using SPSS statistical package. Three variables were included in the regression analysis namely, entrepreneur's characteristics, loan characteristics and firm level characteristics. The study were found that there is significant effect on loan characteristics (Loan size, Repayment period, Installment mode, Follow up procedures, Interest rate) and firm level characteristics (Business size, Business age, Business risk, Technology of Business) for repayment performance and there is no significant effect between entrepreneur's characteristics (Owners interest, Knowledge of MFIs, Work experience, Education Level) and repayment performance.

**Key Words: MFIss, Small and Medium Enterprises, Loan Repayment**

### **INTRODUCTION**

Micro finance institutes do main function to develop poor people's income in rural area. The micro finance institutes provide financial and non-financial services to develop their living standard. The characteristics of micro credit are small amount, short term credit, less collateral, required weekly or monthly payment, poor borrower and most of borrowers are not qualified to Commercial Bank loans. Normally micro credit has high interest rate because of the high cost bear to running micro credit program. Micro finance is now being consider as one of the most important and effective mechanism for poverty alleviation. According to Khan and Rahaman (2007) MFIs provide micro credit for various types of borrowers and also SMEs are major borrowers of micro credit. SMEs obtain micro credit because of them unable to meet minimum qualification to get normal banking loans due to lack of collateral and insufficient documents to support loan applications. MFIs has a higher credit risk with lending to SMEs. High non-performing loan (NPL) is one of the critical problem faced by MFIs. Therefore repayment performance of the borrowers is important to ensure the stability of Micro Finance Institutes. The factors affecting to repayment performance in micro credit that can be divided in to various factors. Such as borrower's characteristics, firm characteristic, loan characteristics and lender's characteristics.

### **Research Problem**

SMEs get micro finance from micro finance institutes to do their business. But most of the SMEs have bad repayment procedures. Because that non-performing loan (NPL) of the micro finance institute became increase. Loan interest and capital repayment is main income of the microfinance institute. Because that their main function is lending. The most of the developing countries are failure in micro finance due to inability to ensure good repayment performance among their borrowers. To manage this problem micro finance institutes should know, what are the reason and factors affecting to borrowers repayment performance. Because that in this study examine what are the factor affect for SMEs loan repayment performance.

### **Research Questions**

1. What are the factors affecting for MFIs repayment performance in Sri Lanka?
2. Does Entrepreneur's Characteristics impact on repayment performance of MFIs?
3. Does Loan Characteristics impact on repayment performance of MFIs?
4. Does Firm Level Characteristics impact on repayment performance of MFIs?

### **Objective of the Study**

#### **Major objective**

1. To identify the factors of a MFIs loan repayment performance.

#### **Sub objectives**

1. To identify the impact of Entrepreneur's Characteristics on repayment performance in MFIs.
2. To identify the impact of Loan Characteristics on repayment performance in MFIs.
3. To identify impact of Firm level Characteristics on repayment performance in MFIs.

### **Hypothesis of the study**

- H1: There is an impact between entrepreneur's characteristics and loan repayment performance.
- H2: There is an impact between Loan characteristics and loan repayment performance.
- H3: There is an impact between firm level characteristics and loan repayment performance.

### **Sample and population**

Primary data were collected through survey interviews using a structured questionnaires. The questionnaires were distributed among 120 SMEs in Anuradhapura District.

### **Significance of the study**

The objective of MFIs is procuring financial services to improve the living standard of the poor people. The profitability and sustainability of MFIs depend on the borrower's action toward the loan repayment rate. The borrower's action toward loan repayment performance is determined by various factors. There are no huge number of previous researches carried out for determine the factor affecting to repayment performance in MFIs in Sri Lanka. As well as there is no carried out a research relate to the determinants of repayment performance of Entrepreneurs in MFIs. Therefore researcher planned to undertake this study for searching the most basic causes for repayment performance in micro finance companies. The result of this study can use loan officers and credit managers for requirement to monitor and control non-performing loans (NPL).

## **LITERATURE REVIEW**

### **Entrepreneur's characteristics and Repayment Performance**

According to Majeed (2014) noted that the education level determines loan repayment positively and significantly in Ethiopian MFIs. Teng et al. (2015) found that level of education is significant towards loan repayment performance at the significance level for both government agencies and non-government agencies. Aruppillai and Phillip (2014) analyzed relatively farmer's characteristics and its influencing on loans resettlement decision in Sri Lanka. It argued that there is no statistically significant impact on repayment performance with high level of education. Aruppillai & Phillip (2014) stated that experience of the borrowers have positive impact on the repayment performance reveals that as experience of the beneficiaries increases their repayment performance of loan also increases. But it is not statistically significant. Reta (2011) also proved this statement that experience of the borrowers is also significant determinant of loan repayment performance.

### **Loan characteristics and Repayment Performance**

According to Teng et al. (2015) stated that the amount of loan has a significant positive impact towards loan repayment performance for both government agencies and non-government agencies. According to Yogendrarajah and Semasinghe (2016) noted that there is no significant differences between amount of loan and repayment of loan. However Aruppillai & Phillip (2014) argued that if the loan size was higher, the chance of unwilling default increased in the case of failure in group repayment performance. Eze and Ibekwe (2007) Noted that the amount of loan borrowed was positively correlated to the amount unpaid and statistically significant. According to the Teng et al. (2015) loan tenure is the important determinant of loan repayment performance for both government agencies and non-government agencies. Loan duration was positively and significantly related to the outstanding loan, the amount borrowed and the timeliness in disbursing the loan in Indigenous financial systems. (Eze & Ibekwe, 2007). However, Gebremedhin (2010) stated that the repayment period has a positive sign as expected and it is statistically highly significant. According to the result of Acquah and Addo (2011) revealed that easy loan processing and onward disbursement of loans need to be ensured by the credit institutions to improve repayment behavior.

According to Mokhtar et al. (2012) examined that borrowers who had to pay over weekly loan instalment faced problems in repaying their loans. As well as Negera (2012) analyzed that Lack of loan follow-up was also one of the top factors rated to contribute to the occurrences of NPL by the survey and interview participants. Reta (2011) also proved above statement in study that continuous follow up and supervision is important for loan repayment, there is not enough supervision made by loan officers. This is due to the increasing number of clients in the institution.

### **Firm Level characteristics and Repayment Performance**

Asantey & Tengey (2014) found that most dominant group of determinants of bad loans are availability of other income sources & types of products/services. Majeed et al. (2014) indicated that respondents who engaged in non agricultural types of business was found that they had better loan repayment performance than respondents who were engaged in the agricultural types of businesses. Nawai and Shariff (2013) found that the total sales is an important factor in determining borrower's loan repayment

performance. Murray et al. (2002) stated that income is one of the major factors that is critical in repayment performance. According to the result of Teng et al. (2015) shown that business experience has a significant positive effect towards loan repayment performance for default borrowers. Business experience helps to enhance the loan repayment rate of the group borrowers. The cumulative effect of borrower's experience has a positive contribution on the success of business and also loan repayment (Reta, 2011).

## METHODOLOGY

This chapter focuses the systematic approach to achieve the objectives of this descriptive study. According to the above literature review it is identified the following conceptual diagram.

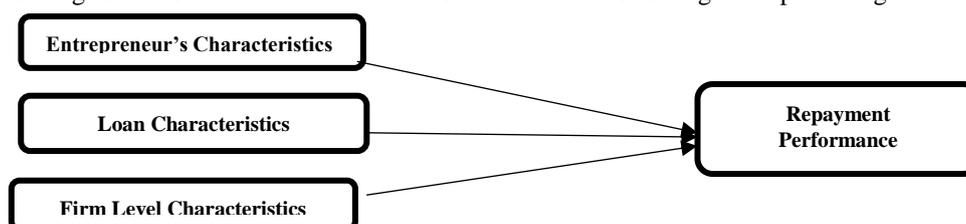


Figure 1: Conceptualization

The study has used the structured questionnaire to operationalize above conceptual diagram. First it is develop background questions to cover the geographical information. There are three independent variables namely, (1) Characteristics of Entrepreneurs measured by Owners Interest, Knowledge of MFIs, Work Experience, Education Level (2) Loan Characteristics measured by Loan Size, Repayment Period, Installment Mode, Follow-up Procedures, Interest Rate. (3) Firm Level Characteristics measured by Business Size, Business age, Business risk, Technology of Business. Finally several questions includes to measure the repayment performance of the borrowers, sample of 10 Micro Finance Institutes (MFIs) in Anuradhapura District that are registered on Lanka Micro Finance Practitioners' association and 120 SMEs credit borrowers among MFIs.

## DATA ANALYSIS AND INTERPRETATION

Data were collected by using primary sources 120 entrepreneurs were questioned by the researcher for data collection procedure and collected quantitative data to find solution to meet research objective. First it is discuss the geographical information as follows;

Table 1: Geographic Statistics

Gender	%	Age	%	Education	%	Business Experience	%	Sales in "000"	%
Male	39.2	<18-25	12.5	Primary	21.7	<1 year	27.5	5-10	18.3
Female	60.8	<26-35	22.5	Secondary	55.8	<2 year	21.7	10-20	24.2
		<36-45	25.8	Diploma	19.2	<3 year	14.2	20-50	31.7
		<46-55	23.3	Graduate	1.7	<4 year	22.5	50-100	21.7
		>56	15.8	Other	1.7	>4 year	14.2	>100	4.2
Loan in "000"	%	Sector		%		Installment Period		%	
5-20	8.3	Manufacturing		22.5		1 week		45	

20-50	15.8	Service	29.2	2 week	45
50-100	31.7	Whole Sale & Retail	48.3	3 week	6.7
>100	44.2			1 year	2.5
				Above 1 year	0.8

According to above descriptive statistics the majority of females are engage with the micro finance activities which is 60.8% and most of them are in between year 26 and 45 year. Most of them have completed their secondary education it is 55.8% and their business experience less than 2 years on other hand some of them have 4 years' experience. The sales given in thousand rupees and commonly of them are earn Rs.20000 – Rs.50000 sales margin which is 31.7% compared to other sales breakup. The MFIs mostly given loans category in between more than Rs.100000 and it is 44.2% as well as using this loan most of them are involve with whole sale and retail business. On other hand most of the cases MFIs are granted loans for 1 week and 2 weeks.

After analysis the geographic background the study has performed several data screening and cleaning strategies and it involves below statistics.

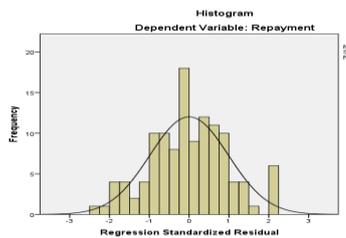


Figure 2: Testing Normality

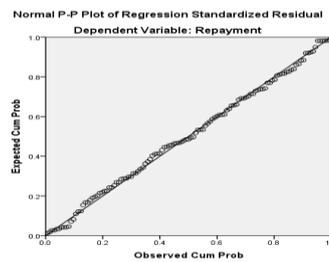


Figure 3: Testing Linearity

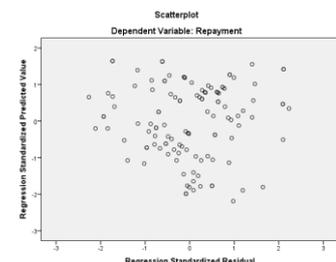


Figure 4: Testing Auto Correlation

The figure 2 shows that the distribution of residual is approximately normal. Therefore assumption of normality testing is completed. Next figure 3 shows the results of linearity and this scatter plot can be visually identified linear relationship between the independent variables and dependent variable. This data set represent a linear relationship and researcher can use linear regression analysis for analyze data. In figure 12 indicates auto correlation among variables. In this plot all the points are falling within -2 and 2. Therefore it has a dissemination distribution. As well as all the points are random. Therefore it is prove no Hetrosecadasticity of random error term. After performed the parametric assumptions then it is proved the validity and reliability of the data.

Table 2: Testing Validity and Reliability

Variables	Convergence validity			Reliability
	KMO Statistics	Bartlett's test stat. ( P value)	AVE to be > 0.5	Cronbach's Alpha
Entrepreneurs Characteristics	0.705	175.748 (<0.001)	0.5583	0.740
Loan Characteristics	0.774	541.936 (<0.001)	0.5129	0.846
Firm level Characteristics	0.785	589.519 (<0.001)	0.5350	0.857
Repayment Performance	0.862	543.658 (<0.001)	0.5659	0.741

KMO statics represented that this samples adequate. In fact, all the cases of this value is higher than 0.5 among all variable and it conclude the sample adequacy of each variables. Again Bartlett's test value tested P value of the survey data for measure the validity of sample. Here also in all the cases ensure

validity of sample. To measure the validity of questionnaire has been used AVE value and this value should be more than 0.50. Entrepreneur's characteristics show 0.5583 and loan characteristics indicates 0.5129 and Firm level characteristics show 0.5350. According to survey data repayment performance also has a 0.5659 for AVE value. The generally accepted minimum standard for internal consistency was 0.7. In this study Cronbach Alpha value was presented 0.931 among all variables. These values revealed that the internal consistency reliability was satisfactory.

*Table 3: Descriptive Statistics*

Variable	Mean	Std. Deviation	Min	Max
Repayment	3.4958	0.54615	1.4	3.7
Entrepreneurs	3.0542	0.71471	1.67	4.5
Loan	3.0455	0.69094	1.64	4.45
Firm Level	3.0240	0.78729	1.25	4.38

Table 3 show the each variables are moderately contribute to the loan repayment performance and it is identified smaller fluctuations.

	Repayment Characteristic	Entrepreneurs Characteristic	Loan Characteristic	Firm Level Characteristic
Repayment characteristics	1	-	-	-
Entrepreneurs Characteristics	.614	1	-	-
Loan Characteristics	.694	.741	1	-
Firm Level Characteristics	.722	.729	.767	1
Unstandardized Coefficient		.502	2.46*	2.99**
R - Square	.570	Durbin Watson	1.517	
F Value	50.873**			

Then below table 4, explain the correlation of each and every variables accordingly every variables are positively correlated with loan repayment performance and less than 80% and it conclude there is no multi-colinarity. Further, R – square represent the explanatory power of the study according to this study it is 57%. As well as overall model significant at 1% level. On other hand other than Entrepreneurs characteristics, Loan characteristics and Firm characteristics are significant at 5% and 1% level respectively finally except first hypothesis other two hypotheses were accepted.

## CONCLUSION

Micro Finance has been recognized a vital socio economic and financial mechanism for poverty alleviation in Sri Lanka and developing country and furthermore to develop entrepreneurship. Micro financing help to entrepreneurs to improve their business and stimulate the poor to be involved in business activities. Therefore examining contributing factors for loan repayment performance is very important. This study has been provided empirical evidence and founded result which contributing Entrepreneurs characteristics, Loan characteristics and Firm characteristics are significant factors for loan repayment performance among SMEs in Sri Lanka.

## REFERENCES

Acquah, H & Addo J 2011, 'Determinants of loan repayment performance of Fisherman: Empirical evidence from Ghana. Cercetari Agronimice in Moldova

- Aruppillai, T. & Phillip P 2014, Farmers Characteristics and its influencing on Loans resettlement Decision in Sri Lanka, *International Journal of Economics and Finance*
- Asantey, J & Tengey S 2014, The Determinants of Badloans in financing small and medium size enterprises in the banking sector in Ghana A Factorial analysis Approach, *International Journals of Research in Business Management*
- Eze, C. & Ibekwe U 2007, Determinants of loan repayment under the Indigenous, *International Journals of Research in Business Management*
- Gebremedhin, K 2010, Determinants of successful loan repayment performance of private borrowers in Development bank of Ethiopia, North Region
- Khan, M & Rahaman, M (2007). Impact of Microfinance on living standards, Empowerment and poverty alleviation of poor people.
- Majeed, S. 2014, Performance of Loan Repayment Determinants in Ethiopian finance: an analysis, *Eurasian Journal of Business and Economics*
- Mokhtar, S. Nartea, G. & Gan C. 2012, Determinants of micro credit loans repayment problem among micro finance borrowers in Malaysia, *International Journal of Business and Social Research*
- Murray, U. & Boros, R. 2002, a guide to Gender Sensitive Micro Finance Socio Economics and Gender analysis Programme
- Nawai, N. & Shariff, M 2013, Determinants of Repayment performance in Micro Finance program in Malaysia, *Labuan Bulletin of International Business and Finance*
- Negera, W. 2012, Determinants of Non-Performing Loans: The case of Ethiopia Banks. W.N. Geletta Research Report
- Reta, F 2011, Determinants of loan Repayment performance: A case study in the Addis Credit and Saving Instituton, Addis ababa, Ethiopia
- Teng, L. Zariyawati, M. Hanim, M. & Annuar, M 2015, Determinants of Micro Finance Repayment Performance: Evidence from Small Medium Enterprises in Malaysia. *International Journals of Economics and Finance*
- Yogendrarajah, R. & Semasinghe, D (2016), An Empirical Analysis of Micro Credit repayment in Northern Sri Lanka, *Pearl Journal of Management, Social Science and Humanities*

# Flexible Asset Management Model Empirical Study of Manufacturing Companies Listed in Indonesian Capital Market

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## Abstract

The purpose of this study is to test empirically the relationship between Flexible Asset Management Model that integrates financial working capital operational working capital and fixed assets to profitability. The findings show that Financial Flow Cycle and Cash Conversion Cycle have negative effects on EBITDA while Fixed Assets / Net Sales and Liquidity have positive effects on EBITDA. It is also found that Liquidity and Fixed Assets / Net Sales have positive effects on ROI and Financial Flow Cycle as well as Cash Conversion Cycle does not have any effects on ROI. This study gives new insights to financial management literacy, which also gives managerial implication to the strategic planning and corporate financial decisions. The originality of this study is that it uses the integration between working capital and asset management literacy on the profitability and gives empirical proof on the manufacturing companies in Indonesia.

**Keywords:** FAM Model, FFC, CCC, Liquidity, Fixed Assets Ratio, Profitability

## Introduction

The Flexible Asset Management (FAM) model is a model of flexibility of finance analysis as a solution for profitability optimization through fixed assets and working capital adjustments. Marttonen et al (2013) and Talonpoika et al. (2016) explain the financial working capital management part of Flexible Asset Management (FAM) as the interface between corporate finance and strategic management for decision-making. Flexibility relates to how companies adapt to the business environment (Gibson, 2000), its relationship to market dynamics and business cycles (Enqvist et al., 2014), economic differences between countries (Monica and Piyus, 2017), the condition of external uncertainty, as well as the model of measuring its implications for profitability (Chauchan & Banerjee, 2018; Monica & Piyush, 2017) and its relationship to strategic decisions (Talonpoika et al., 2016).

The FAM model, inspired by Fluriet in 1978 and revised in 1980 (Fluriet, 2005) classifies operational and financial working capital and was further developed by Marttonen et al (2013) through profitability ratios to separate current assets and fixed asset components. The method is almost identical to the derivation of the DuPont model to explain the effect of asset management on ROE. Asset flexibility is basically a way to respond to sales changes. Initially, some literature has explained this by a common size approximation approach analysis, which uses a sales approach (Ross et al., 2012). This approach had been popular long before Marttonen et al. (2013) called it a flexible fixed asset.

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However, the FAM model approach is more comprehensive, not only in the impact on the total assets' ability to increase profitability, but also as a way to explain cash flow. The difference is the existence of segregation of account elements in financial statements. Elements of operational working capital as cash conversion cycle (CCC) are obtained from the inventory cycle and the receivable cycle is reduced by the account payable cycle, some previous literature, used the term net working capital, by which all current assets accounts are reduced by current liabilities, or using gross working capital as the entire account current ratio. However, in the CCC model, as an operational working that does not include cash and treasury balance accounts, Financial Working Capital is presented with Financial Flow Cycle (FFC) as the residue of the Financial Current Assets (FCA) component and Financial Current Liabilities (FCL). FCA is the ratio of Other Current Assets (OCA) to net sales and FCL is the ratio of Other Current Liabilities (OCL) to net sales (Fluriet, 1978; Marttonen et al., 2013; Talonpoika et al., 2016).

There is still little empirical research on the FAM model, especially in relation to working capital management literature. Most research uses more funding sources and fixed assets to do with profitability, supported by several studies which suggest that there is little to talk about the development of working capital literature compared to other financial fields (Frolov et al., 2010; Komonen et al., 2012; Schneider et al., 2006). Similarly, short-term financing is of less concern than long-term financing (Bolek, 2013; Harsh, 2014; Rappaport, 2005).

In addition, working capital management is very important in conditions of companies facing problems of market instability, trade fluctuations and economic growth uncertainty. As Indonesia is currently a developing country, it faces various problems of rising inflation, negative trade balance, consumer exchange rate patterns, interest rates and ever-changing government regulation (Franata, Marwa, & Yusuf, 2017). From the company aspect, these external factors are very influential in investment and funding decisions. While investment decisions and funding are strategic, they are long-term decisions, but very rapid changes and external dynamics require shorter, flexible operational decisions and might affect cash budgeting. Some researchers have shown a significant positive relationship between inflation, gross domestic product growth rates and the length of cash tied in working capital or Cash Conversion Cycle (Ban˜os-Caballero et al., 2010; Mathuva, 2014).

The most easily analyzed phenomenon in the micro sector is in companies that go public on the Indonesia Stock Exchange. Companies listed on the Indonesia Stock Exchange (BEI) currently number 124 industry in manufacturing. From a number of companies it shows that companies with sales growth do not create value because the sales have a very strong relationship with the level of debt (Sulastrı et al., 2016)

This study is expected to contribute to the enrichment of financial management literacy, especially working capital management, through empirical studies in Indonesia that may result in a differentiation from other countries on the FAM model study and how it relates to unexplored profitability in Indonesia. The purpose of this study is to test empirically the influence of liquidity, financial flow cycle (FFC), Cash Conversion Cycle (CCC), Fixed Assets to Net Sales on profitability ROI and EBITDA.

## **Literature Review**

### **Flexible Assets Management (FAM) Model**

The FAM model is different from financial flexibility, which emphasizes on the liabilities side (Preve, 2010; Ross et al., 2012). Denis (2011) defines financial flexibility as the ability to react with unexpected changes and with regard to financial flexibility as a key element in

corporate financial policy, which assumes that external funding costs are very expensive and cash flow growth is unpredictable. This is in line with Gryglewicz (2011), in that financial flexibility can be used to maintain optimal cash handling, capital structure and dividend policy. Bancel and Mitto (2011) and Balasubrahmanyam et al. (2012), on the other hand, consider financial flexibility as a strategic decision and as a starting point for strategy formulation. Other researchers have also illustrated the determinants of financial flexibilities, such as enabling legal environment (Bancel & Mitto, 2004); macroeconomics conditions (Singh and Hodder ,2000); incorporating cultural aspects (Chang & Noorbakhsh, 2009); size of the firm (Brounen et al.,2004); and age of the company (Gamba & Trantis, 2008). Marchica and Mura (2010) stated that financial flexibility improves investment capability, in line with O'Connor and Tate (2013) who state that limited funding and inflexibility of the company can lead to a decrease in investment, especially companies unable to maintain cash flow in volatile conditions, while the FAM model emphasizes the changes in the asset side caused by changes in sales as the impact of external factors, The FAM model connects financial statement and income statement information to analyze the efficiency and effectiveness of asset management to improve profitability which is often measured by Return On Investment (ROI). In terms of asset management, investment is grouped into working capital as a form of short-term operational asset usage, while fixed asset is more emphasized on the use of long-term static assets. However, in the FAM model, it assumes fixed assets will be flexible in line with the change in capacity or the so-called capital intensity ratio (Marttonen et al., 2013; Ross et al., 2012), linking profitability with working capital in the form of the FAM model.

$$ROI = \frac{EBITDA(\%)-FA\% \cdot \frac{1}{B-1}}{\frac{CCC}{365} + \frac{r}{365} + FA\%} \dots\dots\dots(1)$$

The formula (1) means that ROI is determined by five parameters, namely operational working capital (CCC); EBITDA%. i.e. profit margin plus depreciation divided by net sales; FA%, i.e. Fixed Assets to Net Sales; B is the average depreciation time; and r as cycle time of residual. For the "r" notation, Talonpoika et al. (2016) use the term "Financial Flow Cycle" (FFC), which is the residual value of other current assets and other current liabilities to net sales.

The essential importance of the FAM model is to segregate assets that previously used the conventional approach to classify into net working capital, consisting of current assets reduced by current liabilities; or gross working capital as the total amount of current assets. In the FAM model, some researchers also use the term dynamic working capital. In this case, current assets are reclassified into operational working capital, consisting of inventories, accounts receivable and accounts payable, and financial working capital consisting of cash, treasury balance and other obligations not directly related to operations, which are also referred to as Fluriet's model (Fluriet, 1978; Marttonen et al., 2013, Talonpoika et al., 2016). Operational working capital is more discussed in various studies and literature, while financial working capital is less discussed, and, if discussed, it is just part of the financing needs associated with seasonal conditions and the flexibility to determine spontaneous liabilities (Preve, 2010; Ross et al., 2012) as a strategic decision; therefore, financial working capital is called dynamic working capital (Marques & Braga, 1995). Although Antônio et al. (2014) criticized the Fluiret's model's view of the dynamic model, it was finally explained that the Fluiret's model is merely a reclassification of accounts in the dynamics of financial equilibrium.

## Sales Approach

The percentage approach to sales is a common approach used in financial planning to generate pro-forma statements, which assumes that all items in the financial statement will change with the change of sales level (Ross et al., 2012). As a consequence, the interaction between sales growth will affect the financial policy (Higgins, 1977, 1981). For example, firms will invest higher in net working capital and additional fixed assets to support higher sales; as assets increase, funding sources will increase. However, the explanation of working capital management on profitability empirically has more emphasis on the liquidity aspect, i.e. the relationship between current assets with current liabilities. While little research emphasizes the aspect of cash flow, cash flow is a very important aspect, especially in working capital management. Comprehensive measurements involving cash flows in working capital management are measurement methods with CCC and FFC, Cash CC and FFC being important parameters in determining profitability under conditions of sales changes, in addition to fixed asset turnover against net sales averages.

### **Liquidity and Financial Flow Cycle**

Fluriet (2005) clarified the working capital statement accounts, namely operational financing and operational working capital, to explain the significant impact of liquidity and operating cash flow. These account separations include current liabilities account (term debt, bank loan and discounted duplicates) as a short-term portion of long-term debt and equity or as debt financing, other liabilities (trade payables, deferred revenues and pension liabilities) directly generated from transactions with consumers and suppliers. Debt financing has a direct impact on operations, called operational financing or operating liabilities, both of which are still said to be the financing function of total assets. The same is true for current assets such as cash, bank and short-term financial investment accounts showing excess cash, while other accounts, such as inventories and trade receivables directly related to operating cycle, are called operational working capital or operating current assets. This separation aims to define a working capital requirement that is operating current assets - operating current liabilities. Some literature call it Net Liquid Balance (Shulman & Cox, 1985; Shulman and Dambolena, 1986), and Financial Needs for Operations (FNOs) to explain the concept of Financial Working Capital Management (FWCM) (Preve, 2010). Finally, the terms are "Other Current Assets" (OCA) and Other Current Liabilities (OCL) as an account other than operating assets and operating liabilities, as followed by several empirical studies (Marttonen et al. 2013; Talonpoika et al., 2016).

Liquidity and FFC relationships can be explained as that liquidity is a conventional measurement of current liabilities in meeting the immediate obligations of the company, or the availability of net working capital in the company's operations. Measurement of the liquidity ratio or networking capital is a measure that does not fully measure the efficiency of working capital, because it includes elements of cash balance and short-term liabilities that have no direct relationship with the company's operational activities related to the production function and sales function. However, liquidity measures are still needed for company performance measures, especially information on the potential quick asset that can be used in overcoming corporate risk. The FFC, however, is more the measurement of how the company is able to overcome financial risks only through activities that directly relate to sales. This is very important, especially in the face of fluctuations in sales or seasonal sales, while the company faces external financing problems. So, this measurement is more effective to know immediately the financial obligations under conditions of sales changes. Therefore, FFC is also a part of financial flexibility.

### **Cash Conversion Cycle (CCC)**

There are many concepts of Cash Conversion Cycle (CCC). CCC was first introduced by Gitman (1974) as a comprehensive measurement tool to estimate working capital efficiency (Ban˜os-Caballero et al., 2010; Deloof, 2003; Soenen, 1993). Furthermore, other researchers have also developed another measurement to estimate operational working capital, called Cash Conversion Efficiency (CCE), which measures the efficiency of working capital through operating cash flow and sales (Filbeck & Krueger, 2005). Gentry et al. (1990) also developed the Weighted Cash Conversion Cycle (WCCC) which measures the real resources involvement in working capital. Viskari et al. (2011) also developed Advance Cash Conversion Cycle (ACCC), which uses the same principle as WCCC; however, it can be used in operational level of the company, thus, this measurement can be utilized in calculating working capital management at customer level, products as well as orders. Talonpoika et al. (2016) modified CCC to disclose hidden advance payment; this measurement is called the Modified Cash Conversion Cycle (mCCC) and is used measure operational efficiencies, which include advance payment elements such as reduction of payable account for working capital investment due to the prepayment prior to delivery. In this study, we use the concept of CCC.

CCC is defined as a variable to calculate the length of each cash input value tied to working capital, which is used to measure working capital management efficiency (Marttonen, 2013, Talonpoika et al., 2016). CCC further explains predictive ability to profitability for pro-forma income statement compared to balance-sheet side, which is often used with liquidity measure through current ratio of liquid ratio or working capital asset ratio. Moreover, CCC can predict failure or success of a company, caused by factor internal factors (investment level, firm sustainability and cost of sales) and external factors (financing sources, economic conditions, customer and supplier bargaining power).

Longer CCC can improve profitability if supported by higher sales, but some researchers maintain that shorter CCC can increase profits; therefore, some researchers question whether there is an optimal CCC, since maintaining an optimal CCC is important as the excess or the lack of investment will affect the performance of the company (Mathuva, 2014; Nobanee et al., 2011; Yazdanfar, 2014). Some previous researchers have shown CCC's relationship with profitability is negatively correlated, thus, in improving profitability; the CCC should be shortened (Mathuva, 2014; Nobanee et al., 2011; Talonpooika, 2016; Tripathi & Ahamed, 2016). This study will use CCC as part of the FAM model and how its impact on profitability is measured by ROI and EBITDA, which is also used in the study by Marttonen et al. (2013) and Talonpooika (2016)

## **Research Design**

The data used are from the financial statements of manufacturing companies listed on the Indonesia Stock Exchange for the period 2012-2016, as many as 31 companies with panel data of 156, and outlier samples are removed for randomness of data to meet the assumption of normality, producing 134 samples. The parameters of FAM model (Talonpoika et al., 2016), used in this research are financial working capital, operational working capital, fixed asset to net sales and liquidity ratio (conventional). This is measured by percentage of EBITDA and ROI.

Detection of outlier data is done by univariate or multivariate outlier. Univariate outlier criteria are performed by comparing standardized Z-Score values with critical values;  $-2.5 \geq ZScore \geq 2.5$  (Hair et al., 1995). Multivariate outlier detection used the Mahalanobis Distance method to measure the distance of each value of each observed average of the whole

variable (Hair et al., 1995; Tabachnick & Fidell, 2001). Critical value of *Mahalanobis Distance*:  $X^2$  (degree of freedom; 005). Normality test was performed by the Kolmogorov-Sminirnov Test; critical value  $\alpha > 0.05$ . To test the model of multiple regression Ordinary Least Square (OLS) with ANOVA test was used, with F test value critical  $\alpha \leq 0.05$  and coefficient of determination  $R^2 \geq 0,05$ , Next, parameter coefficient was tested with t test, critical value  $\alpha < 0.05$ .

## Result and Discussion

The FAM model is relatively newly introduced in working capital management, but, basically, the derivation of profitability model through working capital partially has been done, for example, prediction to influence of CCC to profitability or influence liquidity to profitability, or derivation through multiplier Return On Equity (ROE) with the DuPont model. What distinguishes it is the existence of cycle financial flows which are residuals of Other Current Assets and Other Current Advantages that have not been widely empirically undertaken. An interesting finding is the average of CCC, if compared to the results of research in various countries by some other researchers. In this research sample, it identified an average CCC of about 99 days in manufacturing sector companies listed on the Indonesia Stock Exchange.

**Table 1. Description of Data**

Variable	Min	Max	Mean	SE	STD
FFC (days)	-93.52	144.32	-9.47	4.58	53.11
CCC (days)	10.58	198	99.8	4.47	51.78
FA%	5.31	172.67	45.67	3.72	43.15
Liquidity (%)	45	352	174	64	747
ROI (%)	-9.8	35	12.7	.88	10.16
EBITDA (%)	-10	27	6.6	.64	7.4

**Source: Result of the study**

The empirical model is consistent with the FAM model (Marttonen et al., 2013; Talonpoika et al., 2016) in that there are five important parameters, including FFC, CCC, Fixed Sales Assets and depreciation duration, but, in this case, the researchers add liquidity variables as conventional models related to profitability. The variable duration of depreciation, (B), is not used in the regression model because it is difficult to distinguish diverse assets with different shrinkage periods.

Transforming data with  $\ln X_i$  is a way of satisfying the distribution of normality, although it is difficult to meet the normal distribution of all variables due to data limitations. However, the data are free from outliers and meet the multivariate assumption of normality, so the regression model can proceed.

The model test (F test) in Table 2 shows that the regression model can be generalized in the population, for ROI variable with sig 0.025 and  $R^2$  termination coefficient of 8.2 percent, for EBITDA sig 0.00 variable with  $R^2$  termination coefficient of 34.1 percent. All FAM model and liquidity variables positively affect EBITDA with different influence, such as FFC and CCC have negative effect on EBITDA, while Liquidity and Fixed Assets influence EBITDA. Other FFC and CCC have no effect on ROI, and Liquidity and Fixed Assets to Sales ratio have positive effect on ROI.

**Table 2. Result of Multiple Regression with FAM Model Variables**

Variables	ROI			EBITDA			Distribution Normality Test $\alpha > 0.05$
	R <sup>2</sup> = <b>.082</b> ; SEE= <b>.098</b> ; F-Test sig = <b>.025</b>			R <sup>2</sup> = <b>.341</b> ; SEE= <b>.060</b> ; F-Test sig = <b>.000</b>			
	$\beta$	SE	Sig	B	SE	Sig	
Constant	.198	.071	.006	.038	.044	.392	
LIQUIDITY	.041	.013	.003	.033	.008	.000	.076
LN F_ASSETS	.028	.013	.027	-.028	.008	.000	.001
LN_FFC	-.003	.010	.744	.027	.006	.000	.064
LN_CCC	-.022	.015	.147	-.037	.009	.000	.200
ROI							.200
EBITDA							.200

Source: Result of the study

### Conclusion

Study on firms in the manufacturing sector listed on the Indonesia Stock Exchange empirically proves that there is a negative influence of CCC and FFC variables on EBITDA significantly and not significantly to ROI. This means that the longer cash cycle turnover period decreases the profit or is more inefficient, while the CCC and FFC cannot explain the ROI as another measure of profitability. In contrast, liquidity and fixed asset ratios have a significant effect on both EBITDA and ROI. It is clear that CCC, FFC, Liquidity and Fixed Asset Ratio can explain operating efficiency in line with the essence of the FAM model to contribute to working capital management in short-run operations.

This study concludes that the FAM model can explain the relationship between operational working capital and financial working capital to profitability as a more flexible model that can fill conventional gaps that use static measures, such as net working capital or gross working capital or ratio-ratio liquidity.

Analysis of the FAM model derived from Return On Investment can be seen as an analogy of the DuPont model identity, derived from Return On Equity, which explains the relationship between profit margin, total asset turnover and equity multiplier: profit margin as a measure of operating efficiency; total asset turnover as a measure of asset efficiency; and equity multiplier as a measure of financial leverage. This measure is more for the benefit of shareholders. The FAM model derived from profitability using ROI indicator as a measure of managerial performance includes elements of operating efficiency by using Operational Working Capital indicator with CCC and profit margin (EBITDA), while the assets efficiency use Fixed Turn Over and duration of depreciation. So the DuPont model and FAM model are complementary.

This study has contributed to the enrichment of financial management literacy, in particular to add an explanation of the concept of dynamic working capital management, which has been more discussed on the liabilities side as financial flexibility.

### Managerial Implication

The present orientation of financial performance measurement is not only on a static conventional approach; the dynamics of the external environment sometimes exceed what management predicts internally. Therefore, the financial performance approach based on environmental dynamics needs to be a managerial concern to complement the conventional approach. Companies need predictors in investment decisions and short-term funding decisions to address short-term risks that change, so that potential losses can be detected early on.

The FAM model sees changes in sales affecting working capital that can be grouped into working capital financing, as reflected in the Cycle Financial Flow (FFC), and Operational Working Capital, reflected by the Cash Conversion Cycle (CCC), together with the capital ratio analysis in the form of fixed assets ratio with net sales. Managers can develop simulated models of working capital requirements and short-term funding sources determined by relative changes in the level of sales at any time, and support the financial technology model in the digital era through the FAM model as a financial multiplier effect.

It also provides enlightenment for companies, especially in the manufacturing sector, for decision-making, especially spontaneous financing decisions caused by changes in sales fluctuations, financial planning and strategic decisions in choosing short-term capital structure.

The findings show a negative relationship between CCC, FFC and profitability as an indication for managers how to improve profitability by shortening CCC and FFC. Efforts to shorten the CCC can be done by managing working capital (inventory, accounts receivable and trade payables), which emphasizes the value chain relationships, ranging from raw material procurement to producing products and management of corporate credit policies to consumers, all of which can be accounted for by financial managers. In addition, efforts to shorten FFC can be done by managing other financial resources in the short term to determine the funding strategy in the face of external uncertainty.

### **Further Research**

This study can be continued by using CCC and FFC variables in relation with Financial Technology, to explore the impact of delay if consumers use credit cards as well as the company relationship with suppliers by way of payment through credit card involving banking intermediation institution. Research on the FAM model has not yet been done in Indonesia and can be developed for other research by using sample of other companies. Future research will also discuss the relationship of FAM models to profitability when linked to economies of scale and corporate strategy in optimizing funding and asset optimization. It would be interesting to develop more models that use econometrics prediction to explain working capital and working capital finances in a particular seasonal cycle. The FAM model has contributed to mainstream financial management and is important for interdisciplinary development to be applied practically in management decisions.

### **References**

- Antônio De Camargos, M., Castro, M., Camargos, S., De Castro, L., & Leão, G. (2014). *Business and Management Review* “ Empirically Testing The Flueriet’s Model ”: Evidences of Brazilian Market. Retrieved
- Balasubrahmanyam, S., Kaipa, P. and Akhilesh, K.B. (2012). The impact of a firm’s financial flexibility on its strategic renewal: key concepts with evidential support from businesses across industries, *Global Journal of Flexible Systems Management*, 13(3), pp. 165-175.
- Bancel, F. and Mittoo, U.R. (2004). Cross-country determinants of capital structure choice: a survey of European firms. *Financial Management*, 33(4), pp. 103-132.

- Bancel, F. and Mittoo, U.R. (2011). Financial flexibility and the impact of the global financial crisis, *International Journal of Managerial Finance*, 7(2), pp. 179-216.
- Ban̄os-Caballero, S., Garcia-Teruel, P. and Martinez-Solano, P. (2010), "Working capital management in SMEs", *Accounting and Finance*, Vol. 50 No. 3, pp. 511-527.
- Brounen, D., de Jong, A. and Koedijk, K. (2004). Corporate finance in Europe: confronting theory with practice, *Financial Management*, 33(4), pp. 71-101.
- Bolek, M. (2013). Dynamic And Static Liquidity Measures In Working Capital Strategy. *European Scientific Journal*, 9(4).
- Chang, K. and Noorbakhsh, A. (2009). Does national culture affect international corporate cash holdings?, *Journal of Multinational Financial Management*, 19(5), pp. 323-342.
- Chauhan, Gaurav S., Banerjee, Pradip, (2018) "Financial constraints and optimal working capital – evidence from an emerging market", *International Journal of Managerial Finance*, Vol. 14 Issue: 1, pp.37-53,
- Deloof, M. (2003). Does working capital management affect profitability of Belgium firms?. *Journal of Business Finance & Accounting*, 30(3-4), pp. 573-587.
- Denis, D.J. (2011). Financial flexibility and corporate liquidity, *Journal of Corporate Finance*, 17(3), pp. 667-674.
- Enqvist, Julius., Michael Graham, and Jussi Nikkinen. (2014). The Impact of Working Capital Management on Firm Profitability in Different Business Cycles:Evidence from Finland, *Research in International Business and Finance* Vol.32, issue C, 36-49.n
- Filbeck, G. and Krueger, T.M. (2005), "An analysis of working capital management results across industries", *American Journal of Business*, Vol. 20 No. 2, pp. 11-20
- Fleuriet, M.J., Kehdy, R. and Blanc, G.A. (1978). A Dinâmica financeira das empresas brasileiras. Belo Horizonte: Fundação Dom Cabral. In Portuguese
- Fleuriet, M.J.(2005), "Fleuriet's rebuttal to "Questioning Fleuriet's model of working capital management on empirical grounds", available at : [http:// papers.ssrn.com](http://papers.ssrn.com)
- Franata, J., Marwa, T. and Yusuf, K..M. 2017. Factors Affecting Poverty Level in South Sumatera, Indonesia. *Sriwijaya International Journal of Dynamic Economics and Business*. 1(1), 119-132.
- Frolov, V., Ma, L., Sun, Y. and Bandara, W. (2010). Identifying core functions of asset management, In: Amadi-Echendu, J.E., Brown, K., Willett, R. and Mathew, J., eds., *Definitions, Concepts and Scope of Engineering Asset Management*, pp. 19-29. London: Springer-Verlag.
- Gamba, A. and Triantis, A. (2008). The value of financial flexibility, *Journal of Finance*, 63(5), pp. 2263-2296.
- Gentry, J.A., Vaidyanathan, R., Lee, R. and Wai, H. (1990), "A weighted cash conversion cycle", *Financial Management*, Vol. 19 No. 1, pp. 90-9.
- Gibson, V. (2000), Property portfolio dynamics: the flexible management of inflexible assets, *Facilities*, 18(3), pp. 150-154
- Gitman, Lawrence J. (1974). Estimating Corporate Liquidity Requirements: A Simplified Approach, *The Financial Review. Estern Finance Assosiation*.
- Gryglewicz, S. (2011). A theory of corporate financial decisions with liquidity and solvency concerns. *Journal of Financial Economics*, 99(2), pp. 365-384
- Hair, J., R. Anderson, et al. (1995), *Multivariate data analysis*. New Jersey, Prentice-Hall Inc.
- Harsh Pratap Singh Satish Kumar , (2014),"Working capital management: a literature review and researchagenda", *Qualitative Research in Financial Markets*, Vol. 6 Iss 2 pp. 173 – 197
- Higgins, R.C. (1977). How Much Growth Can a Firm Afford? *Financial Management* (Fall, 1977).

- Higgins, R.C. (1981). Sustainable Growth Under Inflation. *Financial Management*, 10 (4), pp. 36-40.
- Komonen, K., Kortelainen, H. and Rääkkönen, M. (2012). Corporate asset management for industrial companies: an integrated business-driven approach. In: van der Lei, T., Herder, P. and Wijnia, Y., eds., *Asset Management – The State of the Art in Europe from a Life Cycle Perspective*, pp. 47-63. Dordrecht: Springer.
- Marchica, Maria-Teresa and Mura, Roberto. (2010). " Financial Flexibility, Investment Ability, and Firm Value: Evidence from Firms with Spare Debt Capacity". *Financial Management* • Winter 2010 • pages 1339 - 1365.
- Mathuva, David Mutua , (2014), "An empirical analysis of the determinants of the cash conversion cycle in Kenyan listed non-financial firms", *Journal of Accounting in Emerging Economies*, Vol. 4 Iss 2 pp. 175 - 196.
- Marques, J.A.Y.d.C. and Braga, R. (1995). "Analise dinamica do capital de giro - o modelo Fleuriet", *Revista de Administracao de Empresas*, Vol. 35 No. 3, pp 49-63.
- Marttonen, S., Monto, S., & Kärri, T. (2013). Profitable working capital management in industrial maintenance companies. *Journal of Quality in Maintenance Engineering*, 19(4), 429–446.
- Monica Singhania, Piyush Mehta, (2017) "Working capital management and firms' profitability: evidence from emerging Asian countries", *South Asian Journal of Business Studies*, Vol. 6 Issue: 1, pp.80-97,
- Nobanee, Haitham Modar Abdullatif Maryam AlHajjar, (2011), "Cash conversion cycle and firm's performance of Japanese firms", *Asian Review of Accounting*, Vol. 19 Iss 2 pp. 147 - 156
- O'Connor Keefe, M. and Tate, J. (2013). Is the relationship between investment and conditional cash flow volatility ambiguous, asymmetric or both?. *Accounting and Finance*, 53(4), pp. 913-947.
- Preve, Lorenzo A. 2010. Working Capital Management. OXFORD University Press.
- Rappaport, Alfred. (2005). The Economics of Short-Term Performance Obsession, *Financial Analysis Journal Volume 61*, Number 3.
- Ross, Stephen A., Westerfield, Randolph W., Jaffe. (2012). Corporate Finance. McGraw-Hill ISBN:978-0-07-8034770.
- Schneider, J., Gaul, A.J., Neumann, C., Hogräfer, J., Wellssow, W., Schwan, M. and Schnettler, A. (2006). Asset management techniques. *Electrical Power and Energy Systems*, 28(9), pp. 643-654
- Shulman, J.M., and Dambolena. (1986). Analyzing Corporate Solvency, *Journal of Cash Management*, Vol. 6 pp. 35-38.
- Shulman, J.M., and Cox, R.A.K. (1985). An Integrative Approach to Working Capital Management, *Journal of Cash Management*, Vol.5 pp.64-67.
- Singh, K. and Hodder, J.E. (2000). Multinational capital structure and financial flexibility, *Journal of International Money and Finance*, 19(6), pp. 853-884.
- Soenen, L.A., (1993). Cash Conversion Cycle and Corporate Profitability, *Journal of Cash Management*. Vol.13, pp. 53-57.
- Sulastri, Adam, Mohamad, Isnurhadi, and Muthia, Fida., 2016. Diversification Strategy And Risk Reduction, *I J A B E R*, Vol. 14, No. 13, (2016): 8931-8952.
- Tabachnick, B. G. and L. S. Fidell (2001), *Using multivariate statistics*. Needham Heights, MA, Allyn & Bacon.
- Talonpoika, A.-M., Karri, T., Pirttila, M., & Monto, S. (2016). Defined strategies for financial working capital management. *International Journal of Managerial Finance*, 12(3), 277–294.

- Tripathi, N., & Ahamed, N. (2016). Does Optimizing the Cash Conversion Cycle Ameliorate Firm's Performance? Unraveling the Relationship in the Indian Corporate Landscape, 243–255.
- Viskari, S., Lukkari, E and Karri, T (2011), "State of working capital research: bibliometric study", *Middle Eastern Finance and Economics*, Vol 5 No 14, pp 99-108
- Yazdanfar, Darush Peter Öhman , (2014),"The impact of cash conversion cycle on firm profitability ", *International Journal of Managerial Finance*, Vol. 10 Iss 4 pp. 442 – 452.

# GROWTH, REDISTRIBUTION INCOME, AND POVERTY

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## Abstract

This study discusses the effect of growth and the redistribution of income towards poor people in Java using the Poverty Equivalent Growth Rate (PEGR) and poverty decomposition method. In this study, the National Socio-Economic Survey was used. This study found no pro-poor growth provinces in 2010. DKI Jakarta, West Java, DIY and Banten became pro-poor in 2014. Both DKI Jakarta and Banten became pro-poor in 2016. Income growth is more effective in reducing poverty than income redistribution. The results of this study have the practical implication of improving the government policy that is aiming to overcome income redistribution in Java. The originality of the paper is that this is the only study that has been done about growth, income redistribution and poverty in Java.

*Keyword: growth, income redistribution, poverty.*

## INTRODUCTION

Indonesia is one of the countries located in the region of Asia. Based on its region, Indonesia can be divided into Java and Outside Java. There are 6 provinces in Java and 28 provinces that are outside Java. One of the performance indicators for the regional economy is the Regional Gross Domestic Product (GDRP). GDRP provinces in Java provide a massive contribution to the GDP of Indonesia. In 2010, the contribution was 58.06 percent, which then increased to 58.29 percent in 2015. Unfortunately, the increase of the GDRP per capita does not directly solve the problem of poverty and inequality. Java Island contributed nearly sixty percent to the GDP, yet is inhibited by having half of the total of poor population in Indonesia. The number of poor making up the population in Java in 2016 reached 15.31 million people while the poor population outside of Java numbered 13.20 million.

Moreover, another problem faced by the region of Java is an inequality of income. The increasing value of the Gini ratio shows that an inequality of income among the residents of Java continues to deteriorate. The Gini ratio in 2010 was 0.372 and increased to 0.412 in 2015. The increasing value of the Gini ratio is caused by the enlargement of expenses from 20 percent of the richest population and the decrease in the share of spending by 40 percent from both the lowest and intermediate population segments in Java. The share of expenditure from the top 20 percent of the population groups in Java was 45.11 percent in 2010. Then, the value rose in 2015 and became 48.80 percent. In contrast, the share of expenditure from a group of residents making up the 40 lowest in Java decreased from 18.62 percent in 2010 to 16.84 percent in 2015. The expenditure proportion of 40 percent of the population - the middle groups – was 36.27 percent in 2010 and become 34.36 percent in 2015.

The growth of per capita income from 2000 to 2015 had no direct impact in eliminating the poverty and income inequality in Indonesia, especially in Java. This was because of income growth only resulting from a handful of wealthy people. If the revenue growth was only generated by the small number of rich residents, then the benefit of revenue growth would only be enjoyed by the wealthy population groups. So, the poverty and inequality would only get worse. However, if the revenue growth was generated by a lot of people, especially the poor, then they would benefit from the results of economic development (Todaro, 2011).

The revealed phenomenon was the contribution of Java's GRDP towards Indonesia's GDP was very high and relatively constant. The increasing Gini ratio eventually leads to an argumentation as to whether the economic growth provides benefits for the poor segment of the population. Bourguignon (2004) suggests that the focus of

the development strategy should encompass economic growth, poverty and inequality. The government is faced with a dilemmatic condition, where a rapid reduction in the poor population is very meaningful in the developmental process. A reduction in the poor population requires strength and a specific combination between growth and distribution policies. The majority of government spending for poor people is designed to improve their current consumption and most are designed to enhance the ability of the poor to obtain a decent living in the future (Rosen, 2014). Sastra (2017) suggests that the gap is not something that is eternal and timeless. It can be avoided and can be removed. However, it must be noted that there is no one powerful bullet (magic bullet) to lower the gaps.

## **LITERATURE REVIEW**

### **Poverty**

Haughton and Khandker (2009) revealed that poverty is a deprivation in well-being. Common views express that prosperity means to dominate or control a commodity more. The poor are those who do not have enough of an income, are not able to meet the above requirements or have a consumption minimum limit. Poverty can also be linked to different types of consumption such as not having a permanent residence or the home conditions are bad. It can also refer to when they are starving or in ill health.

Poverty is the absolute level of living where many people cannot afford certain pre-determined consumption needs or one or more persons do not attain a level of economic well-being that is deemed to constitute a reasonable minimum standard of society. Inequality is about disparities in the level of living. For example, how much more is held by rich people than poor people (Ravallion, 2016).

Based on Franata, *et.al* (2017) education, government investment, and private investment did not directly influence the poverty in South Sumatra, while the health and productivity directly and significantly but negatively. Meanwhile Kosim *et.al* (2017) study based on education influences poverty, but the ratio of health facilities and health workers insignificantly.

### ***Pro-Poor Growth***

Kakwani *et. al.* (2004) defines pro-poor growth as growth that benefits the poor and provides them with opportunities to improve their economic situation. The judgment indicator in measuring inequality carries considerable weight behind the position that one takes on, and whether growth tends to be where inequality increasing or not. Finding that the share of income going to the poor does not change on average with growth does not mean that growth raises the income (of the poor). This is judged by how much it raises the income of everybody else in comparison (Ravallion, 2016).

Most expenditure for the poor is designed to increase their current consumption levels. In contrast, some programs have been enhancing their ability to supports themselves in the future. They include educational and job training programs. Other programs are in-kind transfer, work incentives, income tax credit, security income, Medicaid, unemployment insurance, supplemental nutrition and housing assistance (Rosen, 2014).

### **Poverty, Growth and Inequality**

The relationship of the growth of expenditure and poverty as described by Bourguignon (2004) comes in the form of a triangular relationship of growth, income distribution and poverty. Poverty is measured by the size of the absolute poor population i.e. the proportion of people under the poverty line data that was obtained from household surveys. The uneven distribution of income refers to the relative income gap between residents calculated from income gaps after the normalisation of the entire observation with average income as the Lorenz curve calculation. Growth is the change in the average level of well-being, both in income and expenses.

A change in the distribution of income can be decomposed into growth effect and distribution effect. Poverty is measured by absolute poverty; inequality or distribution refers to disparities in the relative income across the whole population, and growth is the percentage change in consumption (Bourguignon, 2004).

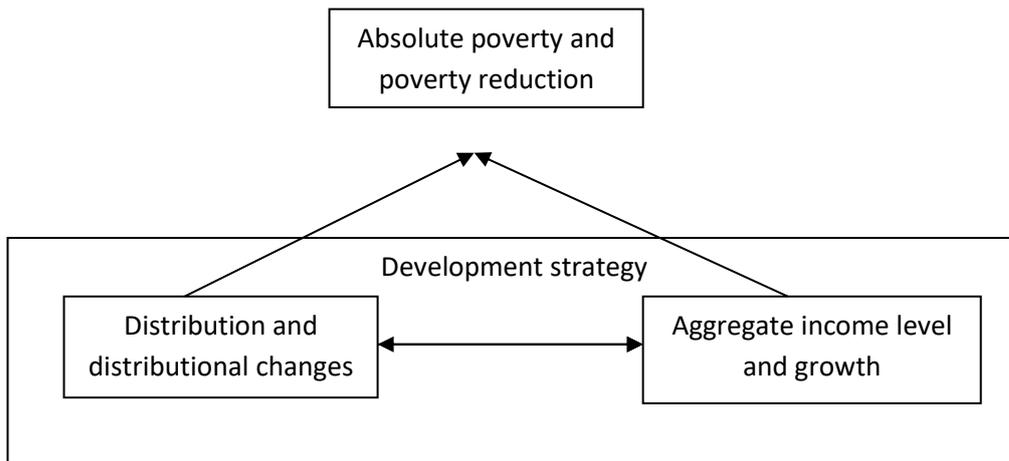


Figure 1. The Poverty-Growth-Inequality Triangle

Sources : Bourguignon (2004)

Widyastika, *et. al* (2017) found that income growth influences the decrease in poverty both in rural and urban areas in Indonesia, during 2009-2016, 2009-2014, and 2014-2016. Conversely, the distribution of income increases the poverty in both areas during the periods. Inequality of income seems to give a strong influence so that the economic growth has not been a pro poor both in rural and urban areas of Indonesia.

Changes in the poverty level is a function of the growth, distribution and changes in distribution. For example, a large amount of poverty is the area under the curve to the left of the poverty line (shaded area) and the per-capita income of the population is assumed to follow a normal log distribution. The X axis shows the density of the distribution of income i.e. the number of individuals in each income level in a logarithmic scale. The Y axis shows the share of the population with a certain income level out of the entire population.

A poverty change in two time periods is shown in the shaded area. In such cases, the influence of growth contributes to a larger (brighter shaded areas) than the influence of distribution (darker shaded areas). If the benefits of growth are distributed evenly or in a neutral manner, then the form of the distribution curve does not change, and the influence arising is simply the influence of growth, while the influence of the distribution is zero.

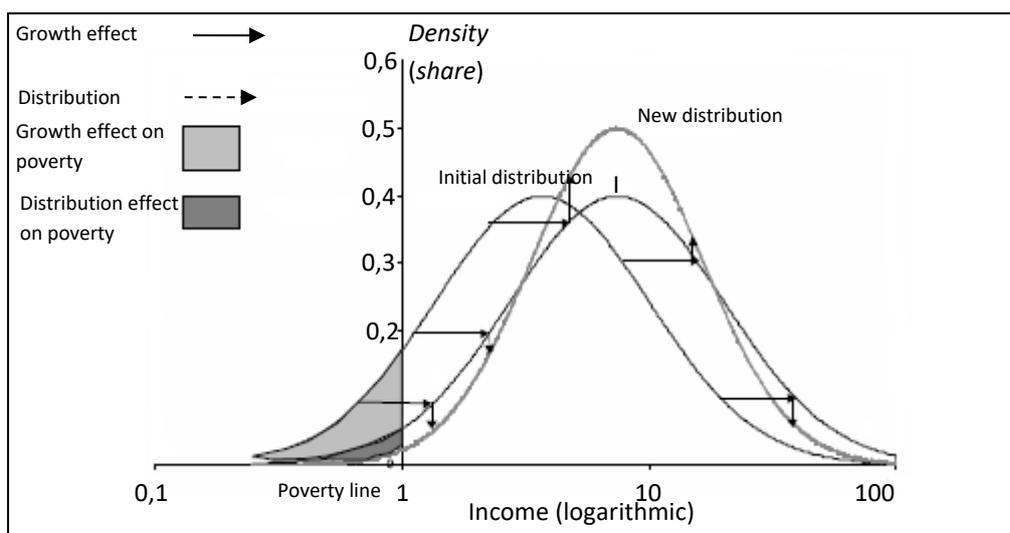


Figure 2. Decomposition of change in distribution and poverty in relation to growth and distribution effects

Sourced by: Bourguignon (2004)

### 3. METHOD

This study uses secondary data originating from the Statistics Board Center (BPS). Secondary data that comes from the BPS is the rate of growth of income per capita, the Gini Ratio, the number and the percentage of the poor population as well as the raw data of household spending that is the result of the National Socio-economic Survey (Susenas). The Consumption Modules were differentiated into Indonesian data grouped into urban and rural from 2009 until 2016.

The main data, i.e. household spending, collected by the Consumption Module Susenas via BPS was used to calculate the value of the revenue. An approach for calculating the income of the household uses the value of the magnitude of spending, because it is considered more reflective of the actual circumstances, though there are also weaknesses in this approach. Any household tends to adjust their spending through transfer or donation when revenues are down.

#### **Poverty Equivalent Growth Rate (PEGR)**

Kakwani, *et.al.* (2014) looked into the relationship between economic growth, inequality and poverty. *Poverty Equivalent Growth Rate (PEGR)* was taken into account, concerning both the magnitude of growth and how the benefits of growth were distributed to the poor and the non-poor.

The PEGR was given by:

$$\gamma^* = (\delta / \eta) \gamma$$

*Poverty Equivalent Growth Rate (PEGR):*

1.  $\hat{\gamma}^* = \hat{\gamma}$       *Neutral*
2.  $\hat{\gamma}^* > \hat{\gamma}$       *Pro poor growth*
3.  $0 < \hat{\gamma}^* < \hat{\gamma}$       *Non pro poor growth,*
4.  $\hat{\gamma}^* < 0$       *Anti pro poor growth*

#### **Decomposition of Poverty with the Shapley Value**

There are several methods that can be used to decomposition poverty, including the approach of Datt and Ravallion (1992) and the approach of the Shapley Value that Shorrocks created (1999). The decomposition model of Shapley poverty when formulated in form of the normalisation of FGT (Foster-Greer-Thorbecke) can be written as follows:

$$\Delta P = P_2(z, \alpha) - P_1(z, \alpha)$$

$$= 0.5 \left[ \left( P_1\left(\frac{z\mu_1}{\mu_2}, \alpha\right) - P_1(z, \alpha) \right) + \left( P_2(z, \alpha) - P_1\left(\frac{z\mu_2}{\mu_1}, \alpha\right) \right) \right] + 0.5 \left[ \left( P_2\left(\frac{z\mu_2}{\mu_1}, \alpha\right) - P_1(z, \alpha) \right) + \left( P_2(z, \alpha) - P_1\left(\frac{z\mu_1}{\mu_2}, \alpha\right) \right) \right] \quad (3.3)$$

Growth effect

Distribution effect

Where:

- $\Delta P$                       is poverty change
- $P_1(z, \alpha)$                 is FGT in initial period
- $P_2(z, \alpha)$                 Is FGT in the end period

$$P_i\left(\frac{z\mu_t}{\mu_s}, \alpha\right)$$

Is average income change from t to s ; t ≠ s, and t,s = 1, 2.

PEGR is expected to answer the research hypotheses that more growth is felt by the poor (or not) as well as the degree of growth. In addition, with the poverty decomposition method, it can answer whether the growth in expenditure and the distribution of expenditure resulted in a decrease in the poor population total.

## ANALYSIS

### Poverty in Java

The condition of poverty is a reflection of the population that is below the poverty line. BPS (2007) disclosed that the value of the poverty line refers to the need for a minimum of 2,100 kcal per capita per day, plus the minimum non-food needs such as clothing, school attendance, transportation, household goods and individual needs as well as other fundamentals. The magnitude of the value of expenditures (in rupiah) to meet the minimum basic needs both food and non-food is called the poverty line. In other words, the poor population is a population that does not have the capability to meet food and non-food needs, which is fundamental.

The value of the provincial poverty line in Java is quite varied. In 2016, Jakarta had the highest poverty line i.e. 510.359 rupiahs and the lowest poverty line i.e. in Central Java i.e. 317.348 rupiahs. West Java province amounted to 324,992 rupiahs with Rp-354,084 for Yogyakarta, East Java, i.e. 321.761 rupiahs and Banten 367.949 rupiahs.

The population of the poor provinces in Java fluctuated during 2010-2016. In general, the poor population in Java has decreased. However, unlike other provinces, Jakarta experienced an increase in the population of the poor from 2010 to 2017. In the 2010, the poor population in Jakarta numbered 312.20 thousand inhabitants and this increased to 389.69 thousand inhabitants in March 2017.

**Table 1. The Population of The Poor in the Java Provinces (thousands of inhabitants), 2010-2017**

Province		DKI JAKARTA	WEST JAVA	CENTRAL JAVA	DIY	EAST JAVA	BANTEN
2010	annual	312.20	4773.70	5369.20	577.30	5529.30	758.20
2011	annual	363.42	4648.63	5107.36	560.88	5356.21	690.49
2012	(March)	363.20	4477.50	4977.40	565.30	5071	652.80
	(March)	354.19	4297.04	4732.95	550.20	4771.26	656.25
2013	(September)	375.70	4382.65	4704.87	535.18	4865.82	682.71
	(March)	393.98	4327.07	4836.45	544.87	4786.79	622.84
2014	(September)	412.79	4238.96	4561.82	532.59	4748.42	649.19
	(March)	398.92	4435.70	4577.04	550.23	4789.12	702.40
2015	(September)	368.67	4485.65	4505.78	485.56	4775.97	690.67
	(March)	384.30	4224.33	4506.89	494.94	4703.30	658.11
2016	(September)	385.84	4168.11	4493.75	488.83	4638.53	657.74
	(March)	389.69	4168.44	4450.72	488.53	4617.01	675.04

Source : Tabulate of Statistics Board Center (2017)

The poor population in the East Java provinces amounted to 4617.01 thousand inhabitants in March 2017. This followed the Central Java province, 4450.72 thousand, and in West Java as much as 4168.44 thousand inhabitants in the same year. The poorer population in Banten consisted of 675.04 thousand inhabitants and DIY had as many as 488.53 thousand inhabitants. As for DKI Jakarta, it had the lowest poor population, totalling 389.69 thousand in 2017.

The problem of poverty is not simply the number and percentage of the poor population, but also there is another dimension to note which is the depth and severity of poverty. The index of the depth of poverty (Poverty Gap Index-P1) is the average size of each expenditure disparity of the poor against the poverty line. The higher the index value, the farther from the average the expenditure of the residents of the poverty line is. The Index of the severity of Poverty (the Poverty Severity Index-P2) gives an idea of the spread of spending among the poor population.

The poverty depth index value of the provinces in Java showed a downward trend from 2010 to 2017, except in DKI Jakarta. The index in West Java showed that the depth of poverty in 2010 amounted to 1.93 and was 1.45 in 2017. The index of the depth of poverty in Central Java was 2.49 in 2010 and in 2011, it was 2.21. Next, the Yogyakarta special region province result went from 2.85 to 2.19 in the same period. The index value of the depth of poverty was in decline. This shows the growing seriousness of the distance between the average spending on the poor population with the poverty line, which means that average spending by the poor in Indonesia is increasingly approaching the line poverty.

The poverty severity index in Java showed a similar development, namely that it decreased across the whole province from 2010 to 2017. The value of the severity of poverty shows that the distribution of expenditure amongst the poor population is increasingly homogeneous and has increased compared to the previous period.

The income of DKI Jakarta's poor inhabitants is the most homogeneous compared to the other provinces. This is shown by the value P2, which is the least in this province. The value of P2 was shown in the Central Java province and DI Yogyakarta, and was 0.57 and 0.55 respectively. This value indicates that spending on the poor population in the two areas stated was the most varied compared to the four other provinces.

### Income Growth in Java

The average growth of expenditure in Java fluctuated during that period. The highest peak was in 2010-2011, when the expenditure of all provinces jumped by more than 15. Meanwhile, the lowest point was in 2015-2016, when it reached below 10 percent on average. In 2010-2011, the province with the highest expenditure growth was DKI Jakarta, which reached 29.04 percent. In 2011-2012, the province with the highest expenditure growth was DIY, with a growth rate of 12.04 percent while DKI had a rate of only 3.50 percent. In the period after, the province with the highest expenditure of growth was East Java, with a growth rate of 14.79 percent. This continued to happen in 2014-2015 and 2015-2016. In 2013-2014, the province with the highest expenditure growth was in Central Java. This gives the picture that West Java and Banten had a more stable expenditure of growth compared to other provinces in Java during 2010-2016.

**Table 2. The Province's Income Per Capita Growth In Java, 2011-2016**

Province	2011	2012	2013	2014	2015	2016
(1)	(2)	(3)	(4)	(5)	(6)	(7)
DKI Jakarta	29.04	3.50	8.93	11.77	3.81	5.82
West Java	19.20	6.95	11.64	9.22	12.99	9.70
Central Cava DI	17.59	8.26	11.45	11.85	11.15	8.75
Yogyakarta	18.87	12.04	11.01	0.38	19.00	1.33
East Java	19.21	2.40	14.79	15.41	25.86	4.81
Banten	17.91	3.67	11.18	12.61	14.61	9.97

Sourced by: Cross Tabulation Board Statistic Center and SUSENAS 2010, 2016.

## Income Distribution in Java

The changes in income distribution are always in line with economic growth, and the same thing has happened in Indonesia. The value of income distribution can be expressed in the Gini ratio. Income distribution in Java during 2010 to 2017 was unequal. This is shown by the increase in the Gini ratio. In 2010, the Gini Ratio in Java was below 0.4 or 0.37, on average. There was significant increase to 0.3985 in 2017. The provinces with a high distribution gap were DIY and DKI Jakarta. The highest gap was in DIY. Based on Yudhistira (2017), the rise of the Gini ratio in DIY was caused by land speculants, and mall and hotel developments. The existence of land speculants caused an increase in property price and was not reachable for natives, especially poor people. Moreover, the property owner was from one of the high end groups.

**Table 3. Gini Ratio Provinces in Java 2010-2017**

Province	2010	2011	2012	2013	2014	2015	2016	2017
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
DKI Jakarta	0.361	0.438	0.421	0.433	0.431	0.431	0.411	0.413
West Java	0.356	0.411	0.412	0.411	0.413	0.415	0.413	0.403
Central Java	0.341	0.383	0.383	0.387	0.376	0.382	0.366	0.365
DIY	0.407	0.401	0.434	0.439	0.419	0.433	0.420	0.432
East Java	0.337	0.374	0.357	0.364	0.369	0.415	0.402	0.396
Banten	0.419	0.404	0.387	0.399	0.395	0.401	0.394	0.382

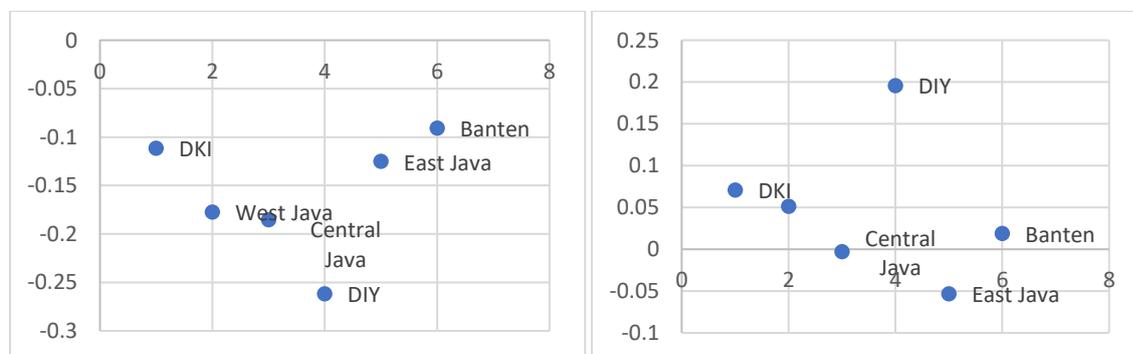
\*) In March every year

Sourced by: Cross Tabulation Board Statistic Center, 2017

The high fluctuation of the increase in expenses and the Gini ratio in these two provinces shows the heterogeneity of the resident's expenses. Besides, economic growth is assumed to not be enough to overcome the disparity among residents. This worsens the disparity, because of increasing the income per capita.

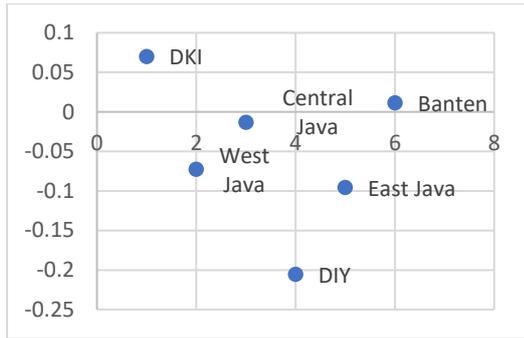
### Pro-Poor Growth

The PEGR method, in addition to being able to explain the influence of economic growth itself, may also explain the degree of benefits that is given to the poor population as a result of the economic growth process. The economic growth of this condition impacts on the increase of poverty. The value of the PEGR is positive but lower than the economic growth, which means that economic growth has not been classified as pro-poor growth or an economic growth benefit enjoyed by the poor. The value of the PEGR is greater than the level of real income growth, which means that the economic growth process belongs to the pro-poor growth category.



**a. 2010-2012**

**b. 2012-2014**



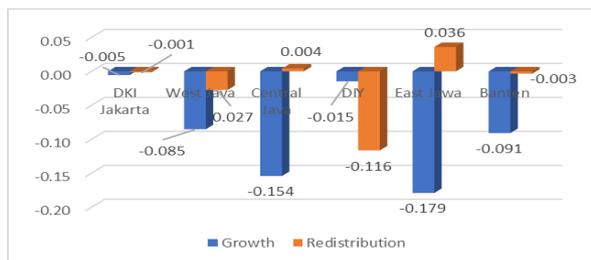
c. 2014-2016

**Figure 3. Scatter plots of the difference between the value of the PEGR and Growth in the province of Java**

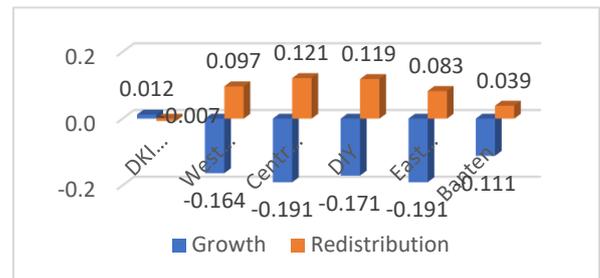
The difference between the value of PEGR and Growth in Java shows a positive value indicated by the point being above the zero line, instead of the negative value as shown in the point below the zero line. It can be seen from the picture above that the difference between real growth and PEGR in Java Island was negative, or below zero.

### Decomposition of Poverty

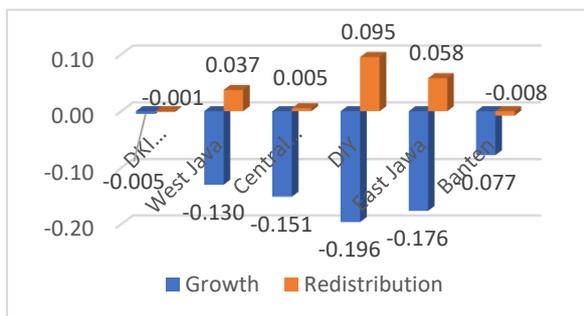
Factors influencing the poverty change between the two years can be explained by the decomposition of poverty. The influence of growth in relation to expenditure and the distribution of income as a result of the decomposition of poverty can have a positive sign, which means that it has the effect of increasing poverty.



a. 2012-2014



b. 2014-2016



c. 2014-2016

In the first period of research, 2010-2012, it was clear that revenue growth generally influenced the reduction of poverty, except in DKI Jakarta. On the contrary, the redistribution of income had a worsening effect on poverty in the provinces of Java Island. As seen in Figure 4, a similar phenomenon also occurred in the 2012-2014 period, where earning growth also influenced poverty. The redistribution of income influence was quite varied. There was a reduction of poverty in the provinces of Yogyakarta, West Java and Banten. In DKI Jakarta, Central Java and East Java, income distribution increased poverty. A large number of poor residents in Jakarta,

Central Java and East Java compared to other areas of expenditure growth effect (growth effect) did not have a role in lowering poverty. In addition, the process of redistribution was not going well in those areas, so revenue growth was only enjoyed by the top 20% of the population.

The social assistance fund provided by the government increases every year. Unfortunately, this fund has yet to increase the income obtained by the poor. An evaluation of the mechanism and process of this social aid from the type of the program up to the distribution method must be conducted. Intensive control and supervision must be achieved. This is to confirm that all of the funds get to the poor who are willing to receive the aid and to diminish fund leakage due to corruption, which has happened before. A more intensive income redistribution process is also expected in order to make the poor benefit better from economic growth.

## CONCLUSIONS

Poverty is a problem for most countries, including Indonesia. Many programs to overcome poverty have been made by the government. Programs to increase economic growth are expected to increase the level of income for poor people. Moreover direct and indirect subsidies have been given to help the poor come up from the poverty line.

Unfortunately, many programs that have been done have yet to succeed in lowering the poverty level. This is due to many factors affecting poverty level every year. Some of the factors are income development and income distribution across the different population groups. Income development had a lowering impact on poverty in Java in 2010-2016. The value of income development is close to the expenditure per capita. However in 2010-2012, the economic growth increased poverty in DKI Jakarta.

On other side, the income redistribution across the population groups has a varied impact on poverty in Java. In general, income redistribution worsens poverty. This is shown by the increasing Gini ratio in 2010-2016. In 2010-2012, income redistribution increased poverty in all provinces in Java. This repeated impact happened in 2012-2014, except for DIY, West Java and Banten, where it reduced poverty. Meanwhile, in 2014-2016, only in DKI Jakarta and Banten did income redistribution reduce poverty while in the four other provinces, income redistribution increased poverty.

## Selected References

- Abukosim, Marwa, Taufiq and Subardin. (2010). *Jurnal Ekonomi Pembangunan*, 8 (1). ISSN 1829-5843. <Retrieved on May 7, 2018 from [http://eprints.unsri.ac.id/3093/1/Jurnal\\_Ekonomi\\_Pembangunan.pdf](http://eprints.unsri.ac.id/3093/1/Jurnal_Ekonomi_Pembangunan.pdf)>
- Bourguignon, F. (2004). *The Poverty-Growth-Inequality Triangle*. World Bank, Washington,DC. <Retrieved on November 10, 2016 from [http://siteresources.worldbank.org/INTPGI/Resources/342674206111890151/15185\\_IC-IER\\_paper-final.pdf](http://siteresources.worldbank.org/INTPGI/Resources/342674206111890151/15185_IC-IER_paper-final.pdf)>
- Datt, G. and Ravallion, M. (1992). Growth and Redistribution Components of Changes in Poverty Measures: A Decomposition with Application to Brazil and India in the 1980s. *Journal of Development Economics*;38: 275-295. <Retrieved on January 15, 2017 from [http://siteresources.worldbank.org/INTPGI/Resources/15180\\_Growth\\_and-redistribution\\_Ravallion\\_and\\_Datt.pdf](http://siteresources.worldbank.org/INTPGI/Resources/15180_Growth_and-redistribution_Ravallion_and_Datt.pdf)>
- Dewanto, Pendi, Rujiman, Agus Suriadi. (2014). The Analysis Effect Economic Growth and Income Inequality on Poverty in Mebidangro. *Jurnal Ekonomi*. 17(3), Juli 2014. <Retrieved on August 15, 2016 from <http://repository.usu.ac.id/bitstream/123456789/43577/1/pendi%20rujiman%20agus.pdf>>
- Franata, Jhony. Marwa, Taufiq and Yusuf, M. Komri. (2017). Factors Affecting Poverty Level in South Sumatera, Indonesia. *Sriwijaya International Journal of Dynamic Economics and Business*. 1(1), 119-132. <Retrieved on May 7, 2018 from <http://sijdeb.unsri.ac.id/index.php/SIJDEB/article/view/12/33>>
- Haughton, J and S.R Kahndker. (2009). *Handbook on Poverty and Inequality*. Washington,DC: The World Bank. <Retrieved on November 3, 2016 from [http://siteresources.worldbank.org/INTPA/Resources/429966-1259774805724/Poverty\\_Inequality\\_Handbook\\_Ch01.pdf](http://siteresources.worldbank.org/INTPA/Resources/429966-1259774805724/Poverty_Inequality_Handbook_Ch01.pdf)>

- Kakwani, N. (2000). *On Measuring Growth and Inequality Components of Poverty with application to Thailand*. Discussion Paper. The University of New South Wales. <Retrieved on October 20, 2016 from [http://www.docs.fce.unsw.edu.au/economics/Research/WorkingPapers/1997\\_16.pdf](http://www.docs.fce.unsw.edu.au/economics/Research/WorkingPapers/1997_16.pdf)>
- Kakwani, N ; Shahid Khandker and Hyun H.Son . (2004). *Pro poor growth : Concepts and Measurement with Country Case Studies*. Working Paper. UNDP. <Retrieved on October 16, 2016 from <http://www.ipc-undp.org/pub/IPCWorkingPaper1.pdf>>
- Kakwani,N and Hyun H.Son. (2006). *Pro-Poor Growth: The Asian Experience*. Research Paper No. 2006/56. United Nations University. <Retrieved on October 16, 2016 from <https://core.ac.uk/download/pdf/6379847.pdf>>
- Kakwani , N and Hyun H.Son. (2008). Poverty Equivalent Growth Rate. *The Review of Income and Wealth*. 54(4). December 2008. <Retrieved on October 10, 2016 from <http://www.roiw.org/2008/2008-30.pdf> >
- Kakwani, N and Pernia, Ernesto M. (2000). What is Pro Poor Growth? *Asian Development Review*;18(1). <Retrieved on October 10, 2016 [http://www.policyinnovations.org/ideas/policy\\_library/data/01158/res/id=sa\\_File1/](http://www.policyinnovations.org/ideas/policy_library/data/01158/res/id=sa_File1/)>
- Núñez, J and S. Espinosa. (2005). Pro-Poor Growth and Pro-Poor Programs in Colombia. *Documento Cede* 2005-51. <Retrieved on October 20, 2016 from <http://www.ideas.repeg.org/diakses>>
- Ravallion, Martin. (2016). *The Economics of Poverty. History, Measurement, and Policy*. Oxford University Press. Georgetown University. USA
- Rosen, Harvey S and Gayer, Ted. (2014). *Public Finance*. McGraw-Hill Education. Princeton University and Brookings Institution.
- Sastra, Eka, (2017). *Economic Inequality. Towards Society Justice in In Indonesia*. Expose (PT Mizan Publika). Indonesia
- Shorrocks, A. F. (1999). *Decomposition Procedures for Distributional Analysis: A Unified Framework Based on the Shapley Value*. University of Essex. Colchester. <Retrieved on October 16, 2016 from <http://www.komkon.org/~tacik/science/shapley.pdf> >
- Statistics Board Center. (2008). Analysis And Calculating Poverty Levels. BPS, Jakarta. Retrieved on September 10, 2017 from [https://bps.go.id/website/pdf\\_publicasi/Analisis-dan-Penghitungan-Tingkat-Kemiskinan-2008.pdf](https://bps.go.id/website/pdf_publicasi/Analisis-dan-Penghitungan-Tingkat-Kemiskinan-2008.pdf)
- Statistics Board Center. (2016). *Indonesian Economy Reports*. BPS, Jakarta. <Retrieved on November 1, 2017 from <http://bps.go.id/publikasi>>
- Statistics Board Center. (2016). Gross Regional Domestic Product Provinces in Indonesia. <Retrieved on December 24, 2016 from <http://bps.go.id/publikasi>>
- Statistics Board Center. (2016). *Calculation and analysis of Poverty Macro in Indonesia*. <Retrieved on December 24, 2016 from <http://bps.go.id/publikasi>>
- Todaro, Michael P and Smith, Stephen. (2012). *Economic Development*. Erlangga Publisher. Indonesia
- Widyastika, Fadlun Hayu and Azwardi and Sariman, Tatang. (2017). Poverty, Income Distribution, and Government Policy that Pro-Poor in Indonesia year 2009-2016. *SIJDEB*, Vol 1 (2). 2017, 219-238. <Retrieved on May 6, 2018 from <http://sijdeb.unsri.ac.id/index.php/SIJDEB/article/view/18/41>>
- Yudhistira, Bima. (2017). *Angka Ketimpangan Yogyakarta Tetap Paling Tinggi*. <Retrieved on August 12, 2017 from <http://finansial.bisnis.com/read/20170718/9/672514/>>

# **Adoption of SMEs online shopper with Unified Theory of Acceptance and Uses Technology 2 (UTAUT 2) approach Model**

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## **ABSTRACT**

The purpose of this study is to analyze the level of e-commerce adoption by consumers of Small Medium Enterprise in Banten - Indonesia with UTAUT 2 theory approach. By using PLS-SEM, this study involves 100 SMEs consumers as respondents who have been shopping SMEs products and who live in Banten. The finding of this study is that behavioral intention of SMEs consumer using internet is 43.9% and use behavioral of them is 24.2%. The results also show that gender does not have significant factors on internet adoption. The managerial/practical implications of the result are; training to increase knowledge and mastery of information technology is very urgent to be done, all stakeholders should promote SMEs products in online shop more aggressively and develop networking. The originality of this paper is that this study is done in Banten with very limited consumers of SMEs online products.

**Keywords:** SME, UTAUT2, PLS-SEM, Online Shopping

## **INTRODUCTION**

Online buying and selling activity has become a very popular trend and has become a lifestyle in Indonesia. It is proven by the increase in online transaction which reached Rp. 45.50 trillion in 2015 to Rp 75 trillion in 2016 (Martowardojo, 2018). This is due to the lower cost of internet access and the cheaper price of devices. Ministry of Communications and Information (KEMKOMINFO) states that three main activities of Indonesian people when accessing the internet is to open social networking, make transactions and study (Basuki, 2015).

Small and Medium Enterprises (SMEs) in Indonesia are regulated in Law No. 20 of 2008. The law describes SME criteria based on the amount of net worth excluding house and land that is from Rp. 50 million to Rp. 10 billion and based on net sales for a year of Rp. 300 million to Rp. 50 billion. SMEs currently play an important role for Indonesia economy. In 2014 SMEs contribute to Indonesian economy in the form of job openings of 97% and contribute to GDP as much as 59% (Deny, 2014). Unfortunately, they still cannot maximize their sales by using internet. IBM Research shows that by 2013 there are 55.2 million SMEs in Indonesia, but only 75 thousand SMEs have utilized the internet for their business activities (Wiguna, 2015).

Banten, one of provinces in Indonesia has many potentials from various sectors of SMEs that can be maximized by using the internet. Utilization must be tailored to the type of SMEs products and business models. This can cover various types of businesses, such as fashion, culinary and tourism products. The Internet can be used from product introduction activities, sales promotion to payment process which much more effective and efficient along with the increasing interest of Indonesian people to use the internet as a tool to shop. Large companies with sufficient human and financial capital can create an ecommerce site tailored to their various needs such as integration with warehouse systems, integration with financial systems and more. But it is a matters for SMEs which have limited capital.

Nowadays, various types of ecommerce sites that provide sales systems has emerged and ready to use for SMEs in Indonesia. This e-marketplace has ability for individuals or SMEs to open an online store and start selling electronically by Customer-to-Customer (C2C) system. With the presence of e-marketplace, SMEs can develop and sell their product into electronic commerce (ecommerce). To maximize the sales, they should know exactly who will buy and how buyers adapt to ecommerce process. This information can be one of the key successes that can be utilized to maximize ecommerce strategy.

UTAUT 2 theory gives an idea how consumers adapt to a technology. UTAUT 2 was developed from UTAUT which initially assessed employee behavior in adapting to newly used technology. With a focus on technology adoption by consumers, UTAUT 2 added three new predictor variables, namely price value, hedonic motivation and habit (Venkatesh, et al., 2012: 59). Through the seven predictor variables in UTAUT 2, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Hedonic Motivation, Price Value and Habit are believed to give an idea how SME customers are interested in using (Behavioral intention) internet to shop online and cause the habits (Use Behavior) of using internet, especially on SMEs consumers in Banten.

This study aims are to answer the question of how SME consumers in Banten are interested in using internet (Behavioral Intention) and cause the habit of using internet (Use Behavior) for shopping which assessed with predictor variable in UTAUT 2. This is an important things for SMEs to prepare a great strategy in using internet so that they can be more effective and have a higher competitiveness in digital competition.

Inability to master internet technology is a hindrance to SMEs development in digital era today. This study examines technology adoption of SME consumers in Banten by using UTAUT 2 variables that can show how much use of internet technology adoption at this time. Figure 1 illustrates the relationships that occur within each variable.

## **LITERATURE REVIEW**

UTAUT 2 is a theory based on eight previous technology acceptance theories, namely TAM, TRA, MM, TPB, C-TAM-TPB, IDT, SCT and MPCU. UTAUT is used to predict the extent to which an individual can receive and use a technology in his or her life. The objectives of UTAUT 2 model are (1) identify three important constructs of acceptance and usage for both public and consumer, (2) alter some of existing relationships in UTAUT model and (3) introduce new relationships (Venkatesh et. al. 2012).



## **Social Influence**

Social influence include social factors from the closest people of consumers that influence consumers using Internet to shop online. Previous researches (Gatautis and Medziausiene, 2014, Harsono and Suryana, 2014) explain that social influence has an influence on behavioral intention. Thus, hypothesis in this study is;

H3: Social influence has a significant influence on behavioral intention.

## **Facilitating Condition**

It describes various things that can facilitate internet usage such as internet connection, supporting tools or gadgets, knowledge and skills and other things needed by consumers in shopping online. Previous studies (Alwahaishi and Snasel, 2013, Hasrono and Suryana, 2014) show that facilitating condition has an influence on behavioral intention, has an effect on behavioral intention and has a direct influence on use behavior. Thus, hypotheses in this study are;

H4a: Facilitating condition has a significant influence on behavioral intention.

H4b: Facilitating condition has a significant influence on use behavior.

## **Hedonic Motivation**

Hedonic motivation means the use of internet technology can provide pleasure or entertainment for consumers in online shopping through interaction or processes that occur in online shopping sites. Previous research (Hasrono and Suryana, 2014) states that hedonic motivation has an influence on behavioral intention. Thus, hypothesis in this study is;

H5: Hedonic motivation has a significant effect on behavioral intention.

## **Price Value**

Price value captures conformity of incurred costs with consumer benefits in using internet technology to shop online. Previous researches (Escobar-Rodríguez and Carvajal-Trujillo, 2013; Harsono and Suryana, 2014) explain that price value has an effect on behavioral intention. Thus, hypothesis in this study is;

H6: Price value has a significant effect on behavioral intention.

## **Habit**

In this study, it is shown to know the habits of consumers in using internet to shop online in everyday life. Previous studies (Escobar-Rodríguez and Carvajal-Trujillo, 2013, Harsono and Suryana, 2014) explain that habit has an influence on behavioral intention and has a direct influence on use behavior. Thus, hypotheses in this study are;

H7a: Habit has a significant influence on behavioral intention.

H7b: Habit has a significant influence on use behavior.

## **Behavioral Intention and Use Behavior**

In this study, behavioral intention is used to describe how much consumers desire to use internet technology to shop, while use behavior is used to explain intensity of consumers using Internet technology for everyday shopping. Previous researches (Escobar-Rodríguez

and Carvajal-Trujillo, 2013; Harsono and Suryana, 2014) describe a direct link between behavioral intention and use behavior. Thus, hypothesis in this study is;

H8: Behavioral intention has a significant positive effect on use behavior.

## **METHOD**

This study uses Partial Least Square Structural Equation Model (PLS-SEM) method. The use of SEM is due to this study more focused on exploratory research (Hair, et al., 2014). In addition, based on type of data, framework, algorithm used, and evaluation model, this study is more appropriate using PLS-SEM (Hair et al, 2014). In the PLS-SEM method, it is stated that rule of minimum sampling is based on 10 times the number of formative indicators or 10 times the number of lines linking each latent variable in the study (Hair, et al 2014). Based on the research framework adopted from UTAUT 2 theory as shown in Figure 1, there are 10 lines connecting each latent variable. Therefore the minimum sample amount that must be used in this research is 100 samples. The sample in this study amounted to 100 respondents who are domiciled in Banten area. Data collection based on SME condition in e-marketplace and the studied respondents using non-probability sampling method which is accidental sampling. Data is collected for one month from 1 to 31 August 2017.

Data were collected by using questionnaires that have passed reliability and validity test. Collecting Data by distributing questionnaires digitally through instant message as well as in digital forum. Validity and reliability tests were performed on 32 male and female respondents with 19-22 year old students. The questionnaires used in the study were adopted from previous researches (Venkatesh et al. 2012; Escobar-Rodríguez and Carvajal-Trujillo, 2013; Harsono and Suryana, 2014). There are 23 questions with four likert scales (1 = strongly disagree) to (4 = strongly agree) to assess use behavior (1) and behavior intention (4) through seven predictor variables: performance expectancy (3) effort expectancy (3), social influence (3), facilitating condition (3), hedonic motivation (3), price value (2), and habit (1). Figure 2 describes research framework, relationship of each variable and research hypothesis.

To explain relationship within each variable, this research uses data analysis with Partial Least Square Structural Equation Modeling (PLS-SEM) through SmartPLS 2.0 M3 software. PLS method is an analytical method that has many ease of processing because it is not based on many assumptions. Besides can be used to confirm a theory, PLS can also be used to explain the presence or absence of relationships among latent variables (Ghozali, 2011).

There are three categories of estimation used in the PLS analysis, namely; (1) Weight estimate used to create latent variable scores; (2) Path estimate that connects latent variables and between latent variables and indicator blocks (loading); and (3) Relating to means and location of parameters (regression constant values) for indicators and latent variables.

To obtain these three estimates, PLS uses a three-stage iteration process and each iteration generates an estimate. The first stage produces the weight estimate, the second stage generates estimates for the outer model (measurement model) and inner model (structural model), and the third stage produces means and location (constants) (Ghozali, 2011).

Based on variables in this study that is reflexive, factor that gives rise to something when observed, the evaluation of outer model (measurement model in SEM-PLS) with reflective

variable is indicator of reliability (outer loading) for each indicator, internal consistency (composite reliability) for block indicator, convergent validity (AVE) and discriminant validity (Hair, et.al. 2014). Value of reliability indicator must be above 0.708, acceptable internal consistency should be between 0.60 to 0.95, convergent validity (AVE) value must be above 0.50, and discriminant validity assessed from the outer loading value of an indicator must be higher than other indicators. If the value of indicator reliability below of 0.708 should be considered deleted by looking at composite reliability and AVE values, if after deletion increases value of composite reliability (CR) and AVE then the indicator should be removed, and vice versa. In the SmartPLS software, this step uses PLS Algorithm function.

Reliability indicator value is taken from root outer loading value, calculation using MS Excel software with SQRT formula. Evaluation performed with PLS Algorithm function on SmartPLS indicated PE3 indicator for Performance Expectancy and FC3 variable for Facilitating Condition has outer loading value below 0.708 ie 0.5587 for PE3 and 0.5150 for FC3. Once deleted, re-calculated with the PLS Algorithm CR and AVE values increase, then PE3 and FC3 indicators should be removed. In Figure 3 shows the value of outer loading on each latent variable.

Inner model (structural model in SEM-PLS) is evaluated by looking at percentage of variance described by looking at value of R2 for latent dependent construct and also looking at magnitude of its structural path coefficient (Ghozali, 2011). Framework of this study can be seen in Figure 2 below:

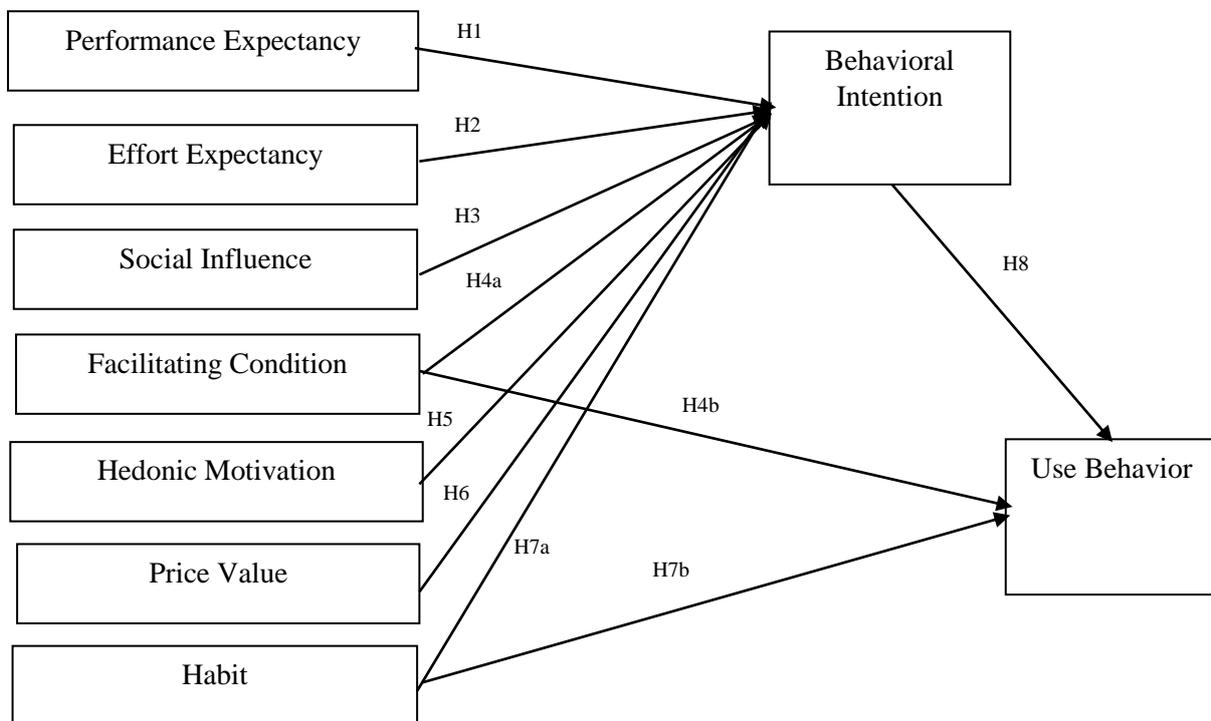
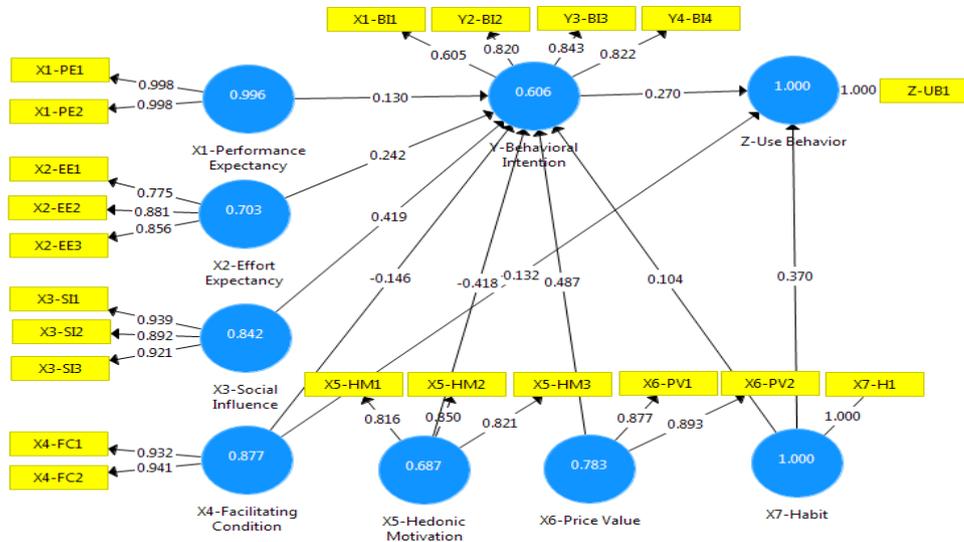


Figure 2. Research Framework

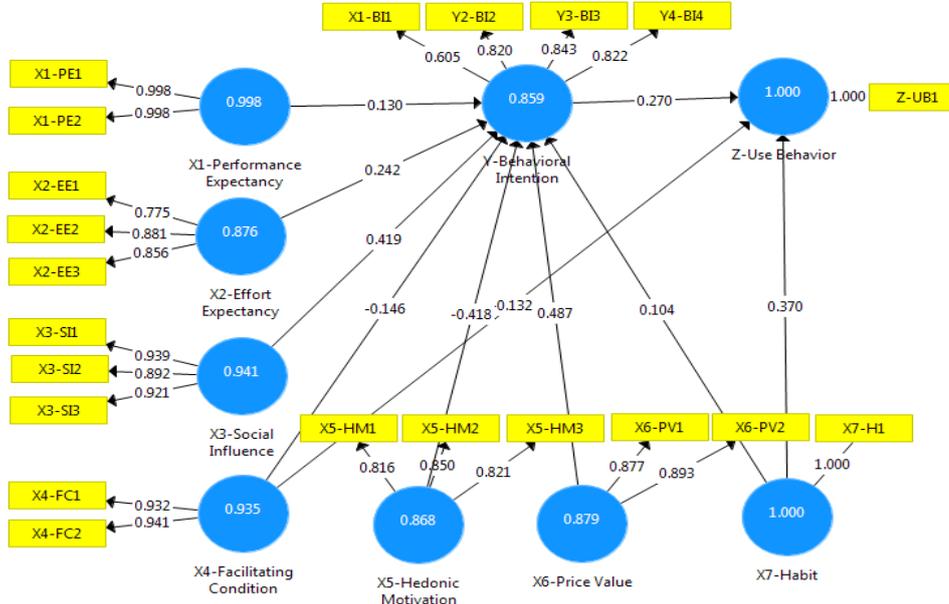
## RESULTS AND DISCUSSION

Figure 3 shows the convergent validity (AVE) using the SmartPLS software function. The number of cases (cases) used as many as 100 cases. The value of convergent validity (AVE) should be above 0.50, (Hair et al, 2014)



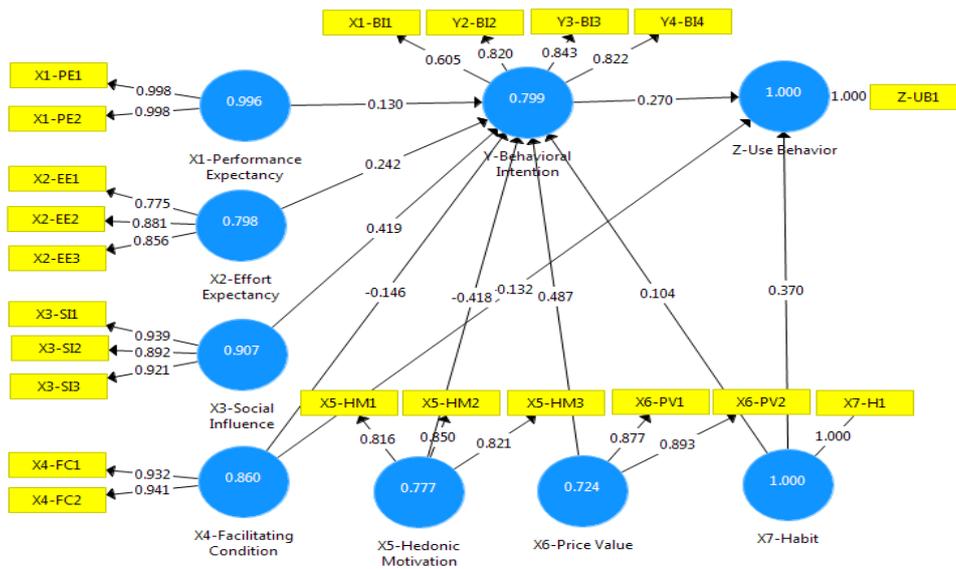
**Figure 3.** Convergent Validity (AVE) value

Figure 4 shows the value Internal consistency (composite reliability) that can be accepted must be between 0.60 and 0.95, (Hair et al, 2014)



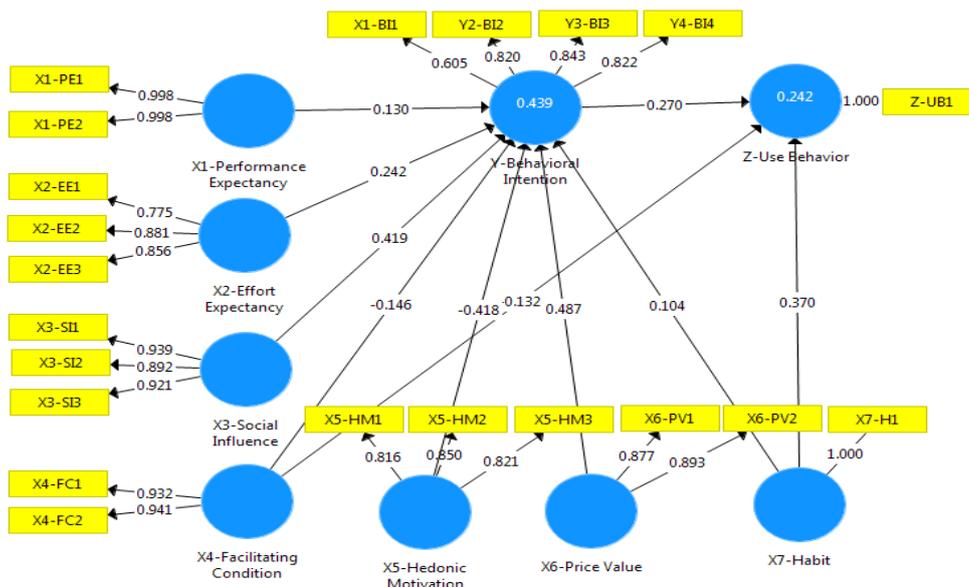
**Figure 4.** Composite Reliability value

Based on results, the value of reliability coefficient of Cronbach Alpha is 0.850. These results indicate that instrument reliability values are greater than 0, 700 ( $0.850 > 0.700$ ), it can be concluded that all instrument are reliable, (Hair et al, 2014).



**Figure 5.** Reliability Coefficient of Cronbach Alpha value

As shown in figure 6, value of  $R^2$  on behavioral intention variable means that all exogenous variables influence endogen behavior variable equal to 0.439 or 43.9% and rest influenced by other factor which not examined. Value of  $R^2$  on use behavior variable means that the exogenous variable facilitating condition and habit and endogen behavior intention variable influence endogen use behavior variable of 0.242 or 24.2% and rest is influenced by other factors not examined. In the assessment criteria using PLS, the  $R^2$  yield of 0.67 indicates that the 'good' model, 0.33 indicates 'moderate' and of 0.19 indicates 'weak' (Ghozali, 2011). This research yields  $R^2$  value 0.439 for behavioral intention and 0.242 for use behavior which show that model in this research is moderate.



**Figure 6.** R Square value

Path Coefficient shows the direction of relationship of each variable, if it is positive then meaningful relationship of each positive variable and apply vice versa. T-value and p-value indicate the level of significance of relationship, if t-value above 1.67 then the relation of each variable is significant equal to 0.1, above 1.96 significant 0.05 and above 2.57 significant 0.01. If p-value is less than 0.01 then each variable is significant 99%, less than 0.05 then significant 95% and less than 0.1 then significant 90%. The p-value is obtained by using MS Excel software with T.DIST.2T formula. It can be deduced that accepted hypothesis are H1, H2, H3, H7a, H7b and H8.

Exogenous variables in this study are: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Hedonic Motivation, Price Value, Habit, and Behavioral Intention each have little effect on behavioral interest and also habit of using internet to shop. In use behavior for men and women the equally significant variables are habit and behavior intention. This reflects that habit between men and women affects use behavior of using online shopping on the internet. Women and men who used to use internet regularly every day will be easier to look around on the internet, so it is very wide to look SMEs products in online. In addition, social influence is also a significant variable. This is very natural because with enormous environmental influences encourage people to try to shop on the internet. Promotion by word of mouth experience as a Moderator Variable. The experience observed in this study is divided into three groups: (1) using the internet to shop for the last 1 year; (2) the last 2-5 years; (3) over the last 5 years. Data distribution is dominated by 3-5 years experiences group that is 71%.

In outer loading analysis within gender variables, there are some indicators that are deleted due to value below of 0.708. In outer loading analysis, removed indicator for man are EE1, SI1 and FC2. Furthermore, on value of female outer loading, removed indicators are PE3, FC1 and FC2. Deletion of these indicators has been adjusted to previously mentioned rules.

Evaluation of outer model in Figure 3 shows that each group has sufficient AVE to show a good level of validity. The value of composite reliability also shows good results that is between 0.60 and 0.95. For latent variables with one question type, the value of AVE and CR must be 1.00.

Inner model evaluation in table 1 shows hypotheses received from male group are H1, H3 and H8 significant 0.01 and H7b significant 0.1. While in women group, hypothesis received are H7b and H8 significant 0.01 and H2 and H3 significant 0.5. For each hypothesis significant different strengths, in group of men H1, H3 and H8 are moderately significant and H7b is significantly weak because coefficient path value is close to 0. Then in women group, H7b and H8 are moderate, H2 and H3 are weak.

### **Moderator variables**

To see the difference between two groups can use difference of two R<sup>2</sup> values for each variable, the difference in behavioral intention variables for both groups is 0.003 or only 0.3% which shows no major differences between two age groups for behavioral intention variables. While the difference in use behavior variable for both groups is 0.1962 or 19.62% which indicates there is a big difference for use behavior variable.

Results shows that group of men and women have a small influence level of 2.63% for behavioral intention variables and 1.74% for variable use behavior. Both values can be said to

have a not too great effect. This means that previous experience in using internet to shop has a powerful impact on the adoption of internet technology to shop for consumers in Banten.

## CONCLUSIONS AND RECOMMENDATIONS

Interest in using internet technology (behavioral intention) to shop online by consumers of SMEs in Banten influenced by variable performance expectancy, effort expectation, social influence and habit. Then the habit (use behavior) using internet technology to shop online by consumers of SMEs in Banten is influenced by habitual and behavioral intention variables. It is known that sex does not affect adoption of internet technology, it is shown through the difference in both groups under 5%. The biggest influence in interest of using internet technology (behavioral intention) is on community groups who have been using Internet technology to shop for 2-5 years. Furthermore, from this interest, the biggest influence that led to habit of using internet technology to shop (use behavior) is the age group of 22-over years old.

Suggestions for SMEs in Banten based on the results of this study are: (1) conducting internet training to be able to increase knowledge and mastery of information technology, (2) helping to promote SME products in online shop, (3) cooperating with various parties that provide supporting ecommerce facilities in order to improve SMEs competitiveness.

Limitations of this study is collected data not in large numbers. In addition, respondents of this study is limited to consumers of SMEs in Banten alone. It is expected that further research can examine more data to have greater variation.

## REFERENCES

- Alwahaishi, S., & Snasel, V. (2013). Consumer's Acceptance and Use of Information and Communications Technology: A UTAUT and Flow Based Theoretical Model. *Journal of Technology Management & Innovation*, 61-73.
- Basuki, Y. I. (2015). Berita Kementrian: Buku Saku Data dan Tren TIK. Diambil kembali dari Kementrian Komunikasi dan Informatika: [http://kominfo.go.id/index.php/content/detail/4634/Buku+Saku+Data+dan+Tren+TIK/0/berita\\_satker#.VbX1qLOqqko](http://kominfo.go.id/index.php/content/detail/4634/Buku+Saku+Data+dan+Tren+TIK/0/berita_satker#.VbX1qLOqqko) Bint005. (2015, Maret 7).
- Deny, S. (2014). Ekonomi: UKM 99% Masih Dominasi Perusahaan di Indonesia. Diambil kembali dari Liputan 6: <http://bisnis.liputan6.com/read/2113181/ukm-99-masih-dominasi-perusahaan-di-indonesia>
- Elvandari, S. D. (2011). Penerimaan Sistem Online Shopping berdasarkan Unified Theory of Acceptance and Usage of Technology. *INTEGRA*, 72-91.
- Escobar-Rodriguez, T. & Carvajal-Trujillo, E. (2013). Online Drive of Consumer Purchase of Website Airline Tickets. *Journal of Air Transport Management*, 32, 58-64.
- Gatautis, R., & Medziausiene, A. (2014). Factor Affecting Social Commerce Acceptance in Lithuania. *Contemporary Issues in Business, Management and Education 2013*, 1235-1242). Elsevier Ltd.
- Ghozali, I. (2011). *Structural Equation Modeling, Model Alternatif dengan Partial Least Square (PLS)*. Badan Penerbit Universitas Diponegoro.
- Hair, J. F., Hult, G. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Strucural Equation Modeling (PLS-SEM) (1 ed.)*. SAGE Publisher, Inc.

- Harsono, L. D., & Suryana, L. A. (2014). Factor Affecting The Use Behavior of Social Media Using UTAUT 2 Model. Proceedings of the First Asia Pasific Conference on Global Business, Economic, Finance and Social Sciences (API 4SINGAPORE Conference). Singapore: Global Biz Research.
- UU No. 20 Tahun 2008
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Tehcnology. *MIS Quarterly*, 157-178.
- Wiguna, D. (2015). Teknologi, Internet: Google Edukasi Pelaku UKM Manfaatkan Teknologi internet. Diambil kembali dari Antara News: <http://www.antaraneews.com/berita/495230/google-edukasi-pelaku-UKM-manfaatkan-teknologi-internet>
- Martowardojo, A. (2018). <https://pendidikan.id/main/forum/diskusi-pendidikan/artikel-berita/9178-memajukan-produk-lokal-di-bisnis-online>.

# Entrepreneurship Education in the Digital Era

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## Abstract

The purpose of this study is to discuss the study about entrepreneurship education in the digital era. Using on Indonesian open and distance learning, Universitas Terbuka, the study explores the implementation of transformation from traditional learning models into modern distance learning or digital/online education for entrepreneurship education. The findings of this study showed the entrepreneurship course by digital education effectively produces the prospect entrepreneur. The results of the study have managerial / practical implication that in order to implement a digital learning system must be supported by ICTs to serve students with technology in the enrollment process, learning process, enrichment of learning, and the process of evaluating learning outcomes packaged in UT-online services. The originality of the paper is able to show that the UT with a distance learning system can generate an entrepreneurial spirit and encourage students and society to build a startup business either independently or in groups.

**Keyword:** *entrepreneurship, distance learning, digital, online, education*

## 1. Introduction

Entrepreneurship is an important instrument for promoting economic growth, addressing unemployment and the impact of the global economic crisis. In addition, entrepreneurship is considered capable of raising job satisfaction, income and improving social status (Askun & Yildirim, 2011; Sondari, 2015; Hj. Din et al., 2016). Entrepreneurship is the process of starting and running a business with all the risks it contains (Gedik, et al., 2015). Entrepreneurship is a process and activity aimed at combining risk, creativity, individual success and / or innovation and considering the financial, moral and social aspects, to establish and develop new profitable business ideas (Askun & Yildirim, 2011). Persons or entrepreneurs who engage in entrepreneurial activities are called entrepreneurs, that is, a person who organizes, manages and takes on existing business risks in order to establish, maintain, and cultivate a business or innovation and creative effort. Entrepreneurs create or develop something that no one ever thinks about, thinks differently, and is innovative in managing its business (Gedik, et al., 2015).

Entrepreneurship will be more effective if done by qualified entrepreneurs. However, the effort to create entrepreneurs as the main entrepreneurial actors through entrepreneurship education is not as easy as imagined. Askun & Yildirim (2011) in Turkey shows that entrepreneurship education has not been able to provide the skills and mindset needed by entrepreneurs to contribute to economic growth and job creation. The new entrepreneurship education is able to contribute to the development of entrepreneurial enthusiasm of learners, although this is not entirely convincing (Küttim et al, 2014).

The great hope of society should be able to be answered by the university with the concept and practice of entrepreneurship education that is precise and comprehensive. Learning outcome desired method and learning process that will be done become an important factor of success of entrepreneurship education at a university. This article is about to present entrepreneurship education at the university from the foundations, competencies, characteristics, and attitudes of the entrepreneurial candidate of the entrepreneurship education he wants to create, the design of learning and the effectiveness of it. At the end presents digital education in entrepreneurship education.

## 2. Literature Review

The importance of entrepreneurship education is increasing because of the need to prepare students for the challenges of current work and environmental change (Küttim et al., 2014). Some studies show a positive impact of education on entrepreneurship while others prove that the impact of education on entrepreneurship is statistically insignificant or even negative (Barba-Sanchez & Atienza-Shuquillo, 2017). The results of Vasiliadis & Poulis (2007) in Ismail, et al. (2015) shows that entrepreneurship education creates a positive image for entrepreneurs and entrepreneurship can be an alternative choice of graduate profession. Instead of Personal (2005) and Jussi (2008) in Ismail, et al. (2015) show that entrepreneurship education is not effective in influencing student entrepreneurial intentions. The reason why the application of entrepreneurship education is ineffective because before entering entrepreneurship education, students have entrepreneurial competence so that entrepreneurship education only gives little change including the problem of improper teaching method implementation (Ismail, et al., 2015).

Entrepreneurship education can be placed in a broader context than just business. Entrepreneurship education not only prepares "people who want to entrepreneurship", but also the effort to create innovators, creators, and even employees of entrepreneurial supporters. Entrepreneurs can build unlimited career maps, full-time careers, and job skills that emphasize flexibility to tackle the modern labor market (Küttim et al., 2014). Universities have an important position in entrepreneurship education because they can increase the motivation and competence of entrepreneurial graduates to become key people in innovative and entrepreneurial activities (Askun & Yildirim, 2011).

Based on the findings of Askun & Yildirim (2011) which show the lack of entrepreneurship education in Turkey, entrepreneurship education must be transformed from a formal teaching approach to entrepreneurship education that builds entrepreneurial intentions and motives. Universities that previously made entrepreneurship as an object, should turn entrepreneurship as a subject by sharing knowledge and learning experiences of students. Entrepreneurship education is encouraged to provide skills and awareness of the market competition and the need for mastery of character as an entrepreneur. The entrepreneur's character must show good endurance in business turbulence, and able to control and influence the behavior of others. In addition, entrepreneurs must have the character of thirst for achievement and dare to take risks.

Universities can introduce entrepreneurial activity among students. Previous research has shown that a person who has attended entrepreneurship education is more likely to start a business than those who follow other courses (Jaafar & Abdul Aziz, 2008 in Sondari, 2014). This tendency may be derived from the experience or knowledge gained from courses that elicit entrepreneurial interests (Ismail et.al., 2009 in Sondari, 2014), as well as from the knowledge

and entrepreneurial abilities previously held (Askun & Yildirim, 2011). According to Zhou Hong (2012) in Ismail, et al. (2015), entrepreneurship education can reduce risks and increase the benefit of entrepreneurs, and indirectly influence entrepreneurial intentions and decisions.

Bascr & Alan (2015) and Küttim et al. (2014) found that entrepreneurship education enhances entrepreneurial intentions. Sondari (2014) uses the definition of entrepreneurial intent as "a state of mind that people want to create their own business and to act and have a different role in owning and running their own business and to engage in entrepreneurial activities that are needed, during their business." The theoretical foundation of entrepreneurship the most suitable is Planned Behavior Theory (PBT) from Ajzen (1991). The PBT sees entrepreneurship education as more than just producing the number of businesses created but the changing attitudes and mindset of students on entrepreneurship. According to PBT, entrepreneurship is a planned behavior, so entrepreneurship can be predicted with intent (Miller et al., 2009 in Sondari, 2014). The PBT is also relevant to the career selection process (Farrington, Gary & Sharp, 2011; Miller et al., 2009; Linan, 2008 in Sondari, 2014).

Hj. Din et al. (2016) add the need for entrepreneurship education based on theories of achievement that propose motivational theories are divided into three different levels of achievement, namely the need for achievement, need for power and need for Affiliation. Barba-Sanchez & Atienza-Shuquillo (2017) mentions entrepreneurial motivation include the need for success, need for independent, and economic motivation. Mohanty (2005) in Hj. Din et al. (2016) states need for achievement, usually found in individuals, groups, and communities. People who have this achievement tend to be successful entrepreneurs. High-oriented people are better equipped to risk entrepreneurship. Actual achievement for motivational purposes, and therefore individuals will try to achieve what they want. How important are the motivation to run the business and the next question whether teaching can generate motivation? Some researchers believe that entrepreneurial motivation can be developed with special entrepreneurship education (Barba-Sanchez & Atienza-Shuquillo, 2017).

The quality of entrepreneurs can at least be seen from psychological factors, character or behavior, and entrepreneurship skills. Chiru (2012) in Ismail, et al. (2015) specifically analyzes the business skills students acquire and various aspects of psychological or behavioral factors (acceptance of risk, models and patterns of success, personal motivation, confidence). However, most entrepreneurship education only provides the necessary skills education to become an entrepreneur, such as finance, marketing, forecasting, but lacking in soft skill and character building (Ismail, et al., 2015). Entrepreneurship education tends to prepare students with the tools to become an entrepreneur but does not know there are other important factors that play a role besides the formal skills that entrepreneurs must possess (Ismail, et al., 2015).

### 3. Results

Therefore the entrepreneur's competence must be extended to the characteristics and entrepreneurial skills to become successful entrepreneurs (Ismail, et al., 2015). Lathi (1999) in Ismail et. al (2015) summarizes competence as a set of knowledge, abilities, characteristics and attitudes related to good performance. Stoof, et al. (2000) in Ismail, et al. (2015) concludes that competence can be interpreted as a successful behavior in a work in which knowledge, ability and attitudes are shared to achieve this behavior. Thus, the components that make up a person's competence consist of desire (motivation), character /behavior, skills, and knowledge.

Motivation is everything that is done with regard to the will. How seriously would someone want something? Motivation depends on internal ambition and drive that can be in the form of individual motives and values. The literature distinguishes the motivation between the push factor and the pull factor. Driving factors refer to situations in which a person is pushed into entrepreneurship. For example, unemployment can force someone to start a business. Driving factors are external problems that drive a person to action. The pull factor refers to situations in which a person is interested in entrepreneurship. For example, someone who always dreams of owning his own business. The actual pull factor originates from one's internal. Thus, motivation is divided into external driving factors (driving factors) and internal driving factors (pull factors). There are three internal drivers or motivation to start a business: the need for autonomy, achievement needs, and the need for power (Ismail, et al., 2015).

Character refers to the properties that make a person able to run entrepreneurship. These characteristics include the need for achievement, the locus of internal control, and the tendency to take risks. The next character is the need for autonomy, the need for power, tolerance for ambiguity, affiliation needs, and endurance (Ismail, et al., 2015).

Skill means being able to do something. Skills are different from characteristics. This distinction is based on a talent for learning. The character is defined as fact and difficult to change (in a short time) or to learn. Skills are easier to learn and change (in a short time). (Ismail, et al., 2015). The literature identifies a number of skills that contribute to business success, which is differentiated as the company's life cycle which is the company's phase. It can be divided into two groups: the initial skill phase and the adult skill phase. The initial phase includes market orientation skills, creativity, and flexibility. The adult phase consists of leadership skills, organization and planning, motivation, and financial control. (Ismail, et al., 2015).

Knowledge is concerned with knowing and referring to rational entrepreneurship sections such as knowledge of administrative rules, legislation, and government regulations. Here the experience is also part of the knowledge. (Ismail, et al., 2015).

Then how digital education can provide motivation, build character, give skills and equip entrepreneurship knowledge to students ?. Before answering and explaining digital education on entrepreneurship education, first presented the entrepreneurship education experience that has been going on.

So far, entrepreneurship education programs do not produce as designed. There is not even a significant difference in character between before and after participating in the program (Ismail, et al., 2015). Facts in Turkey show that entrepreneurship courses are incapable of providing skills and building the mindset required for students to have the basic entrepreneurial competencies required. Most entrepreneurship courses do not cover topics related to decision making such as strategy choices in resource-limited circumstances, initiative-taking, autonomy, and risk-taking. Entrepreneurial courses are weak in relevant content for the integration of various skills/knowledge functions. Similarly, entrepreneurship courses have very little topic on entering the market, creating a market or developing new markets or expanding for the company to grow. The majority of entrepreneurship courses do not include opportunity analysis and recognition. Only 20% of entrepreneurship courses contain issues of creativity, innovation, and management of business organizations that are the most critical phase of entrepreneurial start-up (Askun & Yildirim, 2011). Therefore entrepreneurship education in the university should be built from the basic philosophy and motive of a person to become an entrepreneur.

The application of entrepreneurship education should be supported by learning methods that also emphasize the learner's psychomotor abilities, for example: by establishing business practices or apprenticeship by mentoring or coaching with business practitioners so that students' competence to become successful entrepreneurs can be more developed (Ismail, et al., 2015). In the end, there must be an evaluation of the entrepreneurial competence generated by entrepreneurship education, its effectiveness and readiness of students in entering the business world (Wennekers, 2006 in Ismail, et al., 2015).

Entrepreneurship education should improve students' perceptions of entrepreneurial viability by increasing knowledge, building confidence, and promoting self-efficacy (Bascr & Alan, 2015). The university should change its teaching model and methods and even revise its mission and vision that includes educational goals and strategic conformity that considers the private sector and the expectations of the university (Bascr & Alan, 2015). There are various approaches to entrepreneurship teaching methods. The entrepreneurship teaching methods in universities that rely on lectures and seminars are criticized for not focusing on behavior and just following the managerial concept. Therefore an educational program specifically designed for entrepreneurship with content and teaching methods that are different from traditional business courses including the use of technology in its system delivery.

Digital education for entrepreneurship education starts from the determination of learning outcome. After attending entrepreneurship education, students are expected to be motivated, confident, proactive, creative, and able to facilitate themselves with the skills to start a business based on knowledge of science, technology, and the arts. From the standpoint of psychology and business studies, according to Driessen (2005) in Ismail, et al. (2015) there are ten basic competencies an entrepreneur must possess. Components of competence consist of achievement need, autonomy requirement, power requirement, social orientation, self-efficacy, endurance; and risk-taking tendencies. Skill components: market awareness, creativity, and flexibility (Pihie, et al, 2013; Ismail, et al., 2015).

Ideally, the university's entrepreneurship education approach is linked to dynamic and active methods or learning by doing, goal-oriented to teach students all the components of analyzing, evaluating, and building the required knowledge. Learning in the form of lectures and seminars are given more, but networking and coaching activities are expected to be mostly done by the students. Student participation in entrepreneurship education has a positive impact on the creation of entrepreneurs (Küttim et al., 2014). The duration of entrepreneurship education programs can vary greatly and have different effects on attitudes and intentions toward entrepreneurship. Case-based learning is the most valuable component of developing entrepreneurship education in business schools in the world. (Askun & Yildirim, 2011). Financial support to students is also important (Bascr & Alan, 2015). Provision of other resources for pioneers and networking opportunities is also required. (Küttim et al., 2014). Entrepreneurship education should also offer a variety of alternative entrepreneurial materials because what is offered is not necessarily the most desirable in entrepreneurship (Küttim et al., 2014). Barba-Sanchez & Atienza-Shuquillo (2017) adds efforts to motivate students in entrepreneurship through successful startup entrepreneurs. Brainstorming workgroups are also needed to explore entrepreneurial ideas. Students should also be facilitated in arranging business planning through workshops, presented in class and academically assessed. Students are also given the opportunity to organize business inter-university business planning competitions, and seek funding from various sources.

Hj. Din et al. (2016) state that universities should modify their courses to ensure that students can learn more about the importance of entrepreneurial skills and benefit students in the future. Universities and other higher education institutions should be ideally placed to include students in an environment that fosters entrepreneurial thinking. Effective entrepreneurship education is an important key to generating more young entrepreneurs in the future. Entrepreneurship education should be able to educate the younger generation to become more productive after graduating from university, channeling creativity and energy towards entrepreneurship. To ensure the effectiveness of entrepreneurship education, Welsh, et al. (2016) mentions the evaluation of university processes in improving attitudes, motives, and entrepreneurial intentions from year to year should always be done.

#### 4. Discussion

In this digital era, disruption also occurs in the world of education, especially in learning delivery modes that are heavily influenced by the development of information and communication technology. This is evident from the three main characteristics of networked, digital and virtual that push the university into cyber university. Universitas Terbuka (UT) as open and distance learning in Indonesia always develop and utilize ICT for its learning process so that become online / digital education. UT experience in applying digital education for entrepreneurship education begins from registration to evaluation of learning outcomes.

Entrepreneurial candidates at the time of registration and academic administration are facilitated by the web-based student Record System Generation 4 (SRS4G). Students can register online anywhere. Students can also easily obtain academic information online, including when obtaining student ID cards, test cards, and viewing grades. Student payment system using online billing system with single entry payment gateway and multiple banking.

Before starting the learning process, students are given educational preparation materials in the form of new student study orientation and training of teaching and learning activities. UT uses a blended learning model which means it provides the main learning materials in both printed and digital mode. The main learning materials are equipped with the learning materials information system (SIMBA) and online bookstore as well as the information system of learning resource transactions. The digital learning materials that are the main learning materials can be accessed by students through a digital library in a virtual reading room. In addition, digital learning materials are packaged in digital cared applications available on Android and IOS as PDF, Epub, Epub 3.0 interactive.

This main entrepreneurship learning material contain self-instructional materials that are organized on topics to achieve the competencies of entrepreneurship courses both general and special competencies. This learning material consists of 9 modules and each module consists of 2-3 learning activities. Each learning activity in addition to containing the material, as well as tasks and exercises, conclusions, and formative tests to measure the ability of students in the mastery of competence. If the student's mastery of one learning activity is not more than 80% then the student must repeat again beyond the passing grade in order to continue to the learning activities or the next module.

In addition to using the main learning materials and digital learning materials, in the UT learning process provides tutorial learning assistance. There are two types of tutorials that are face-to-face tutorials and online tutorials. The face-to-face tutorials are held in regional offices or study groups spread throughout Indonesia and abroad. Armed with the design of tutorial events and tutorials, tutors guide students to master the competence of entrepreneurship courses in 8 meetings. Tutor besides acting as the instructor as well as coach and counselor. In addition to guiding the teaching materials on the main teaching materials, at the 3rd, 5th and 7th meeting the tutors assigned tasks to the students such as the preparation of business feasibility studies, business development plans, benchmarking and market evaluation. Tutorials are delivered in various ways including lectures, workshops, sharing ideas, business simulations, and role play, as well as the preparation of business proposals.

Online tutorials are provided on a web basis that is used offline and online with the mobile application (android). The features provided in this online learning vary with the asynchronous and synchronous mode. The material presented is the same as the face-to-face tutorial referring to the main teaching material (printed and digital) but packed in 8 initiations, 8 discussion forums, and 3 tasks. In addition tutors are given the flexibility to contain relevant materials to build motivation, character, skills and entrepreneurial knowledge derived from the tutor's own work (delivered in ppt or word format) or from open education resources (OER) and massive open online courses (MOOCs ), as well as youtube, and others.

Initiation materials are prepared by tutors drawn from the main teaching materials especially for those competencies that strongly support the achievement of key competencies. Discussion forums are provided to discuss student difficulties and solutions in mastering entrepreneurial competencies. Discussion can be initiated by students and tutors and then the discussion flows. Usually at the end of the tutor's discussion concluded. The three tasks assigned are usually the same as those assigned in a face-to-face tutorial. Each task is completed within 1-2 weeks. Notes on student activities and tutors are well recorded through the e-learning system and at the end of the tutorial are awarded a value that contributes to the final value of 30% provided that the final semester score scores more than 30%.

UT also provides video conferencing facilities for management purposes, oral exams and also for tutorials. On another occasion, UT also provides webinar tutorial (Tuweb) which is a web-based and synchronous tutorial service. Tuweb is usually for students who want tutorials directly face to face and discuss directly with the tutor but do not want to leave their respective residences. Students can do tutorials from their respective homes, as well as tutors as long as there has been an agreement of the previous time. To strengthen the mastery of entrepreneurial competence incidentally held e-seminars by involving successful entrepreneurs to share experiences and motivations to the students. Other facilities will be provided in the form of business incubators in the form of the dry lab, training in e-training and e-counseling. As an enrichment of entrepreneurial materials, UT provides MOOCs, digital libraries, online journals, UT-TV, UT Radio and web supplements.

In the process of evaluating the learning outcomes, UT has an information system of exam materials for problem banks and printing of exam papers. The UT exam is included for

entrepreneurship courses packaged in three test modes: paper-based test (students come to the exam site located closest to students, and simultaneously all students who take entrepreneurship courses carry out the exam), computer-based test (desktop-based, web, offline or online exam and performance assessment), and online proctoring exam (exam anywhere, anytime with an electronic supervisor).

As part of the extracurricular activities of the students, UT holds the competence of self-employed student entrepreneurs who work closely with the KemenRistekDikti and banking. This competency applies to all students including those who do not follow the entrepreneurship course. The student submits a business proposal to be completed. Winners will be given business guidance and funding support from banks. For students who are successful as entrepreneurs in addition to getting additional funds for business development are also given the opportunity to do business sharing to students either through e-seminars, testimonials in audio-video recording, or live present in OSMB and pre-graduation academic seminars.

## 5. Conclusion

Entrepreneurship courses can not only be registered by UT students who have taken certain courses but also for anyone who just wants to take entrepreneurship course only. Therefore, through digital learning for entrepreneurship education, it is expected to generate a lot of potential entrepreneurs massively considering digital learning is not limited by physical classroom learning capacity, the ratio of lecturers and students and the social commitment of the students themselves. In this era of abundance of information and data, lecturers and entrepreneurial subject tutors are required to be creative and innovative in developing entrepreneurial learning in digital/online. The program should be able to provide students' independence and facilitation independently to build motivation, shape entrepreneurial character, acquire skills and acquire entrepreneurial knowledge. Ultimately lecturers and tutors should be able to be good facilitators in adult learning for entrepreneurship education. In order to be a more real digital education in entrepreneurship education needs to be done testing the differences of competence of students who do entrepreneurship education in face to face with students who do entrepreneurship education online or digital.

## References

- Askun, Bige., and Yildirim, Nihan. (2011). Insights on Entrepreneurship Education in public universities in Turkey. *Procedia Social and Behavioral Science* 24 663-676
- Barba-Sanchez, Virginia., and Atienza-Shuquillo, Carlos. (2017). Entrepreneurship intention among Engineering students: the role of Entrepreneurship Education. *European Research on Management and Business Economics* xxx-xxx
- Basrc, Esref Sarvas and Alan, Reha Metin. (2015). Entrepreneurship education at universities: suggestion for model using financial support. *Procedia – Social and Behavioral Sciences* 195 (2015) 856 – 861.
- Ferreira, ASM., Loiola, Elisabeth., Gondim, SMG. (2017). Motivation, business plan and risk management: entrepreneurship among university students. *RAI Revista de Administraç ão e Inovaç ão* 14 (2017) 140-150
- Gedik, Sukru., Mehmet, Miman., Kesici, Mehmet S. (2015). Characteristics and Attitudes of

- Entrepreneurs Towards Entrepreneurship. *Procedia – Social and Behavioral Sciences* 195 (2015) 1087 - 1096
- Hj Din, Badariah., Anuar, Abdul Rahim., Usman, Mariane. (2016). The effectiveness of the Entrepreneurship Education Program in upgrading entrepreneurial skills among public university students. *Procedia Social and Behavioral Science* 224 117-123
- Ismail, Verni Y., Zain, Efendy., Zuliha. (2015). The portrait of the entrepreneurial competence on students entrepreneurs. *Procedia Social and Behavioral Science* 169 178-188
- Küttim, Merle., Kallaste, Marianne., Vanesaar, Urve., Kiis, Aino. (2014). Entrepreneurship education at universities level and students's entrepreneurial intentions. *Procedia – Social and Behavioral Sciences* 110 (2014) 658 – 668.
- Pihie, Zaidatul akmaliah lope., Bagheri, Afsaneh., Sani Z. Haslinda Abdullah. (2013). Knowledge of Cognition and Entrepreneurial intention: Implications for learning entrepreneurship in Public and Private universities. *Procedia Social and Behavioral Science* 97 174-181
- Sondari, Mery Citra. (2014). Is Entrepreneurship Education Really needed?: examining the antecedent of entrepreneurial career intention. *Procedia Social and Behavioral Science* 115 44-53
- Welsh, Dianne H.B., Tullar, William I., Nemati, Hamid. (2016). Entrepreneurship education Process, method or both?. *Journal of Innovation & Knowledge* 1 125 – 132.

# THE ACCESIBILITY OF FINANCIAL INFORMATION ON ASEAN COUNTRIES OFFICIAL WEBSITE

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## ABSTRACT

The purpose of this study is evaluating the presence of financial information government reporting in ten websites member of ASEAN countries. The study was done by elaborating the type of information, characteristic information and the quality information regarding the budget and financial information of the country. It is find that in digital revolution in each countries followed variety differs in present the financial information via the internet. The accessibility of internet financial report in state level of ASEAN members still low in their main country website. Transparency as the heart of public sector accounting reform relevantly occurs in each country, although it is not in same level. Government manager will be convinced that the needed of easy, detailed and timeliness information of the website are relevant in increasing the transparency issue. In the new era of Industry Revolution 4.0, people need accurate, timelines and detailed information for better quality decision making. This study give insight in government perspective of the quality of their financial information should inform.

Keyword: internet, government financial reporting, transparency, ASEAN

## **Introduction**

This paper examines the accessibility of internet financial reporting in government entities, in country level in south east Asia region. There are three things that lead to increased demands for transparency in the organization today. These are corruption, human rights and good governance. Countries with low transparency levels are indicated to have high levels of corruption (Zafarullah and Siddiquee 2011). The more transparent a government is, the fewer will be the opportunities for public administrators and managers to resort to corrupt practices in the tasks they perform (Zafarullah and Siddiquee 2011). The number of human rights violations is also linked to low transparency. Transparency is one of the pillars of good governance (O'Neill 2006). The current study reiterates the fact from literature that **transparency** in transactions enables effective **e-governance**. (Iyer and R.N. 2017)

In a new culture of openness in government, measures to improve transparency tend to lead to tighter and more centralized management of information. (O'Neill 2006). The opinion of transparency still confused and have debated for years. (Bianchi 2010). Transparency' is widely canvassed as a key to better governance, increasing trust in public-office holders. But transparency is more often preached than practiced, more often referred to than defined, and more often advocated than critically analyzed.(O'Neill 2006)

This research observed the official website of government ASEAN countries to answer the accessibility of digital financial reporting in each country. As we know the fact of transparency as a problem in this region related the high corruption level in ASEAN countries (Www.transparency.org 2015). Some research explains the trends of corruption combat in ASEAN countries. According to (Jones 2016) further progress to combat **corruption** may be difficult, as a result of the lack accountability and limited transparency, which are essential features of Brunei's system of

government based on absolute monarchy. Research in Viet Nam show that a higher level of transparency, participation, and accountability is associated with a lower level of corruption, and that corruption is negatively associated with public service quality. Thang V. Nguyen, Thang N. Bach, Thanh Q. Le, Canh Q. Le, (2017). In Brunei, it also found the need in combating corruption (Jones 2016). Indonesia government also working hard in fighting corruption. In south east Asia, according to (Zafarullah and Siddiquee 2011), open government, which can promote a culture of probity within the public service

Internationally, the disclosure of public information is regulated in the United Nation law, that one of the human rights is to obtain public information. There are 83 countries that have public transparency laws.(Dhoho A Sastro, M Yasin, Ricky Gunawan, Rosmi Yulitasari 2010) In South East Asia, just Indonesia and Thailand have passed a freedom of information (Www.transparency.org 2015). Transparency provides citizen participation and strengthens public management control instruments (Craveiro, Santana, and Albuquerque 2013)

In the age of digital era today, companies are required to report their finances transparently over the internet, as a form of liability. Research on the transparency of financial statements is known as internet financial reporting. Research on this topic is growing especially for companies that go public. Content covered from transparency, focusing on financial disclosures up to sustainability reporting topics. This research is significant to find out how financial information has been transparent on the official government website in addition to demands for public information disclosure as well as a proof to see whether good governance has been implemented. It is important to observe how ASEAN countries, as countries committed to improving the welfare of the region, are open in presenting the information. Disclosure of information will increase public participation. Now, internet financial reporting is also examined in government entities. This is in line with the topic of transparency and accountability, as part of the implementation of good governance both in private and government companies.

Relevant to this, the phenomenon of the use of information technology in government has long been the concept of e-government has been implemented, even today various public services and jobs related to the task of government has been done with the internet media. Various countries have applied e procurement, a system to procure goods and services online. This method is considered to be able to strengthen good governance because it cuts the line of meetings directly between government and vendors, which tend to condition corruption. The use of e-government is not only done at the level of central government but also the level of local government.

The financial statements for the government are primarily used to compare the realization of revenues, expenditures, transfers, and financing of all activities with a prescribed budget, assessing the financial condition, evaluating the effectiveness and efficiency of a financial reporting entity. This report also helps to determine workers' or community's compliance with laws and regulations. How to create a financial report affects the report of all activities and results achieved in the implementation of the activity in a systematic and structured manner. The financial statements for the government prepared by each reporting entity also have different interests.

The purpose of this paper is to assess the extent that information users have access to government financial data on the Internet. We explore two aspects of internet financial reporting: first, whether the report is easy to access online; secondly, we extent the information available on government website, that is divided in financial and nonfinancial information.

Some studies have examined Internet financial reporting on public sector, especially in government entity. Most of them is done in local government context. There is no evidence that the research in comparing internet financial reporting was done in country level. We extend the previous studies by examine in detail the information available in official website of countries ASEAN members, related (Jerome Lim 2002) finding that although these countries differ in their levels of development in

the Information Economy, their prospects of growth depend on the policies that they choose to pursue.

This website study, is on accounting perspective, reviews the literature related to government financial reporting especially the development of internet financial reporting. Many research of financial reporting in internet previously directed by private sector. Related the increasing pressure of transparency, as the implementation public sector reform, government entities need to inform their budget on internet.

The benefit of this research is to gain knowledge about the extent to which financial information has been disclosed in the website, as modern information media today. By knowing the depth of financial information presented will be obtained information whether each ASEAN country has presented its financial information in accordance with the financial statements required by IPSAS or not. Other benefits can be found out what information is presented more by the government, whether more non-financial information in terms of public services or more financial information. Governments that are willing to present financial statements, are committed to the demands of public transparency. Given that transparency will be reduced to slack in asymmetric information thereby reducing dysfunctional behavior. In government entities this leads to a reduction in the intensity of corruption within a country.

## LITERATURE REVIEW

### **Website Study and Public Sector**

Research using the website as an object has long been done. At first the website as an information technology product is only considered as a medium of communication. Through the website, companies or organizations can deliver their products or profiles so that consumers can clearly and clearly know the products and services offered to decide whether to buy or not. Therefore, the website is more widely used in e-commerce at first. Websites on the World Wide Web have become ever more resourceful, enabling users (i.e., visitors) to obtain various services and information from them (Gopal et al. 2018)

Research on websites is diverse nowadays. But it can be divided into research related to its own technology, and related to the content of its website, which is usually related to information transparency. Related to the website technology, many research interest on the website design and website quality (Tsao, Hsieh, and Lin 2016; Jiménez-Barreto and Campo-Martínez 2018; Priyadarshini, Sreejesh, and Anusree 2017; Canziani and Welsh 2016; Sanders and Galloway 2013). Currently, many are researching from the side of economic information, because of the possibility of leakage of information because the website of mutual sharing of information between publisher (Gopal et al. 2018).

This research explores website content from the information presented by the government. The extent to which the government is willing to disclose the information, whether to financial or non-financial information. Website research in public sector area commonly related with financial information (Styles and Tennyson 2007)

In line with technological developments and demands for transparency for government (Welch and Hinnant 2003). So this institution is also affected to use the website as a means of communicating for its citizens. The government began using the website to deliver its work programs in the hope that citizens are increasingly eager to participate in developing the country. Research on websites is evolving today. This can be understood because the development of information technology that is currently up in the digital era. Website becomes a means of providing information in cyberspace is very important because it helps convey information various things. Under the global pressure of information technology, the adoption of web based technologies in public administration has created a new government and- citizen interface.(Wong and Welch 2004). In the business world, e commerce has evolved ahead of e-government concepts. Many studies have proposed new website evaluation frameworks and criteria. most early studies adopted the IS-approach but that later ones (after the burst of the dot-com bubble) shifted to a combined-approach (Wen-ChihChiouaChin-ChaoLinbChyuanPerngc 2010)

### **Overview of Government financial reporting.**

Local government financial and budget reports are important documents that can provide information to stakeholders regarding government financial management. Therefore, financial statements should be available on time and easily accessible to all government stakeholders. Styles and Tennyson (2007) said internet usage is the most cost effective way of disseminating information for stakeholders. According to the Government Financial Officer's Association (GFOA) in 2013 the use of the internet in accessing financial and budget reporting information can provide benefits such as: Increase government's attention to financial statement documents and budget. The government will be more careful in preparing financial and budget reports because open access allows all parties to access it can provide ease in conducting analysis. Financial and budget reporting information can be accessed

anywhere and anytime. Save on publication costs because the internet can reach more people. Increase community participation

The public can easily monitor government financial performance through financial reports available on the internet. According to Verity (2015) the definition of Internet Financial Reporting (IFR) is the disclosure or reporting of public sector accounting using the media website (e-government). Oyelere et al (2003) explains that IFR is a combination of capacity and multimedia capabilities of the Internet to communicate interactively about financial information.

By using Internet Financial Reporting (IFR) to make the financial statements are usually printed to be distributed over the internet so that users of financial statements can more quickly access that information (aspect timeliness). In addition, according to Verawaty (2015) the use of the internet makes the government able to exploit the usefulness of information technology to further open themselves by informing its financial statements (disclosure aspect).

Furthermore, according to Verawaty (2015), Internet Financial Reporting (IFR) through e-government is the medium that best meets the 3E aspect (Efficiency, Effectiveness, and Economy) to provide and publish financial statement information to all public stakeholders such as central government, other regional governments, DPRD, BPK, economic analysts, investors, creditors, donors, and the people.

### **The easiness to access government financial information.**

In recent years accounting standard setters and professional bodies have issued directives aimed at improving the transparency and accessibility of financial reports compiled by government agencies. Results indicate that provision of financial reports is more prominent among larger cities. Cities with higher income per capita and higher levels of accounting disclosure are also more likely to provide financial reports on the Internet. The accessibility of the financial data reported on the Internet is positively related to the number of residents, resident income per capita, and level of debt and financial position of the municipality. (Styles and Tennyson 2007)

## **Government Digital Reporting**

The definition of the public finance report by Bastian (2006) is a representation of the financial position of a number of sector transactions conducted by a public sector entity. According to Bastian (2006), the form and preparation of public sector financial reports can be influenced by various factors such as the nature of public sector institutions, the governance system of a country, the mechanism of financial management, and the state budget system.

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## **Internet Financial Reporting (IFR)**

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In Malaysia digital reporting still Voluntary. (Ghani and Said 2010) Digital reporting serves as an effective communication tool as it enhances the accountability of the government (Laswad et al., 2005). However, at present, what is mandatory by the government on its local authorities is hard copy financial report which includes government policies and performance to all interest groups. Digital reporting is still voluntary.

In Indonesia, there public information law. On April 30, 2010, Indonesia's Law on Freedom of Information will come into effect; it was adopted in 2008. Under its provisions, public institutions, including government ministries, state agencies, and legislative and judicial institutions, are obligated to respond to information requests from members of the public. <http://www.loc.gov/law/foreign-news/article/indonesia-law-on-public-information-in-force/>

### **Agency Theory in explaining the need of online disclosure financial government reporting.**

Many researchers use agency and legitimacy theory to explain the need for transparency. Agency theory is deemed unusable in public sector organizations due to its weaknesses related to inter-community, executive and judicial oversight functions. However, many researchers use this theory in

governmental organizations. In agency framework, the literature on accounting disclosure in the public sector suggests a number of incentives for voluntary disclosure of financial information. These incentives are viewed in the literature as predominantly driven by the need to reduce information asymmetry between principals and agents. Voters, citizenry groups, bond investors, and state/federal regulators (principals) use accounting information to monitor local government managers' (agents') performance. (Styles and Tennyson 2007)

Agency theory explains the relationship between principal and agent. The agency relationship arises when one party (principal) gives authority and responsibility to the other party (agent) to make decision (Mitnick 2015). The agency theory itself arises from the premise that the owners of the company (principal) and the manager of the firm (agent) have different interests.

(Yuhertiana 2011) explains if agency problems are also present in the context of governmental organization. In this theory explains the pattern of relationships between government and citizens. The people as principals mandate the government as an agent, to carry out government duties in order to improve the welfare of the people. (García and García-García 2010) also stated that there is a principal-agent relationship between the central government and local government. The central government is the principal and the local government acts as an agent. This is because, as a unitary state, the regional government is responsible to the community as a voter and also to the central government

The implication of this theory explains that the people as the principal of the government need to be directly involved in monitoring the activities of their agents, both government and politicians. In agency theory, local government acts as a temporary agent of society and other stakeholder is the principal of government. The community as the principal has given mandate to the local government to run the government and then the government is obliged to report the results of the implementation of government management to the community. Implementation in the field shows sometimes the information received by the public as the principal of the government does not match the actual reality. According to Afryansyah (2013) this inequality of information will lead to information asymmetry

that encourages opportunistic behavior and conflict of interest. The agency relationship between government and citizens can lead to information asymmetry which results in the emergence of some behaviors such as opportunism, moral hazard, and adverse selection (Fadzil and Nyoto, 2011).

Opportunistic behavior in the budgeting process for example, (1) the budget includes public-oriented programs but actually contains government interests to finance their short-term needs and (2) program allocation into budgets that make governments stronger in political positions especially in the lead up to the electoral process programs that appeal to voters and the public can participate in them (Fadzil and Nyoto, 2011).

This conflict of interest and information asymmetry may result in a government taking on substantial agency costs, in order to monitor and ensure that nothing can harm the public as principal (Afriansyah, 2013). Therefore, to reduce agency costs and improve relations between communities and local governments, transparency of information from local governments is symmetrical with the actual situation. According to Wau (2015) transparency of information from local government is needed to improve the relationship between local government and society and reduce the conflict of interest. One way that local governments can do to improve the transparency of government management information is by disclosing their financial statements through the internet. According to Berto et al (2010) with the ease of obtaining information about the government, as well as financial reporting through the internet, can increase public confidence, and reduce the practice of corruption.

The Agency Theory explains that to reduce the existence of information asymmetry between government and citizens requires adequate disclosure related to government financial management including the presentation of financial statements. The ease in obtaining information about the government, as well as the publication of financial statements through the internet can increase the supervision made by the community (Sinaga and Prabowo, 2011). Publication of local government financial reports through the internet can also reduce the monitoring costs that must be issued by the principal and agent (Wau, 2015). According to Wau (2015) publications through the internet make the

government can report financial information to the public and interested parties effectively and efficiently, so that the public can monitor the performance of government anywhere and anytime.

This opinion is in line with Verawaty (2015) which explains IFR (Internet Financial Reporting) disclosure will be more adequate to do because it has the main advantage that can be distributed more quickly (aspect timeliness) and can be exploited to be more open by informing its financial statement (disclosure aspect) .

### **Research Methodology**

This study explores in depth the official government website. The reason either the digital era of e government, the use of websites is closely associated with the public service administrative reforms (Joseph 2010). As claimed by Mussari and Steccolini (2006, p. 193), "Internet technologies provide public sector organizations with an opportunity to improve their accountability, and promote a change in the overall philosophy of government and organization of activities" (Joseph 2010). There are 10 official government websites of ASEAN countries used in this study. This study searches the main domain to determine the government official website. Only 9 from 10 websites is used. Malaysia government office website, <https://www.malaysia.gov.my>, the server do not respond on period observation, between 1<sup>st</sup> April until 20 May 2018. In each country there is an official government website as a front door from the country that describe anything for the visitor. The website usually has general information that is used by its citizen, investor, donor organization or other user. The name of main domain of the country is regulated by common international body. This research only observed government domain, go. (follow initial country) and not use others such as, .net, .com, or .org.

The unit of analysis was the homepage, defined as the first page or computer screen of information that a viewer sees when accessing a website. Some sites open with fairly sparse introductory pages that offer to hyperlink visitors 'inside' to second, or main, information pages. In these cases, the second page was treated as the site's homepage. Basic website content and design attributes were selected for

analysis, considering the exploratory nature of this study. (WENYONG ZHAO, BRIAN L. MASSEY 2003)

Content analysis use to comparing each information in the website. There are three steps in analyzing the website. First, it is determined the website domain located by using google search engine. Second, observing the content of information in front page of website, in order to find what kind of information on those websites, Third, analyze the accessibility of government internet financial reporting.

According to Styles and Tennyson (2007) internet financial reporting define as a level of ease with which users can find and view financial reports on local government websites. The Accessibility variables in this study were measured using IFR accessibility index calculations developed by Styles and Tennyson (2007) which can be explained in the following table:

Table 1. The Indicator measurement of IFR

NO	SCORE	REQUIREMENT
1	+1	If the official government website can be found on the first page of google search engine by typing the country name
2	+1	If there is a link of state financial information data on the home page (home) website
3	+1	If there are search engines to search for financial information
4	+1	If it takes only three clicks or less to view Internet Financial Reporting (IFR) on the government website
5	+1	If Internet Financial Reporting (IFR) data can be downloaded in PDF or HTML format
6	+1	If the file size of downloadable state financial statements is less than 3MB
7	+1	If there is Internet Financial Reporting (IFR) data the previous year on the government website
8	+1	If there are components of the Government Financial Report such as the budget
9	+1	If there are components of the Government Financial statement such as the budget realization report, cash claw report, surplus and deficit report and others
10	+1	If there is contact person information such as phone / fax / email to get financial information data

Source modified from Styles and Tennyson (2007)

Calculate the index value based on the IFR search results according to the access dates of the local government website. Internet Financial Reporting in this case is the government's financial statements of fiscal year 2017-2018. The previous year's Internet Financial Reporting (IFR) data in question is fiscal year 2017. If eligible are added according to score, if not meet = 0

## Results

Before, analyze the accessibility of digital financial reporting of ASEAN government, exploring the website technically will easier to observed in advanced. The five journalism research of website indicator is used (Felik Yosi Irawan, n.d.). Below is the result of exploring ASEAN countries website.

Table 2. Attributes in Front page of official government ASEAN members.

NO	Attibutes	Amount	Percentage
1	Content (Country Profile/History)	6	75%
2	Content (Public services)	5	62,5%
3	Content (Investor Information)	5	62,5%
4	Content (Macro Economics Information)	4	50%
5	Content (Budget Information)	3	37,5%
6	Content (Government Information)	6	75%
7	Content (Public Sector Reform)	4	50%
8	Content (Publication)	5	62,5%
9	Interactivity (Contact)	8	100%
10	Navigation (Search)	8	100%
11	English button	7	87,5%
12	Video Quality	4	50%

1. **Content.** Content is related to the type of information disclose in government website. In profit oriented company, website content related with information that can include a range of materials such as details related to the services offered, order status, corporate policies, and/or public relations. (Thongpapanl and Ashraf 2011) Otherwise, in government organization, especially in local context, the information can be divided in financial and non-financial content. The financial information content was divided into 4 categories: annual report only, financial highlights only, annual plan only and a combination of the items mentioned earlier. The non-financial content of the websites was reviewed and the items disclosed were systematically placed into 17 categories based on the study. The 17 categories include: (1)

Introduction, profile, background and history; (2) Services, facilities and function; (3) Mission, vision and objective; (4) Organization chart; (5) Complains, feedback and suggestion; (6) Mascot, logo, official flower and flag; (7) YDP and mayor statements; (8) Event calendar and planning; (9) Others; (10) Laws, enforcement and procedure; (11) Tourism information and interesting places; (12) Tender and licenses information; (13) Quality programs; (14) Administrative, personnel, management and board of directors; (15) Accomplishment and current development project; (16) Information technology and initiative information and (17) Industrial opportunities and incentives (Ghani and Said 2010). After observing ten official websites of each ASEAN countries, this study found there are 8 information in the government content i.e., country profile, public services, investor information, macroeconomics information, budget information, government information, public sector reform, and publication. The popular information disclose is country profile and government information (75%). Budget information is the lower content get transparent. This finding get similarity with (Ghani and Said 2010)

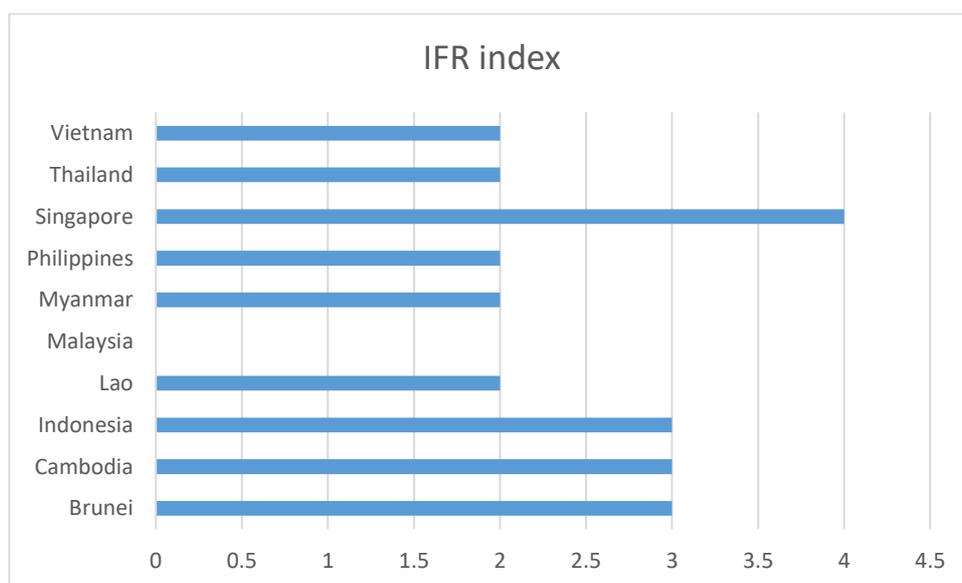
2. **Interactivity.** Interactivity relates to how the web involves its readers. If citizens are fully involved it can increase their confidence in the state. Interactivity is measured by contact on the website. The contact is an address, email, or phone no. This interaction is known as one-way interaction. Throughout the ASEAN countries website, the interaction rate is 100%, all of the website have contact information, this is called one-way interactivity. The one-way e-transparency strategy may be insufficient, and that in the future agencies should make an effort to enhance e-interactivity.(Welch and Hinnant 2003)
3. **Navigation.** Navigation deals with how easily you find content in the website. Search engines hold a promise of delivering relevant and useful information to the human user(Weideman and Ngindana 2004; Wang, Dai, and Yuan 2008). All of the website have search engine. All websites have search engine features. This makes it easier for website visitors to find the

desired data. It's just that some websites only provide information in local scripts so it makes it difficult to understand and search for information.

4. International communication. Cross-cultural communication via websites, and of the elements that constitute the individual screens of each site, is one of the fastest-growing areas opened up by the era of electronic communications. The development of the Internet as an interactive medium is giving rise to a series of creative non-professional translation practices. There are several ways of relating the groups working on the different language versions of a website. Because of mixed strategies, most organizations preserve their global image while at the same time incorporating elements likely to enable regional synergies and appeal to local users. Website communication is such a fast-moving phenomenon. As websites increasingly use spoken and visual communication, more and more translations may be into voice files.(Pym 2012). This study found that not all website use English as international language. In comparative studies between countries, the absence of English as an international language makes it difficult. This became a limitation in this study.

### The Accesibility of Government Internet Financial Reporting in ASEAN countries.

Table 3. Accessibility of IFR



source: appendix 2

If the official government website can be found on the first page of search google or yahoo by typing the country name. Only three countries, those are Brunei, Indonesia and Singapore that their official website could be found in first page in Google search engine. In fact, Wikipedia website is an online dictionary, that give useful information on each country, easy to access in finding information about each country. All of ten ASEAN countries have a general information in Wikipedia. This is helpful for understanding information about countries history, general economics, politics and government. Even if in the official website itself difficult to understand the content because of difficulty in reading the script related the nationality script is not common use (Latin). Cambodia, Lao, Myanmar, Thailand and Vietnamese those are have their official website and information written in their local script, Khmer script, Lao script, Burmese script, Thai scrip and Vietnams script. At the time of the first type is not found domain Cambodia.gov. But Cambodia.org found that it contains brief information about Cambodia. It contains only Cambodia country demographic profile but there is no information about official activities of the land. government (official website tidal found, direct ministry). No official government website found. There is a website of ministries. Financial information is reported, in the form of a brief budget 2018. Constraints, Language used Khmer Language, making it difficult for analysis.

The financial information available on the website is mostly about the budget in the form of summaries or infographics. On the Singapore government website budget information is linked to a special link on budget. Where information about the budget is presented in a simple, not much use of numbers but more to the visualization.

On the government's main website, no government financial report was found. It could be that each country has different financial reporting. IPSAS requires government financial statements prepared on an accrual basis. The financial statements of the government are declared in IPSAS 1, "Presentation of Financial Statements" as the statement of financial position, statement of financial

performance, statement of changes in net assets / equity, cash flow statement and accounting policies and notes to the financial statements. <https://www.ifac.org/system/files/publications/files/ipsas-22-disclosu.pdf>. International Public Sector Accounting Standards (IPSAS) are the public sector accounting standards of choice for many countries of the world. Almost 70 countries have adopted IPSASs or are in the process of adopting IPSASs.(Sanderson and Schaik 2008). Asia countries that already adopted IPSAS are Indonesia (Harun et al. 2016), Malaysia (<https://www.pwc.com/my/en/assets/publications/towards-new-era-in-govt-accounting-reporting.pdf>), Srilanka

Related this finding, (Sukmadilaga, Pratama, and Mulyani 2015) stated that Two countries in ASEAN, Indonesia and Malaysia indicated that although Indonesia's government financial statements provide more disclosure rather than Malaysia's, but generally, disclosure level in both countries is low, indicate that both countries still has to increase their disclosure level in the future.

## Financial Information and Non Financial Information in Government Official Website

### Financial Information Available on Government Official Website

Table 4. Type Financial Information

NO		Macro Economic	Budget	Budget realisation report	Balance Sheet	Cash flow reporting	Notes of financial statement	Aset and Inventory list	procurement	Government accounting standard
1	Brunei	1	1 (data.gov.bn)	0	0	0	0	0	0	0
2	Cambodia	1	1 (mef)	0	0	0	0	0	0	0
3	Indonesia	1	1 brief budget	0	0	0	0	0	0	Accrual basis
4	Laos	Laos Script	Laos Script	Laos Script	Laos Script	Laos Script	Laos Script	Laos Script	Laos Script	Laos Script
5	Malaysia	MoF website	MoF website	MoF website	auditor website	auditor website	auditor website	auditor website	MoF website	
6	Myanmar	MoPF website (burmese script)	MoPF website (burmese script)	MoPF website (burmese script)	MoPF website (burmese script)	n.a	n.a	n.a	n.a	n.a
7	Philippines	Gov website	Ministry of finance Commission on Audit website	Commision on Audit website	Ministry of finance Commission on Audit website	Ministry of finance Commission on Audit website	Ministry of finance Commission on Audit website	Ministry of finance Commission on Audit website	Ministry of finance Commission on Audit website	Accrual basis
8	Singapore	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	
9	Thailand	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	
10	Vietnam	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	MoF website	

Source : official website of government, ministry of finance, accounting office, audit office

- Brunei has a fairly sophisticated official website. On the front page there is no financial information. But provided links related needs desired. For example, for investors interested in investing in Brunei, it will be related to [invest.go.bn](http://invest.go.bn). On this website link is informed about the attractiveness of Brunei, in terms of economic growth, GDP, GNP and non-financial form of population, area and future investment vision, who want to achieve the Vision of Brunei in 2035. More detailed financial information is not found on this website directly on the front page, but there is a link to [data.gov.bn](http://data.gov.bn) which provides more complete range of data related to the Brunei macro condition. Brunei has also informed about its information governance plans.
- Cambodia, no budget information was found. In the prime minister's website, the majority of information is non-financial information. There is the Cambodia Basic Law, which states that the regulation on the budget is regulated in the Act. Cambodia budget information found on the website of the ministry of finance. Access difficulties due to using Khmer Language script. Interesting, there is information about the Public Finance Management Reform Report.
- Indonesia has no links on other government websites, such as presidential websites or ministries. The financial information shown is a brief infographic. The majority of the information presented relates to the news of recently executed program activities and tourism
- Laos, there is no translate button to English, making it difficult to obtain  
Laos is now working with donors to improve availability of qualified accountants and set standards aimed at strengthening the quality of financial reporting in the country. Under a World Bank grant to strengthen the accountability of public and private financial reporting it has embarked upon a project to improve its legal framework and develop accounting courses. The country is trying to set the direction for the accounting and independent audit reform with an aim to improve financial reporting quality in compliance with the international standards to ensure accuracy and transparency of the data so that it can be tool for the micro- and macro-financial management, and to contribute to its poverty reduction effort. As part of this effort,

it plans to elaborate upon the accounting law and develop further legal instruments necessary for the adoption of periodic financial reporting standards in compliance with the international standards and the local socio-economic growth. It also plans to set financial reporting standards for different enterprise types, defining a transition period so that each enterprise has sufficient time to plan a gradual improvement to its accounting system to fully comply with the financial reporting standards. Simultaneously, it also plans to facilitate the adoption of international standards on audit and accounting and is working on two decrees to bring that to fruition. Finally, it also plans courses for accountants at the University level so that capacity constraints do not hamper their long term plans to improve accounting and auditing in Laos. <http://blog-pfm.imf.org/pfmblog/2011/09/lao-pdr-better-accounting-to-help-growth.html>

- Malaysia, the server is not responding for the observation period on the official portal of the Kingdom of Malaysia. Financial information obtained from the website of the Ministry of Finance and Accounting National Ministry. Fiscal and budget information available on ministry of finance website whether federal financial statement is available in Accounting National Ministry.
- Myanmar. Official government office of Myanmar president cannot access. Budget and financial information available in Ministry of Planning and Finance. Burmese script of the budget and financial report restricted the information being read and understand for international reader. Information for international reader friendly available at office of the auditor general of union. This is a general auditor of Myanmar government which inform the audit activity for public sector and private sector entity. Financial government report not available in this website. There is an information about the auditor function, which is The Office of the Auditor General of the Union conducts the audit work by means of the following three types of audit; (a) Financial Audit: Examination of financial statements to express auditor's opinion on whether the entity's financial statements are consistently prepared using

Generally Accepted Accounting Principles and whether these financial statements present true and fair position of operational result and financial position of the entity. (b) Performance and Operational Audit: Examination on whether the entities manage and utilize the resources such as means (personnel), money (finance) and material economically, efficiently and effectively. (c) Compliance Audit: Examination on whether the entities comply with prescribed law, rules, regulations, directives and orders in conducting its activities and financial transactions. (<https://www.oagmac.gov.mm/content/policy-objective-and-functions-office-auditor-general-union>)

- Philippines. three official government websites have been updated. Disclosure of information is reflected in the three government websites. On government websites, most contain information for citizens concerned with public services. The website of the Ministry of Finance and the Audit Commission contains complete and detailed financial reports. Compared to other countries, the Philippines has a transparent, complete and timely website. All central government and ministry finance reports are on this website, including, financial position statements, performance reports, cash flow statements and notes on financial statements.
- Singapore. Official government websites Singapore contains more non-financial information. More budget information is simply presented, which does not focus on quantitative figures. The Singapore government has its own website about the budget. On the website it informed its citizens about the budgeting process. Complete information about government programs to achieve established vision. It aims to invite citizens involved and have a concern on the development of the country. In Singapore information in the form of financial statements is available on the websites of individual ministries and organizations under the government. The financial statements contain government auditor reports in the form of auditor opinions, balance sheets, deficit surplus reports, cash flow statements and notes on financial statements.

The budget available on the government website of Singapore makes it easy for citizens to understand because it can be downloaded in English, Malay, Chinese and Tamil.

- Thailand. The Thai government has a major website, Thai Royal and Thai Prime Minister. This main website informs more about the day-to-day activities of the prime minister. In addition, Thailand has a special website integrative with government governance e called the Government Information System (GIS). This study has difficulty accessing financial statements at the level of detail because the website at the technical level uses Thai script.

GINFOGIS website collecting the database of Thai Government agencies, non-government organizations, state enterprise and so on, including the central, provincial and local administrations are compiled together whereby the unit structures, the authority's structures, objectives and tasks and executives name-list are shown the other relevant documents in which general public should be informed. Moreover, the website is an effective pathways-linkage, for the general public, to directly access to the important official data such as the official information center and e-services. These contributes to the official public relations practice and to the state policy on public dissemination purpose. [www.oic.go.th/ginfo/index\\_en.asp](http://www.oic.go.th/ginfo/index_en.asp)

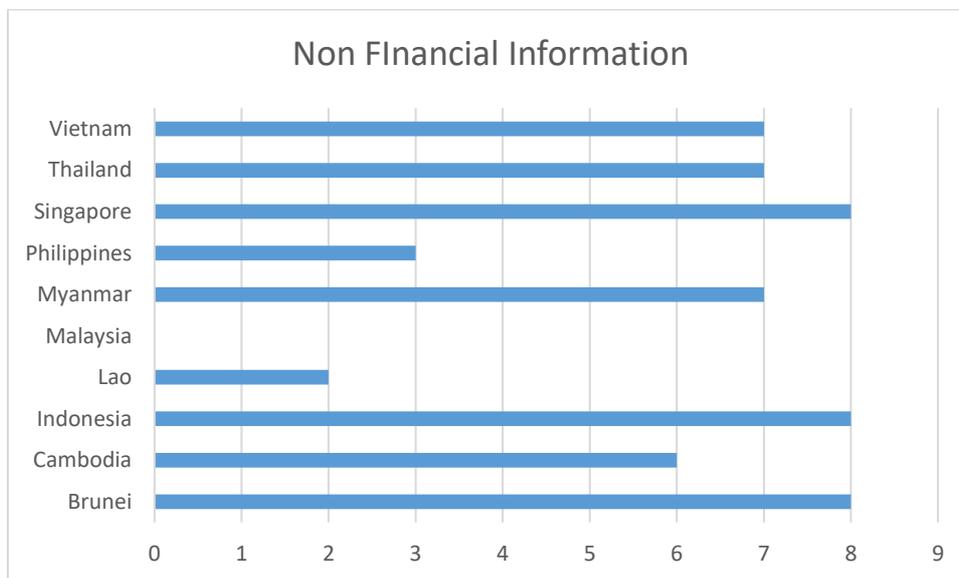
- Vietnam. The Vietnamese government website is the only website that informs how the policy on website management. The rule signed by Prime Minister Nguyen Tan Dung on June 25, 2008 explains that The Viet Nam Government Web Portal (VGP) is an integrated information portal and also a multimedia e-newspaper of the Government on the Internet, directly managed by the Minister-Chairman of the Office of Government (hereinafter called the Minister-Chairman). The Government Web Portal has the functions of (i) organizing, managing, and disseminating the Government's formal information on the Internet; (ii) being the hub of e-administrative information networks of the Government, ministries, ministerial agencies, governmental bodies, People's Councils and People's Committees of provinces and centrally-administered cities (hereinafter called Ministries, sectors, and localities), and other related

organizations; and (iii) integrating information about public services of the Government on the Internet.

<http://www.chinhphu.vn/portal/page/portal/English/About/ShowAboutDetail?categoryId=10000101&articleId=10000460>

### Non-Financial Information Available on Official Government Website

Table 5. Non-Financial Information



source. Appendix 3

Compared to the IFR index then the non-IFR index is higher. The average IFR index is 2.3 whereas the non-IFR average index is 6.3. It can be interpreted that nonfinancial information is considered more useful to share, especially information related to public services, National Agenda, National News, National Identity, President Identity and Ministry.

Singapore, Brunei Darussalam and Indonesia have the most informative in their website. Malaysia cannot access in period of observation. Laos do not have translation button in Latin transcript and English language. It makes difficult to observed the information.

## **Managerial Implications and Conclusions**

The average level of accessibility of obtaining financial information on the official website is 2.3. This represents a low value, which means it is quite difficult to obtain financial information at the central government level in Southeast Asian countries. This is relevant with the finding of a global survey **conducted** by International Budget Partnership [that](#) Most countries in Southeast Asia do not have a transparent budget process (<https://thediplomat.com/2015/10/southeast-asias-transparency-problem/>). The finding also has similarity in local government phenomena. In Indonesia, (Nuridin, Stockdale, and Scheepers 2012) show that some local government websites are not well managed and maintained and that local government websites do not comply with central government standardization requirements outlined in the e-government blue print. The other research, in Malaysia, local government website were maintained by 67% (Ghani and Said 2010). This is because the central government website is more informed of non-financial data. The majority of major government websites contain information about news activities of state officials daily. Although some countries have integrated their website to make it easier for citizens to obtain public services.

All ASEAN member countries have official websites, only Malaysia at the time of observation cannot be accessed. All government official websites, there are no government financial reports of each country, the majority contains non-financial information, containing information on government, politics, tourism conditions. The country of Brunei, Singapore has a more modern website with links to each ministry. Financial and budget information is provided in more detail on the website of the finance ministry.

The main government websites of the ten ASEAN member countries present diverse information that is grouped into financial and nonfinancial information. The information available on the main website (main portal, prime minister, president) provides more non-financial information, which contains

country profiles, current news related to activities carried out by the prime minister or president, information on public services, government programs, and links to all ministries in the lead cabinet.

The financial information presented on the main website is limited to the budget summary in the form of infographics. Some major websites provide information about the state macro condition. More detailed financial information in the form of budget information and financial reports are presented differ widely spread across several ministries. Here in detail, the conclusions for each country. The Government of Brunei has links to its own website with the name of open data. This website consists of various demographic, macroeconomic data including budget and detailed financial reports. The Government of Indonesia, presenting the budget information and its financial statements on the ministry's website, audited financial statements obtained on the website of the financial auditing body. The Malaysian government, the main website is inaccessible, the budget information obtained in the finance ministry, the financial statements (federal government and ministry) are presented on the website of the state accounting firm. Audited financial statements and auditor opinions are presented on the Malaysian Auditor's website. The Government of Singapore has 3 main websites (government, prime minister and president). The main government website contains information on public services to make it easier for citizens to interact with the state. On the website there is a special link called 2018 budget (name adjusted to current year). This website contains in detail the qualitative information related to the program budget program (where numbers are presented globally). The financial statements are on their respective websites.

There are three countries that are not friendly to international readers because the script used is a local script. Burma, Cambodia and Vietnam, it is difficult to elaborate, so that financial information cannot be found. This becomes one of the limitations of this study.

Future research needs to prove the population of a country, the policy on ICT adoption, the implementation of e government and public transparency policy also determine the financial information presented in the government website of a country. Further research also needs to consider the relationship between the transparency of information on the website can reduce the level of corruption at the state level.

## REFERENCES

- Bianchi, Andrea. 2010. "On Power and Illusion: The Concept of Transparency in International Law." In *Transparency in International Law*, 1–20. <https://doi.org/10.1017/CBO9781139108843.002>.
- Canziani, Bonnie Farber, and Dianne H.B. Welsh. 2016. "Website Quality for SME Wineries: Measurement Insights." *Journal of Hospitality and Tourism Technology* 7 (3): 266–80. <https://doi.org/10.1108/JHTT-02-2016-0009>.
- Craveiro, Gisele da Silva, Marcelo Tavares de Santana, and João Porto de Albuquerque. 2013. "Assessing Open Government Budgetary Data in Brazil." In *ICDS 2013, The Seventh International Conference on Digital Society*, 20–27.
- Dhoho A Sastro, M Yasin, Ricky Gunawan, Rosmi Yulitasari, Tandiono Bawor. 2010. *Understanding Public Transparency Laws*. Jakarta: Yayasan Tifa.
- Felik Yosi Irawan. n.d. "No Title."
- García, Ana Cárcaba, and Jesús García-García. 2010. "Determinants of Online Reporting of Accounting Information by Spanish Local Government Authorities." *Local Government Studies*. <https://doi.org/10.1080/03003930.2010.506980>.
- Ghani, Erlane K, and Jamaliah Said. 2010. "Digital Reporting Practices among Malaysian Local Authorities ." *Electronic Journal of E-Government* 8 (1): 33–44.
- Gopal, Ram D, Hooman Hidaji, Raymond A Patterson, Erik Rolland, and Dmitry Zhdanov. 2018. "HOW MUCH TO SHARE WITH THIRD PARTIES? USER PRIVACY CONCERNS AND WEBSITE DILEMMAS." *MIS Quarterly* 42 (1). MIS Quarterly: 143-A25. <http://search.ebscohost.com/login.aspx?direct=true&db=egs&AN=127748826&site=ehost-live>.
- Harun, Harun, Ian Eggleton, Karen V. Peursem, and Stuart Locke. 2016. "An Intergrated Model of Institution and Its Application in Understanding the Adoption of IPSAS in Indonesia Local Governments." *University of Canberra*.
- Iyer, Lakshmi Shankar, and Subba Rao R.N. 2017. "Transparency and Effective E-Governance: A Case of Telecentres in the Indian State of Karnataka." *Transforming Government: People, Process and Policy* 11 (4): 506–22. <https://doi.org/10.1108/TG-12-2016-0092>.
- Jerome Lim, Jamus. 2002. "East Asia in the Information Economy." *Info* 4 (5): 56–63. <https://doi.org/10.1108/14636690210453226>.
- Jiménez-Barreto, Jano, and Sara Campo-Martínez. 2018. "Destination Website Quality, Users' Attitudes and the Willingness to Participate in Online Co-Creation Experiences." *European Journal of Management and Business Economics* 27 (1): 26–41. <https://doi.org/10.1108/EJMBE-11-2017-0048>.
- Jones, David Seth. 2016. "Combatting Corruption in Brunei Darussalam." Edited by Dr Jon S.T. Quah. *Asian Education and Development Studies* 5 (2): 141–58. <https://doi.org/10.1108/AEDS-01-2016-0007>.
- Joseph, Corina. 2010. "Content Analysis of Sustainability Reporting on Malaysian Local Authority Websites." *The Journal of Administrative Science* 7 (1): 101–25.
- Mitnick, Barry M. 2015. "Agency Theory." In *Wiley Encyclopedia of Management*. <https://doi.org/10.1002/9781118785317.weom020097>.
- Nurdin, Nurdin, Rosemary Stockdale, and Helana Scheepers. 2012. "Benchmarking Indonesian Local E-Government." *16th Pacific Asia Conference on Information Systems (PACIS 2012)*. <https://doi.org/10.4018/978-1-4666-0324-0.ch032>.
- O'Neill, Onora. 2006. "Transparency and the Ethics of Communication." In *Transparency: The Key to Better Governance*, 75–90. <https://doi.org/10.5871/bacad/9780197263839.003.0005>.
- Priyadarshini, Chetna, S. Sreejesh, and M.R. Anusree. 2017. "Effect of Information Quality of Employment Website on Attitude toward the Website." *International Journal of Manpower* 38

- (5): 729–45. <https://doi.org/10.1108/IJM-12-2015-0235>.
- Pym, Anthony. 2012. “Website Localizations.” In *The Oxford Handbook of Translation Studies*. <https://doi.org/10.1093/oxfordhb/9780199239306.013.0028>.
- Sanders, John, and Laura Galloway. 2013. “Rural Small Firms’ Website Quality in Transition and Market Economies.” Edited by Dr Paul Jones, Professor Gary Packham. *Journal of Small Business and Enterprise Development* 20 (4): 788–806. <https://doi.org/10.1108/JSBED-01-2012-0009>.
- Sanderson, Ian, and Frans van Schaik. 2008. “Ipsas: Improving Accountability Across the World.” *Accountancy SA*.
- Styles, Alan K, and Mack Tennyson. 2007. “The Accessibility of Financial Reporting of U.S. Municipalities on the Internet.” *Journal of Public Budgeting, Accounting & Financial Management* 19 (1): 56–92.
- Sukmadilaga, Citra, Arie Pratama, and Sri Mulyani. 2015. “Good Governance Implementation in Public Sector: Exploratory Analysis of Government Financial Statements Disclosures Across ASEAN Countries.” *Procedia - Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2015.11.068>.
- Thongpapanl, Narongsak, and Abdul Rehman Ashraf. 2011. “Enhance Online Performance Through Website Content and Personalization.” *Journal of Computer Information Systems* 52 (1): 3–13.
- Tsao, Wen-Chin, Ming-Tsang Hsieh, and Tom M.Y. Lin. 2016. “Intensifying Online Loyalty! The Power of Website Quality and the Perceived Value of Consumer/Seller Relationship.” *Industrial Management & Data Systems* 116 (9): 1987–2010. <https://doi.org/10.1108/IMDS-07-2015-0293>.
- Verawaty, Verawaty. 2016. “The Comparative Analysis of Accessibility Index Value of Government Internet Financial Reporting In Indonesia.” *Applied Finance and Accounting*. <https://doi.org/10.11114/afa.v2i2.1214>.
- Wang, Youwei, Weihui Dai, and Yufei Yuan. 2008. “Website Browsing Aid: A Navigation Graph-Based Recommendation System.” *Decision Support Systems*. <https://doi.org/10.1016/j.dss.2007.05.006>.
- Weideman, M., and M Ngindana. 2004. “Website Navigation Architectures and Their Effect on Website Visibility -a Literature Survey.” *South African Institute for Computer Scientists and Information Technologists*.
- Welch, E. W., and C. C. Hinnant. 2003. “Internet Use, Transparency, and Interactivity Effects on Trust in Government.” In *Proceedings of the 36th Annual Hawaii International Conference on System Sciences, HICSS 2003*. <https://doi.org/10.1109/HICSS.2003.1174323>.
- Wen-ChihChiouaChin-ChaoLinbChyuanPerngc. 2010. “A Strategic Framework for Website Evaluation Based on a Review of the Literature from 1995–2006.” *Information & Management* 47 (5–6): 282–90.
- WENYONG ZHAO, BRIAN L. MASSEY, JAMIE MURPHY & LIU FANG. 2003. “Cultural Dimensions of Website Design and Content.” *Prometheus* 21 (1).
- Wong, Wilson, and Eric Welch. 2004. “Does E-Government Promote Accountability? A Comparative Analysis of Website Openness and Government Accountability.” *Governance* 17 (2): 275–97. <https://doi.org/10.1111/j.1468-0491.2004.00246.x>.
- Www.transparency.org. 2015. “WHY ASEAN NEEDS TO CONFRONT CORRUPTION IN SOUTHEAST ASIA.” 2015.
- Yuhertiana, I. 2011. “A Gender Perspective of Budgetary Slack in East Java Local Government.” *International Research Journal of Finance and Economics* 78.
- Zafarullah, Habib, and Noore Alam Siddiquee. 2011. “Transparency and Corruption in Southeast Asia.” In *Encyclopedia of Public Administration and Public Policy*, 1955–59. <https://doi.org/10.1081/E-EPAP2>.



## Appendix 1

NO	COUNTRIES	URL	ATTRIBUTE AT HOME PAGE LEVEL											
			CONTENT							INTERACTIVITY	NAVIGATION	INTERNATIONAL	VIDEO QUALITY	
			Country Profile/History	Public services	Investor Information	Macroeconomics Information	Budget Information	Government Information	Public Sector or Reform	Publication	Contact	Search	English button	Vi
1	Brunei	<a href="https://brunei.gov.bn/SitePages/Home.aspx">https://brunei.gov.bn/SitePages/Home.aspx</a>	1	1	1	1	1	1	0	1	1	1	1	0
2	Cambodia	<a href="http://pressocm.gov.kh/en/">http://pressocm.gov.kh/en/</a>	1	0	0	0	0	1	1	1	1	1	1	1
3	Indonesia	<a href="http://indonesia.go.id">http://indonesia.go.id</a>	1	1	1	1	1	1	0	0	1	1	0	0
4	Lao	<a href="http://www.laogov.gov.la">http://www.laogov.gov.la</a>	Not in latin script	Not in latin script	Not in latin script	Not in latin script	Not in latin script	Not in latin script	Not in latin script	1	1	1	1 (but couldnt work)	0
5	Malaysia		Could not retrieve											
6	Myanmar	President office,	Could not reach											
7	Philippines	<a href="https://www.gov.ph/philippine-government">https://www.gov.ph/philippine-government</a>	1	1	1	0	0	0	0	0	1	1	1	0
8	Singapore	<a href="https://www.gov.sg">https://www.gov.sg</a>	0	1	1	1	1	1	1	1	1	1	1	1
9	Thailand	<a href="http://www.thaiqov.go.th">http://www.thaiqov.go.th</a>	1	0	0	0	0	1	1	1	1	1	1	1
10	Vietnam	<a href="http://www.chinhphu.vn/portal/page/portal/English">http://www.chinhphu.vn/portal/page/portal/English</a>	1	1	1	1		1	1	1	1	1	1	1

## Appendix 2

NO	COUNTRY	STATUS	LANGUAGE/SCRIPT	1	2	3	4	5	6	7	8	9	10	TOTAL
1	Brunei	active	Malay/Latin Malay	1	1	1	0	0	0	0	0	0	0	3
2	Cambodia	active	Khmer/khmer	0	0	1	0	1	0	0	0	0	1	3
3	Indonesia	active	Indonesia/Latin	1	0	1	0	1	0	0	0	0	1	3
4	Lao	active	Lao/Lao	0	0	1	0	0	0	0	0	0	1	2
5	Malaysia	no active	Malay/Latin Malay	0	0	0	0	0	0	0	0	0	0	0
6	Myanmar	active	Burmese/Burmese	0	1	0	0	0	0	0	0	0	1	2
7	Philippines	active	Filipino/Latin	0	0	1	0	0	0	0	0	0	1	2
8	Singapore	active	English Malay mandarin Tamil/ Latin, simple Chinese	1	1	1	0	0	0	0	0	0	1	4
9	Thailand	active	Thai/Thai	0	0	1	0	0	0	0	0	0	1	2
10	Vietnam	active	Vietnamese/Vietnams	0	0	1	0	0	0	0	0	0	1	2

### Appendix 3

NO	COUNTRIES	TYPE OF INFORMATION								
		Public Service	National Agenda	National News	National Identity	President Identity	Ministry	National Act	Tourism	Public Administration Reform
1	Brunei	1	1	1	1	1	1		1	1
2	Cambodia		1	1	1	1	1	1		
3	Indonesia	1	1	1	1	1	1	1	1	
4	Lao	Can not find english error								
5	Malaysia									
6	Myanmar		1	1	1	1	1	1		1
7	Philippines		1			1	1			
8	Singapore	1	1	1	1	1	1			1
9	Thailand		1	1	1	1	1	1		1
10	Vietnam		1	1	1	1	1	1		1

# DEVELOPING DISTINCTIVE CAPABILITIES IN REGIONAL DEVELOPMENT BANKS IN INDONESIA

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## ABSTRACT

This study aims to analyze the possession of distinctive capabilities as activators capable of producing better performance than passive resource ownership. The study was conducted on the Regional Development Banks (BPD) in Indonesia. This research uses mixed method research design. The first stage was to collect questionnaire data from 26 BPD for quantitative data analysis. The second stage was the collection of information through in-depth interviews and focus group discussions with the leaders of BPD and the Association of Regional Banks (ASBANDA). The results show that the possession of functional capabilities has a strong influence in building distinctive capabilities. The findings indicate that BPD need to develop functional capabilities associated with the bank intermediation function. Success in intermediation is determined by capabilities in segmenting markets.

**Keywords:** distinctive capability, functional capability, cultural capability, regulatory capability, position capability, Regional Development Bank

**Topic:** Management and Leadership

## 1. INTRODUCTION

Research on distinctive capabilities in creating competitive advantage that contribute to the company's performance continues to grow today. Development of organizational structure, reputation, and innovation is conducted by adding strategic assets variable (Asgariyan, Babakhani & Khosravi, 2013). Possession of capabilities cannot be separated from the quality of human resources as the driver (Tikly, L. & Barrett, A. M., 2011).

Distinctive capabilities are derived from the embodied resources as feedstock capability gap. The capability gap used is developed from Foon (2011) with the functional, cultural, regulatory, and positioning gap capability categories resulting in sustainable competitive advantage and superior performance of companies in the service industry. Ownership of distinctive capabilities will be able to move tangible and materialized resources better. The ability to drive resources is what can bring competitive advantage.

The main objective of this research is to investigate the ownership distinctive capability in the BPD banking industry in Indonesia. The purpose of this study is to explain the results of research on how BPD utilizes their distinctive capabilities to produce better performance. The study was conducted on all BPD in Indonesia from July to October 2016 by sending questionnaires to respondents and interviewing informants. This study uses the banks incorporated in the category of BPD in Indonesia as the unit of analysis. The unit of

observation is the management of each bank, in this case the President Director or the authorized person representing the President Director.

Furthermore, this article will be structured as follows: First is the development of the literature used throughout the study. Second is the discussion of methodology research used. Third is explanation of the findings resulted from the study. Fourth are recommendations for implications, limitations and direction for further research.

## **2. LITERATURE REVIEW**

Hitt et al. (2015) states that resource-based models assume that the organization is a distinctive set of resources and capabilities, functions as a basis for strategizing the company and its ability to achieve above-average returns.

On the other hand, Parmigiani, et al. (2011) proposes that technical capabilities and relational capabilities impact on social performance and environmental performance. It presents two types of capabilities, namely technical and relational capabilities. Technical capability is a set of organizational routines based on science and technology in the management of supply and production processes. Relational capability includes the ability to design informal and contractual mechanisms to increase commitment between firms and stakeholders.

Next, Martelo, et al. (2012) suggests that distinctive competence shows the company's ability to create value creations, where distinctive capabilities demand a combination of resources and capabilities difficult to imitate by competitors. It states the company's ability to create value creations. It is further said that the high speed in environmental change and the increasing demands of competition make companies (e.g., banks) need a combination of resources and abilities that are difficult to imitate. For that reason, distinctive capability sets requirements for a combination of resources and capabilities difficult to imitate by competitors, due to increased competition demands.

Fawcett, et al. (2012) says that distinctive capabilities demonstrate practices that bridge organizational boundaries such as goal alignment, smooth and open communication, high levels of managerial interaction, expertise and resource exchange, and willingness to share risks and benefits, essential elements for the development of collaborative capabilities. It is stated that the nature of the distinctive capabilities is practically a tool for bridging organizational boundaries. These limits are target alignment, frequent and open communication, high-level managerial interaction, expertise and resource exchange, and willingness to share risks and outcomes. This property is an important element of the source of collaborative ability built.

Ajayi (2016: 6) proposes that distinctive capabilities are required by firms to translate resources into excellence and performance. Next, Gedajlovic, et al. (2012) states that the capability of value builders and difficult to imitate, such as superior reputation, privileged access to exclusive networks and family-derived social capital, become the basis of success for family enterprises.

On the other hand, Foon (2011) states that "in order to enjoy competitive advantage in the product/market segment, the difference to competitors must be felt by the market." The difference must be reflected in some product or shipping attributes that are key criteria for the market, in buying conditions, the most important thing for sustainability is the existing competitors, and potential competitors cannot or will not take the necessary action to close the gap. When a competitor can and will fill the gap, then the advantage is not sustainable. Therefore, it is important for a company to identify capabilities owned where the use of capability gap is a gap for competitive advantage. There are four categories of capability gap needed to maintain the continuity of competition: functional, cultural, position, and regulation.

The functional gap for companies with this capability will be able to be used to perform individual functions more effectively than its competitors. Employee knowledge is a tangible resource that produces distinctive competencies and helps the company to be different from its competitors. This capability is derived based on the skill, experience, or knowledge of employees who are the company's strategic assets. The assets are the firm's learning curve effect, innovation, strategic management, corporate entrepreneurship, new corporate forms and core competencies. Functional capabilities derived from the knowledge, skills, and experience of the work lead to the company's special skills to outperform competitors.

The cultural gap is the result of corporate capabilities that consistently innovate and adapt more quickly and effectively to environmental change than competitors. This capability is based on the quality of perception, learning ability, trust, and values of all members of the company. Corporate culture is also a strategic asset that is usually rare and difficult to imitate because it forms the distinctive personality of a company member or executive officer. Culture is built through a distinctive history within the company. In addition, corporate values, beliefs, knowledge, perspectives and assumptions are hard to describe and have a causal ambiguity that has not been understood.

The regulatory gap is derived from government control and agency authority over the activities of firms from a regulatory or legal perspective. The embodied resources of the regulatory gap are the company's intellectual property rights, licenses and agreements, patents, copyrights, contracts, trade secrets, and others.

The position gap is a consequence of past actions, resulting in reputation from customers, favorable location facilities, and more. Positive reputation is rare, so it is a source of competitive advantage.

From the above concepts, the distinctive capability definition used in this research is the concept developed by Foon (2011) that is the non-material resource as the raw material of capability gap in producing sustainable competitive advantage and superior performance of the company. This means that the capability is more focused on the development of non-material resources in the company as follows:

Table 1. Construct of Dimensions and Indicators of Distinctive Capabilities

<b>Dimensions</b>	<b>Indicators</b>
The Functional Gap	<ul style="list-style-type: none"> <li>▪ Superior service quality</li> <li>▪ Enterprise entrepreneurship</li> <li>▪ Experience on the learning curve</li> <li>▪ Innovation in the organization</li> <li>▪ Effective strategic management</li> <li>▪ New organizational format</li> <li>▪ Ownership of core competencies</li> <li>▪ Effective human resource management</li> <li>▪ Advanced information technology</li> </ul>
The Culture Gap	<ul style="list-style-type: none"> <li>▪ Tradition to be the best</li> <li>▪ Flexible culture to drive innovation</li> <li>▪ Culture of customer service oriented</li> </ul>
The Regulatory Gap	<ul style="list-style-type: none"> <li>▪ Privileges</li> <li>▪ Cooperation contract</li> </ul>
The Position Gap	<ul style="list-style-type: none"> <li>▪ Management skills</li> <li>▪ Staff skills</li> <li>▪ R &amp; D investment</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Healthy financial ratios</li> <li>▪ Leadership in industry</li> <li>▪ High ethical standards</li> <li>▪ Social responsibility</li> <li>▪ Recognition by stakeholders</li> </ul>
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Source: Summary of previous study

The construct was constructed by taking into consideration that the unit of analysis in this study is BPD, so the distinctive capability variable in this study is a noble resource. In order for such a sophisticated resource to produce sustainable superior performance, there must be a gap in each dimension to the dimensions of the competitor.

Based on the recapitulation of the distinctive capability concept of some experts and constructs of variable definitions built for this study, a distinctive capability development typology as an internal factor in the quest for competitive advantage is proposed. Typology is structured according to distinctive capability types: functional gap, cultural gap, regulatory gap, and position gap. This type of capability is associated with the cause or prerequisite of capability development. Next is the gap generated when capability is owned. Last is the consequence of capability ownership i.e. the benefits gained on capability ownership. The summary is presented in Table 2 below.

Table 2. Typology of Distinctive Capabilities

Distinctive Capabilities	Functional	Cultural	Regulatory	Position
Precondition	Advantages of previous performance	Shared values	Proximity to authority	Internal Strength
The gap produced	High standard of achievement	Superior ethos and culture	Regulatory rules	Competitive Advantages
Benefits	Higher performance	Higher productivity	Ease and alignment of the authority/regulator	Ease in Competition

Source: Summary of previous study

Based on the typology of distinctive capability, hypotheses can be arranged as follows:

1. Functional gaps are developed from past performance as a benchmark for better future performance.
2. Cultural gaps are developed from joint values as a higher productivity reference.
3. Regulatory gaps are developed from proximity to the authority as a reference to regulatory alignments.
4. Positional development capability gaps develop from internal strength as a reference in the face of competition.

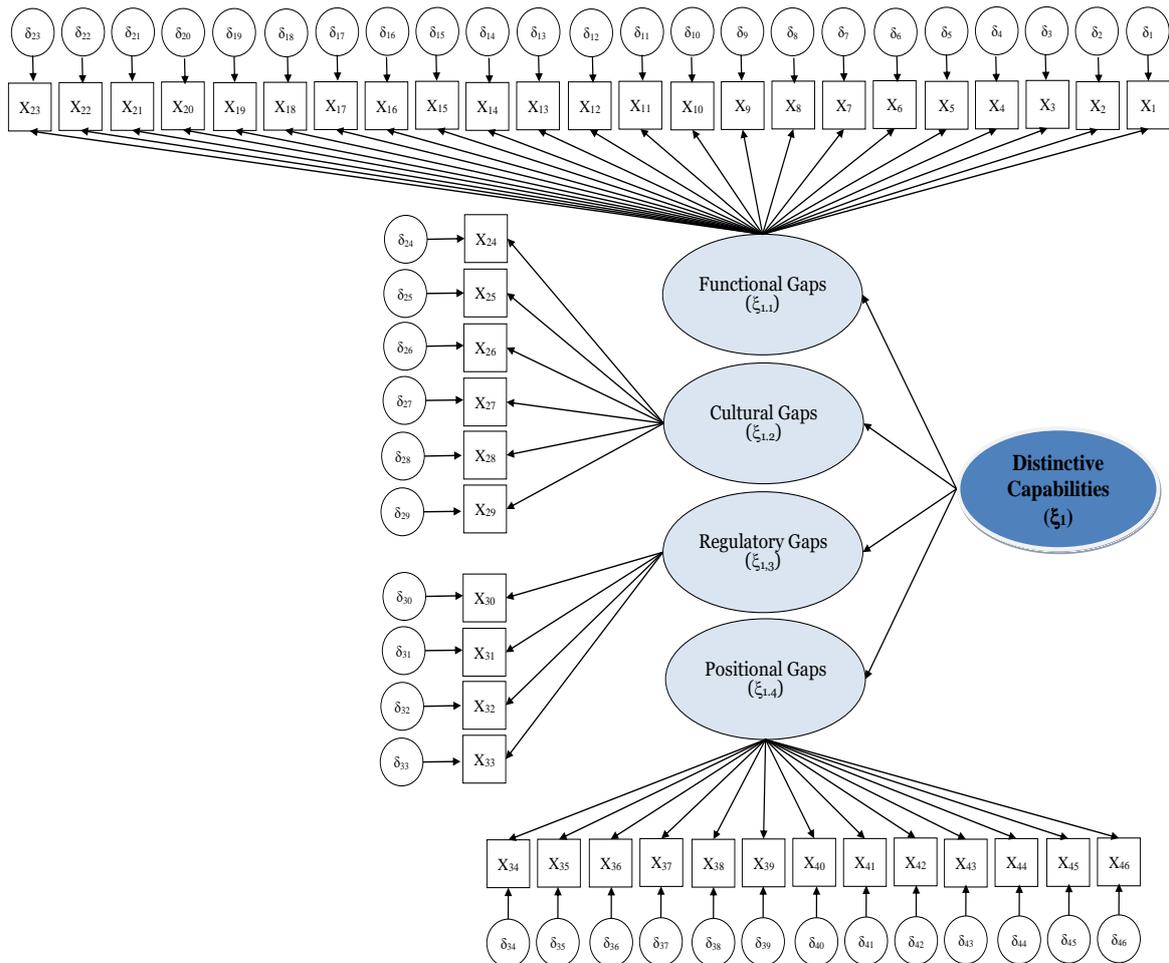


Figure 1: Hypothesis Testing Design

### 3. METHODS

Based on the secondary data from Bank Indonesia (BI) and Financial Services Authority (OJK), the population of all BPD in Indonesia until March 24, 2017 is 26 BPD. Given the small number of population, this research used all 26 BPD in Indonesia. The domain of this research is management strategy that emphasizes on observation of top management behavior in managing organization. Thus, the observation unit in this study is the top management of all BPD namely the President Director.

Data processing used is Partial Least Squares - structural equation modeling (PLS-SEM). The consideration is that PLS-SEM can still be implemented for small data if the population surveyed is small and the consequences of predictive validity are lower (Hair et al., 2014: 48). Furthermore, Hair et al. (2014: 16) provides a detailed description of the key characteristics of the PLS-SEM related data. It is said that in PLS-SEM: (1) The problem is not identified by small sample size, (2) In general, although the sample is small, PLS-SEM is still capable of producing high-quality statistical analysis, and (3) The larger the data, the expected estimates of the research are more accurate (consistent).

Recognizing that this study has a small population size and the potential consequences that the predictive validity of the study is lower, the solutions undertaken to strengthen the research findings are: (1) The sampling method was surveyed to 26 BPD and (2) Interviews and FGDs were conducted intensively to produce an in-depth description in the discussion of

research findings. So in this research, the mixed research method becomes very relevant to be implemented.

Survey was conducted by sending questionnaires to all BPD throughout Indonesia. The questionnaires contain questions relating to variables, dimensions and indicators prepared through literature studies and direct observations described by using answers from all the questionnaires. The questionnaires were submitted to all BPD as an analytical unit. The observation unit to answer each question on the questionnaire was the President Director of each BPD. Respondents who provide answers to the questionnaire are the President Directors or parties authorized by the President Director of BPD to become respondents.

The purpose of this study is to obtain a description of the variables studied and reveal the relationship between variables. Referring to the aims of the study, the design of this study uses a conclusive research design. According to Malhotra (2010: 104), conclusive research is a study that tests the specific hypotheses as well as testing the specific relationship. In practice, research design is made with the aim to test the hypothesis and know the relationship between the dimensions and the variables. The conclusive research design consists of descriptive research and/or causality research.

This research uses explanatory design in a two-phase mixed method, where the first phase involves collecting and analyzing quantitative data, and the second phase includes qualitative data collection and analysis done to strengthen the result of quantitative research (Creswell, 2013: 203). The quantitative results obtained in the first phase were further described qualitatively in the second phase. The design of this study was chosen because the data and quantitative analysis in the first phase aims to explain the problem of research. Furthermore, qualitative analysis in the second phase will explain and complement the statistical results by exploring the views of respondents and other inputs with more depth. In the process of QUAN result, identification of variables from the most to the least dominant size level is done. The result of this process is the list of variables up to the level of size that is supplemented by the candidate reasons for the cause as well as the QUAN conclusions supported by the findings of the previous process.

The process of sending and collecting questionnaires was conducted in July-August 2016. The questionnaires distribution and collection was conducted through Asbanda. From 26 questionnaires sent to all BPD, all were returned and answered fully by the respondents. Details of respondents who answered the questionnaire include: 12 President Directors, 4 Directors, 8 Division Leaders, 1 Sub-Division Leader, and 1 Section Head of BPD.

The result of model analysis of distinctive capability variable shows that there is one dimension with loading factor value less than 0.500, which is the dimension of "Regulatory Capacity Gap" with loading factor of 0.250. Nevertheless, the dimensions of the regulatory gap remain to be considered to linger within the model with argumentation; (1) the loading factor value is still positive and (2) the existence of this dimension does not interfere with the overall CR and AVE values.

Table 3. Measurement Model of Distinctive Capabilities

Dimensions	Manifest Variables	Standardized Loadings	R <sup>2</sup>	Variance Error
<b>Functional Gap</b>	$\xi_{2.1}$	<b>0.979</b>	<b>0.959</b>	<b>0.041</b>
Culture Gap	$\xi_{2.2}$	0.931	0.866	0.134
Regulatory Gap	$\xi_{2.3}$	0.250	0.063	0.937
Position Gap	$\xi_{2.4}$	0.903	0.816	0.184
<i>Composite Reliability (CR)</i>				0.879
<i>Average Variance Extracted (AVE)</i>				0.676

Source: Quantitative result of study

Based on the calculation results presented in Table 3, it is found that the functional dimension is the dimension with the largest loading factor. This means, based on the dimension, it can be said that the distinctive capability gap that BPD should develop is related to functional capability, namely the ability of human resources in all lines to exploit internal strength derived from tangible, intangible resources and organizational capability owned by BPD. One thing that is more keenly highlighted is that the most important functional capability is an effective marketing strategy through segmentation strategy. In this case, skills of BPD are needed in classifying wants-needs-demands from targeted market segments based on geographic-demographic-psychographic segmentations.

In the process of identifying outcomes for follow-up, evaluation of relevant quantitative findings should be followed up by identifying respondents from previous interviews, experts to engage in further research, and preliminary literature studies in the qualitative phase. Output of identification results for follow-up is the formulation of qualitative problems, list of candidate respondents for FGD with banking experts, questionnaires for each FGD, list of development model literature commonly used by the banking industry in Indonesia.

In the process of collecting QUAL data, confirmation of problem formulation was done by conducting FGDs with banking experts to confirm the findings in the quantitative phase and to get input on what, how and why this occurs as a result of quantitative findings.

The description of the questionnaire results was further confirmed by in-depth interviews, focus group discussions and direct observations conducted from May 2016 through March 2017. In-depth interviews were conducted to the President Directors, Directors and Executive Officers of several BPD. Focus group discussions were conducted for Asbando and OJK leaders.

#### 4. RESULTS

Based on the measurement of functional capability dimensions (Table 4), it is found that all indicators used to measure functional gap dimension are valid. Indicators most closely related to functional capability dimensions are indicators of "effective marketing strategies on segmentation choosing strategies".

The functional dimension gap analysis of functional capability is based on the superiority of individuals working in the company in working more effectively and efficiently than competitors. The functional gap is based on the inability of competitors to imitate and follow the company's success. In addition, the knowledge management possessed in managing the tacit knowledge becomes explicit knowledge of the company, creativity, and innovation ability, and the shortness of learning curve that must be passed into factors that build functional gap.

Table 4. Measurement Model of Functional Gap Dimension

Indicators	<i>Manifest Variables</i>	<i>Standardized Loadings</i>	R <sup>2</sup>	<i>Variance Error</i>
Effective marketing strategies on segmentation choosing strategies ( <i>Segmenting</i> : geographic, demographic, psychographic)	X15	0.852	0.725	0.275
<i>Composite Reliability (CR)</i>				0.971
<i>Average Variance Extracted (AVE)</i>				0.597

Source: Quantitative result of the study

Based on the measurements of the cultural capability dimensions (Table 5), it is found that all the indicators used to measure the dimensions of cultural capability are valid. Indicators most closely related to the dimensions of cultural capability are indicators of "bank culture in encouraging customer-oriented employees as the main thing to guide and consideration of thought, attitude, and action taken".

The analysis of the cultural gap dimensions is based on the capability of a company that consistently innovates and adapts more quickly and effectively to environmental change than its competitors.

Table 5. Measurement Model of Cultural Gap Dimension

Indicators	Manifest Variables	Standardized Loadings	R <sup>2</sup>	Variance Error
Bank culture in encouraging customer-oriented employees as the main thing to guide and consideration of thought, attitude, and action taken.	X28	0.949	0.901	0.099
<i>Composite Reliability (CR)</i>				0.967
<i>Average Variance Extracted (AVE)</i>				0.829

Source: Quantitative result of the study

Based on the measurement result of regulatory capability dimension (Table 6), it is found that all the indicators used to measure the dimensions of regulatory capability are valid. Indicators most closely related to the dimensions of regulatory capability are indicators of "having regulated privileges for the management of local wealth as a source of funds".

This is interesting to discuss, because it is very dilemmatic. On the one hand, BPD as government-owned enterprises need the implicit and explicit support of the local government to grow and develop. Most implicit support can be done through applicable laws and regulations, while most explicit support can be done by direct action supporting the placement of funds and the use of credit facilities from BPD. Both of these are very likely to be done by the local government. The problem is the clashing of Law on Prohibition of Monopolistic Practices and Unfair Business Competition. It is a dilemma that makes BPD on the one hand are in a dire need of support from the local government. On the other hand, BPD and the local government are struck on the issue of fair business competition.

Table 7. Measurement Model of Regulatory Gap Dimension

Indicators	Manifest Variables	Standardized Loadings	R <sup>2</sup>	Variance Error
BPD have regulated privileges for the management of local wealth as a source of funds	X31	0.898	0.806	0.194
<i>Composite Reliability (CR)</i>				0.928
<i>Average Variance Extracted (AVE)</i>				0.764

Source: Quantitative result of the study

Based on the dimension measurement result of position capability dimension (Table 7), it is found that all indicators used to measure position dimension of capability are valid. Indicators most closely related to the dimensions of the regulatory capability are indicators of "management capability in enhancing the bank's reputation/reputation as one of the BPD that serves as a role model for the banking industry in the region to the national".

Management Capability in improving the reputation of the bank as one of the BPD serves as a role model for the banking industry in the region to the national level. It is very easy to observe that most BPD are very concerned with the awards issued by various institutions, both government and private institutions. BPD are very proud of all the awards won.

Table 7. Measurement Model of Position Gap Dimension

Indicator	Manifest Variables	Standardized Loadings	R <sup>2</sup>	Variance Error
Management capability in enhancing the bank's reputation/reputation as one of the BPD that serves as a role model for the banking industry in the region to the national.	X63	0.860	0.739	0.261
<i>Composite Reliability (CR)</i>				0.953
<i>Average Variance Extracted (AVE)</i>				0.609

## 5. DISCUSSION

### Key Strategies for Distinctive Capabilities Development

The development of distinctive capabilities in the banking industry, especially BPD in Indonesia, is focused on functional capabilities. Functional capabilities are implemented in the form of superior service quality. Superior service quality is derived from experience with the utilization of learning curve. The learning curve is exploited by trying to repeat every success achieved and trying to avoid any failures that have ever been experienced. Through the use of learning curve, it can be expected that functional capability of the bank can grow faster.

Relevant functional capabilities in the management of BPD in Indonesia are an effective marketing strategy for clear segmentation (segmenting: geographic, demographic, psychographic) strategies. Market segmentation selection strategy is conducted so that banks can obtain a complete and useful map to market what products and services can be offered to customers in what segment.

Functional capabilities are closely related to the bank's intermediary role to connect the surplus units as depositors and deficit units as borrower customers. Banks that have mapped the market segment faced will be more efficient in using time and marketing costs. On the other hand, marketing will be effective in getting customers that match the products and services provided by banks. Referring to the level of corporate, business and functional strategy (Hitt, 2015), in the next paragraph is the main strategy for a distinctive capability that can be done.

Corporate level makes room for the bank's internal entities to develop themselves, innovate and improvise according to the established corridors. The space provided is used for the development of capabilities in meeting the needs of products and services to customers. The fulfillment of the requirement boils down to the creation and sustained business that is intertwined with the customers.

Business level consists of competitive and cooperative. Competitive is the deft use of momentum and act aggressively when finding the right market segmentation with products and services available. Regarding cooperative aspect, if products and services are not relevant to customer segmentation, product and service modifications are maximally available to meet customers' needs optimally.

Functional levels consist of marketing, finance, operations, and human resources. Marketing: optimizing the market segment that is owned by offering products and services

accordingly, so that business is done optimally. Finance: supporting marketing research in order to find the needs of customer products and services and the ability of banks to meet the needs for business continuity of the bank. Operations: operational support and innovation to meet the needs of products and services that provide satisfaction in customer perceptions. HR: innovative human resource ownership within the bank's SOP corridor in providing solutions to meet the needs of products and services for customers.

### **Complementary Strategies for Distinctive Capabilities Development**

Table 4 provides information beyond the functional capability dimensions. The distinctive capability variables based on rank consist of cultural capabilities, position capabilities and regulatory capabilities. Cultural capabilities with the highest indicators of bank culture in encouraging customer-oriented employees as the main thing become the guide and consideration of thought, attitude, and action. Position capabilities are the highest indicator of management capability in improving the reputation/reputation of the bank as one of the BPD, which serves as a role model for the banking industry in the region to the national level. On the other hand, regulatory capabilities have the highest indicator of having regulated privileges for the management of local wealth as a source of funds of the bank.

Regarding cultural capabilities, customer orientation can be expected to lead to customer loyalty to the bank. The awareness of the importance of customers for the bank continues to be echoed in every individual. Awareness is realized in serving transactions and business between the bank and the customer optimally in a professional manner. Banks need to own and inculcate shared values as a bank culture to be dedicated to customers.

In regulatory capabilities, banks need to have the capability to approach LGs in a professional manner to be able to set explicitly or implicitly to place funds that are not or have not been used in BPD. The willingness of the local government to put the funds in BPD well and correctly, which does not violate the rules and crime of business competition, can support the body of BPD flower.

For position capabilities, as a business vulnerable to reputational risk, banks need to sustainably build and maintain a reputation through high quality service standards and products that meet the customers' financial needs. Banks need to have the capability to drive all their resources to maintain and improve bank positions among competing banks.

## **6. LIMITATION**

This research has one main limitation, i.e. the small scope of research that is limited to the BPD group in Indonesia. In addition, this study has not examined the capability development offered for the implementation of the strategy towards the improvement of performance. Given the banking industry is loaded with distinctive capabilities, it is important to do research on distinctive capabilities, implementation strategies and company performance simultaneously. It would be more useful if the research is conducted on a broader scope of banking within a country.

## **REFERECENS**

- Ajayi, B. (2016). The Impact of Entrepreneurial Orientation and Networking Capabilities on the Export Performance of Nigerian Agricultural SMEs. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 2393957515619720.
- Asgariyan, Z., Babakhani, F. & Khosravi, M. (2013). The Study of Distinctive Capabilities of Organization from Kay Point of View and its Effect on Organizational Performance (Case study: Sharheza and Dehaghan health networks). *International Journal of Advanced Studies in Humanities and Social Science*, 1(12), 2784-2796.

- Creswell, J. W. (2013). *Research design: Qualitative, quantitative & mixed methods approaches* (4 ed.). Los Angeles: Sage publications.
- Fawcett, S. E., Jones, S. L. & Fawcett, A. M. (2012). Supply chain trust: The catalyst for collaborative innovation. *Business Horizons*, 55(2), 163-178.
- Foon, L. S. (2011). Foon, L. S. (2011). Capabilities differentials as strategic assets of firms: a pragmatic review. *SEGi Review*, 4(1), 143-64.
- Gedajlovic, E., Carney, M. & Chrisman, J. J. (2012). The adolescence of family firm research taking stock and planning for the future. *Journal of Management*, 38(4), 1010-1037.
- Hair, Jr., J. F., Hult, G. M., Ringle, C. M. & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage Publications.
- Hitt, M. A., Ireland, R. D. & Hoskisson, R. E. (2015). *Strategic management cases: competitiveness and globalization* (11 ed.). Stamford: Cengage Learning.
- Malhotra, N. K. (2010). *Marketing research: An applied orientation* (6 ed.). Pearson Education India.
- Martelo, S., Barroso, C. & Cepeda, G. (2012). Organizational Capabilities and Customer Value: A Dynamic Capability View. *European Conference on Knowledge Management* (pp. 676-682). Academic Conferences International Limited.
- Parmigiani, A., Klassen, R. & Russo, M. (2011). Efficiency meets responsibility: configuring an accountable and responsible supply chain. *Journal of Operations Management*, 29, 212-223.
- Tikly, Leon; Barrett, Angeline M;. (2011). Social justice, capabilities and the quality of education in low income countries. *International Journal of Educational Development*, 31(1), 3-14.

# Assessing Higher Education Performance in Indonesia: Between Efficiency Score and University Rank

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## ABSTRACT

This study aims to analyze the necessity of performance evaluation in higher education institutions based on benchmarking model of Educational Development Efficiency (EDE) to analyze the inclination of stakeholder in making decision. The finding of this study is to predict the inclination of stakeholder based on provided assessment factors. The results of this study support previous studies where input variables in EDE model significantly influence the quality of university outcomes. Furthermore, the quality of academic services and comprehensive quality of educational institution are emphasized by stakeholder in choosing program and university, while the rank issued by National Accreditation Institution of Higher Education in Indonesia contributes as supporting information. The originality of the paper is that this study has been done toward the stakeholders of public universities in Indonesia by examining their understanding of higher education performance and this done by National Accreditation Institution of Higher Education in Indonesia.

**Keywords:** *Performance Evaluation; Performance Efficiency; University Ranks; Educational Development Efficiency*

## I. INTRODUCTION

Education cost has increased of 15%-20% annually over inflation rate of 3,02%<sup>1</sup> in Indonesia. The increase of education cost boosts the expectation of stakeholders toward the quality of education as a trade-off on the cash paid. Nonetheless, it also drives a fundamental question whether a qualified education is really a matter to stakeholder. The quality of higher education institutions is related to its performance in resulting qualified and competitive outcomes. It is urged to explore relevant information needed by stakeholder for decision making, however, the information provided is likely difficult to understand. Hence, valuable information related to the performance of higher education institutions (efficiency) is highly demanded.

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<sup>1</sup> Based on the inflation data in Bank Indonesia, after Melting Down in 2008, inflation rate in Indonesia was fluctuated and has reached the highest rate (after inflation rate during 2008) in 2013. Over 2013, the rate was gradually decreased up to 3,02% on December 2016 which is the lowest rate. (Retrieved from <http://www.bi.go.id/moneter/inflasi/data/Default.aspx> on January 2017).

The performance of higher education institution, either academic and non-academic performance, has been extensively concerned by various parties. Both aspects determine the quality of outcomes which is credibly used as assessment factors of institutions. The accreditation of department is often used as a consideration in choosing a study program, since this accreditation is the result of assessment conducted by National Accreditation Institution for Higher Education based on standardized aspects. In many countries, the rank of university is highly considered in assessing the performance of university, especially to assess the outcomes. The university ranks (the accreditation of department) has been used extensively and it indeed represents the quality of institution performance.

The main academic activities in higher education are lecturing, conducting a research and getting involved in society that we could call as *Tridharma*<sup>2</sup> (three obligations) of higher education institutions in Bahasa. *Tridharma* has become tangible proofs of resources management of each institution. This is similar to the concept of measurement of departmental efficiency in higher education by Martin (2003) where by using accountable human resources, sufficient funding and infrastructure are expected to be the strength to support teaching and learning process. Therefore, the strength and weakness of higher education can be assessed from how the *tridharma* is held.

An autonomous of higher education institution to manage academic and non-academic activities, as stipulated in Act No.12 Year 2012 about Higher Education, enacts the legality of university to be a corporation<sup>3</sup>. Holding this form of legality, a university has boarder authority in establishing a funding mechanism as stipulated in Government Regulation No. 58 Year 2013 which a university as a corporation (PTN BH) can also obtain funds from operating activities by establishing business entities, which was adjusted to Government Regulation No. 26 Year 2015 to respond the discrepancy of autonomous implementation by higher education institutions based on previous government regulation. Therefore, utilization of university funds has become an endless issue by considering that virtually the budget and actual practice are always being evaluated and improved. In other hand, the performance of higher education can be evaluated based on this issue; whether each department in a university has optimally utilized the annual planned budget to improve the quality of services and outcomes.

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<sup>2</sup> Act of Republic of Indonesia No. 12 Year 2012 about Higher Education regulates higher education in Indonesia. Based on this act, *tridharma* of higher education institutions is the obligation of each institution and the academicians to conduct education, research, and society-based activities. The academicians are urged to be innovative, responsive, creative, skilled, competitive, and cooperative through *tridharma*.

<sup>3</sup> In Indonesia using Bahasa, based on Act No. 12 Year 2012 about Higher Education, a university as a corporation is known as PTN BH.

Previous studies found that efficiency of education institutions cannot be considered as a factor to choose a study program for stakeholder (students). The main consideration is whether a prospective university can help or ease them in finding a desired job after graduated (Kong & Fu, 2012). Hence, this study aims to examine whether the efficiency of higher education institution can influence the decision making of stakeholder. Using the perception of stakeholder (students) as an assessment, the efficiency of higher education institution will be assessed using standard assessment components in portfolio of each department. The proposed assessment is based on assessment standards from Indonesia Accreditation Institution for higher education. Further, the assessment results from stakeholders' perspective will be examined whether it is linear and positively related to the ranking system.

## II. LITERATURE REVIEW

### 2.1 University Ranks

Ranking system is one of simpler way to evaluate differences. This system has been used by stakeholder to assess the performance of higher education institution and as a consideration to making decision in choosing a university. University ranks have been extensively and significantly used since 2003. There are some international ranking systems often used, i.e., *Academic Ranking of World Universities* (ARWU) established in 2003 by Shanghai Jiaotong so that it is known as *Shanghai Ranking*; the first ranking system in United States, *the U.S. News and World Report's 'America's Best Colleges'* was established in 1983 by American culture developed back then; in European countries, *the British Times Higher Education Supplement and Quacquarelli Symonds (QS)*, as known as *Times Higher Education*, is an education consultant and currently in collaboration with *Thomson Reuters*; and the ranking system in Indonesia is nationally issued by Research, Technology and Higher Education Ministry.

Various ranking systems have been established and used for over a decade, however, every institution has different potential features that lead to inconsistencies of performance assessment. Hence, no harmonization in employing the assessment components and standards of each system that accommodate the unique features of institutions (Smith, 2004) will turn a ranking system become less reliable. However, a ranking system has become an important component to assess the performance of higher education institutions.

Initially, a ranking system of universities was proposed to provide a consideration in choosing a study program or a university. Smith (2014) has reviewed several criteria used as evaluation components to obtain university ranks, i.e. the quality of teaching and curriculum, the quality of departments in a university, and empirical studies and its implication as citations. Further, Smith (2014) explained that each of those components is measured using various methods. Therefore, university ranks cannot be used as a main reference in assessing whether the related university meets the expectation until there is a standard assessment to obtain the ranks.

## **2.2 The Efficiency of Educational Institution**

Both profit-oriented and non-profit-oriented institutions tend to improve its performance and standards along with the increasing of necessity (of sustainability) of relevant system, even the educational needs are urged to increase to improve its sustainability. At the beginning period of the establishment of educational institutions, stakeholders competed each other to study due to the limited number of educational institutions. It is significantly different from the current condition, where stakeholders have been faced with many options so that it is necessary to require the relevant and valuable information to making a decision (choosing a university and a study program). In this case, knowing the value of an educational establishments will be helpful.

The value of an educational institution varies from the value of a company in which the performance of an enterprise can be seen from the financial statements. Educational institutions have performance assessment standards or *benchmarking* that cannot be aggregately systemized and based on *ad hoc* (Asif, 2015). This is apparent from the system of ranking (*Ranking System*) which had been discussed in the previous subsection, where even though the components are used in performing the same assessment, but the results obtained will vary depending on the methods and procedures used in assessing these components. Therefore, the educational institution requires a *benchmarking* that is more systematic and standardized, so that each educational institution and each assessment institution will get the reliable results in accordance with the performance and free from bias.

The university ranking systems using components and different methods are less appropriate in measuring performance, especially the ranking will give the *brand* of university that will influence the point of views of stakeholders towards the performance of related universities. Actually, the rating system does not consider the improvement process of

education, where the assessment is likely made towards the outcomes regardless of inputs. For instance, the number of publications is considered as a reference in assessing the quality of research or researchers, or the employed graduates is used as an important proxy of educational outcomes. These components do not consider whether the colleges have or do not have available sources. However, a low-ranked university might be known that it effectively and efficiently provides less educational experience to students with limited resources.

The National Accreditation Institution of Higher Education (BAN PT) in Indonesia performs functions as the only institution that evaluates the performance of the program of study and educational institutions in Indonesia based on the portfolio of performance and publishes the accreditation grade as the result of evaluation. Different from the ranking system, the components and methods of assessment conducted by BAN PT are standardized for all of educational institutions in Indonesia. There are 7 assessment standards used by BAN PT, as follows: (1) Standard 1: vision, mission, goals and objectives, as well as the achievement strategies; (2) Standard 2: governance, leadership, management systems, and quality assurance; (3) Standard 3: students and graduates; (4) Standard 4: human resources; (5) Standard 5: curriculum, learning, and academic atmosphere; (6) Standard 6: financing and infrastructure, as well as the information system; and (7) Standard 7: research, societal service, and cooperation.

The fundamental question is who are the main stakeholders of educational institutions. They are students, the users of educational services provided by educational institutions, where they generally refer the results of an evaluation conducted by BAN PT to choose a study program and a university. However, stakeholders will only interpret the provided grade based on the category that is A for 'very good ', B for 'good ', and C for 'enough ', without knowing which components make an educational institution decided as a very good, a good, or a good enough institution. In addition, all components used in performing the assessment is not necessarily required by stakeholders in decision making process, moreover, when the main concern of stakeholder is the optimization of the *pay-off* between the quality and the money paid. In this case, the performance efficiency of educational institutions is very important to be considered in preferring the university.

Due to the process of education is naturally a process of changes, a fundamental question that will be questioned regarding the performance of educational institutions is related to the performance efficiency of the related institution. The ranking system based on the measurement of the outputs will be relevant and unbiased when using the same inputs (Wootton, 2003). Obviously, this is not a major issue at public

universities. Instead, the ideal objectives of the policy makers and stakeholders are the management of educational institutions that is accountable in providing optimal results in educating learners using the provided resources.

Basically, a measurement of efficiency is absolutely required in assessing the accountability of related institutions in organizing accountable activities (Wootton, 2003). But, absolute efficiency measurements on decision making units (DMUs) which produce a product, much more easily than an institution that provides services. Therefore, the absolute efficiency values of the institutions producing abstracts, as well as a learning at educational institutions, are not likely to be calculated.

Accordingly, there are two methods that can be used to measure efficiency. The first is *cost benefit analysis* which is not appropriate to be applied in educational institutions because all the components of the assessment should be quantified as a currency. The second method is by analyzing the relative efficiency values i.e. technical efficiency of the assessment component of an analysis unit. Technical efficiency has been broadly calculated using *data envelopment analysis* (DEA). Therefore, the preliminary observation of this study was done by calculating the efficiency of the performance of the program of study and the educational institutions using DEA.

From Figure 1, Scheerens (2004) explained that the basic criteria in evaluating the performance of an organization is based on the output, while the evaluation of outputs is supposedly for measuring the attainment by adjusting the results and the criteria of learners. In this case, the selection of variables used to evaluate the process should be significantly correlated with inputs and outputs. Benchmarking model by Scheerens (2004) known as *educational development efficiency* (EDE) identifies the ease of access on education, infrastructure, teachers, and the components of management as important factors that influence the development of education. In addition, it can be seen from Figure 2 that the number of new admitted and current students as learning outcomes are necessarily considered.

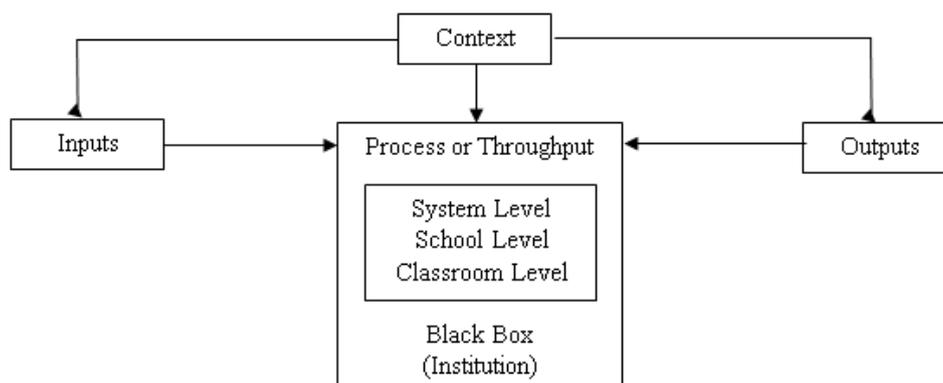


Figure 1. The Basic Function of Education System Model

The Basic Function of Education System model on Figure 1 is modified by Scheerens (2004). Scheerens (2004) assumes the educational institutions as a *Black Box*, where there are complex processes in educational institutions that combines inputs and constrains to become expected outputs, where the change of inputs into outputs occurs and is recorded in the related institutions. In this case, the quality of education is very influential. Further, Scheerens (2004) explains that to test the basic aspects on the basic function of education system model can be reviewed at least from 6 perspectives, i.e. *instrumental view*, *productivity effectiveness view*, *adaptation perspective*, *equity perspective*, *efficiency perspective*, and *disjointed view*.

### **2.3 The Attitude of Prospective Students**

The initial definition of attitude expressed by Thurstone (1928). According to Thurstone (1928), an attitude as one of a fairly simple concept, is the amount of individual influences over or against an object. Falk and Lieberman (2012) suggest that an attitude encompasses a long-term assessment, places, and ideas that possibly influence behavior, including those that directly affect political behavior, relationships between groups, and healthy behavior, among other consequences. Furthermore, Fishbein (1979) states an attitude as a concept of one simple dimension. Currently, most researchers agree that the simple concept of attitude by Fishbein (1979) is the most beneficial. It means that an attitude represents a happy or unhappy feeling towards the observed object. Beliefs (cognition) and the desire to Act (*conation*) are viewed to have a correlation with an attitude over a separated cognitive concept not a part of the attitude itself.

According to Ajzen and Gilbert (2008), an attitude, that is the tendency to respond with the degree of *favorableness* or *un-favorableness* to a psychological object, is an important concept and very useful to understand and to predict human social behavior. An attitude leads someone to consistently behave against similar objects. People do not interpret or react to each object with an entirely new way. It saves energy and reduce mind burdens, because it is difficult to change attitudes. The attitude of an individual forms a consistent pattern and so, to change a specific attitude may require number of adjustments in other attitudes.

Someone was born without specific attitudes and point of views, but rather the attitudes are formed throughout his growth and development. Where in social interaction, an

individual reacts to form a pattern of a specific attitude towards various psychological objects (Azwar, 1995). Loudon and Bitta (1984) explain that there are four attitude-forming sources i.e. personal experience, interaction with another individual or group, the influence of the mass media, and the influence of variables which is considered important. Swasta and Handoko (1982) add that the traditions, customs, cultures, and educational levels influence in shaping the attitude. Based on these definitions, it can be concluded that the determinants of attitude-forming are a) personal experience, b) the influence of others who are considered important, c) cultural influence d) mass media, e) educational and religious institutions, and f) the emotional factor.

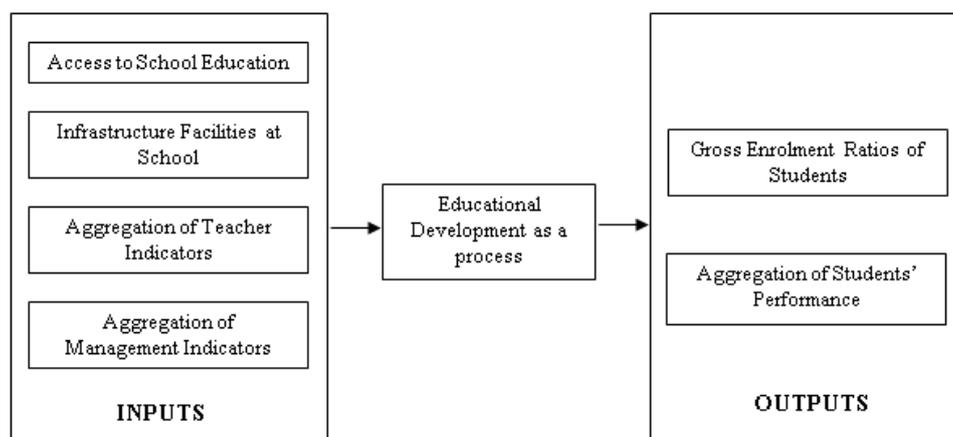


Figure 2. Modified Educational Development Efficiency (EDE)

## 2.4 The Performance Efficiency of Educational Institution for Decision Making

The main concern examined in this study is whether the performance efficiency of higher school affects the decision of prospective students in selecting a study program or a university. From some studies that assessed the performance efficiency of educational departments in universities, the degree of efficiency is able to resolve the complicated relationship between inputs and outputs in providing optimal outcomes (Agha, et al., 2013), both the monetary or non-monetary variables (Wootton, 2003; Kong & Fu, 2012), especially in the benchmarking process with the aim to improve the quality of education (Scheerans, 2004; Gourishankar & Lokachari, 2012). The attitude of stakeholders in determining the choice is based on the assessment process against an object based on personal experiences, social environments, mass medias, ideas, and especially based on educational environments (Thrusthorne, 1928; Fishbein, 1979; Falk & Lieberman, 2012) that build the trust (cognition)

and the desire to act. Therefore, the degree of higher school efficiency is expected to become a consideration by stakeholders in making a good decision.

Furthermore, the University Rankings has long been used by the *stakeholders* in assessing College will be chosen. Because of rating colleges not aggregate (Smith, 2012; Smith, 2014; Asif, 2015) and does not contain all the information needed stakeholders then rank colleges can moderate the influence of level of efficiency against the attitude of *stakeholders* (a candidate).

### III. METHODS

#### 3.1 Research Design

Generally, this research was started by analyzing the research potential and needs that directs it using a quantitative approach with descriptive analysis and binary logistic regression. The conceptual framework of this study and the data sources are adjusted to define inputs and outputs that will be tailored and adjusted with the purpose of data analysis in assessing the performance efficiency. After defining the inputs and outputs, we calculate the determination level of inputs towards outputs from the assessment of respondents which would be used as a reference against the performance assessment of courses and institutions. After obtaining judgments of students, then logit regression analysis with attitude of students as a dependent variable is performed to know how much the influence of higher school efficiency as the consideration of decision-making by stakeholders in selecting a course or a university.

Inputs and outputs used to assess the performance efficiency in this research are selected components of the portfolio of courses and colleges in accordance with the guidelines of accredited assessment issued by the Ministry of Research, Technology and Higher Education and the accreditation institution of higher education in Indonesia, that is tailored to the model of *educational development efficiency* (EDE) by Scheerens (2004) as shown in Figure 2.

#### 3.2 Research Sample

This research will be done to the courses in public cluster I universities<sup>4</sup> in East Java based on the rating system of BAN PT and that have the certificate of accreditation by 2015. There are 3 public universities and 29 bachelor programs that have the certificate of accreditation by 2015. The required data are obtained from 461 students that perceive the performance of the

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<sup>4</sup> Public Islamic universities are not included as the sample of this study since it is not under the authority of the Ministry of Research, Technology and Higher education instead under the authority of the Ministry of Religious Affairs. The list of universities is attached as Appendix 1.

corresponding courses and the university rankings by Ministry of Research, Technology and Higher Education in Indonesia. After deducting the respondents with missing values, outliers and double counted data, respectively 49, 11 and 1 observations, the number of the data used in this study is 400 observations.

### 3.3 Data Analysis

It has been mentioned that there are 2 procedures of data analysis conducted in this study. A descriptive analysis is conducted to describe the information based on the data obtained, including the reasons why respondents select the course. Furthermore, analysis of the determination is carried out in two stages where the first stage is to regress the determination of inputs toward outputs that reflects the performance efficiency of the courses and the second one is to analyze the inclination of higher school students in selecting courses based on their assessment against the courses after a while by using binary logistic regression.

On the second regression model, the dependent variable is *Inclined* as the tendency of students whether they keep choosing their courses or not, in order to gauge the attitude of prospective students in selecting a course or a university. Independent variables used is the assessment grade from students towards the faculties, facilities, services, and the overall value towards the institution. This analysis is intended to find out how efficient higher educational institutions affect the decision-making process of stakeholders (prospective students).

## IV. RESULTS AND FINDINGS

### 4.1 Data Description

The data of variables used in this study is described in Table 1. Most of 400 respondents used in this study is female students. Most of the students consider the tightness ratio when choosing a course (*Access mean of .71*) and are satisfied with the faculties, provided facilities and governance of institutions in improving the quality of academic services.

**TABLE 1. Data Statistics**

	Minimum	Maximum	Mean	Std. Deviation
<b>Institution</b>	1	3	1.63	.837
<b>Rank</b>	1	3	2.07	.623
<b>Gender</b>	0	1	.37	.482
<b>Access</b>	0	1	.71	.455
<b>Infrastructure</b>	-4.361	2.188	.025	1.690
<b>Teacher</b>	2.40	19.11	12.866	2.761

<b>Management</b>	7.66	39.44	29.309	5.261
<b>Outcomes</b>	1.57	16.39	10.692	3.184
<b>EduPoint</b>	4	10	7.94	1.014
<b>FacilPoint</b>	1	10	7.37	1.486
<b>ServPoint</b>	1	10	7.16	1.572
<b>InsPoint</b>	2	10	8.17	1.379
<b>Inclined</b>	0	1	.73	.445

Table 1 provides statistics of variables used in this study. This research uses 400 respondents from 29 courses of 3 cluster I universities in East Java. Variables used in this study are described in Appendix 2. The dependent variable used to examine the determination based on the EDE model is *Outcomes*, while the variable used to examine the tendency of stakeholders (students) is *Inclined*.

There are students giving low points to the quality of faculties (*EduPoint*), facilities (*FacilPoint*), the quality of services (*ServPoint*) and the overall assessment of institution (*InsPoint*), however, most of students are satisfied with the four components. This can be seen from the average grades more than 7 out of 10. In addition, most of students tend to choose to study in their current course. This is proven by the un-tabulated results that 66.3% of the total respondents keep selecting a course where they study because of their interest in the field currently studied.

## 4.2 Analysis Results

Table 2 provides the results of correlation analysis among variables used in this study. Variables in Panel A represent input variables (*access*, *infrastructure*, *teacher* and *management*) towards the output (*outcomes*). Almost all of the correlations among variables in this study is positive and significant. It shows that the increase in the quality of one component drives the increase in the quality of other components.

**TABLE 2. The Correlation Analysis**

<b>Panel A</b>							
	<b>Access</b>	<b>Infrastructure</b>	<b>Teacher</b>	<b>Management</b>	<b>Outcomes</b>		
<b>Access</b>	1						
<b>Infrastructure</b>	.146***	1					
<b>Teacher</b>	.004	.167***	1				
<b>Management</b>	-.009	.080	.424***	1			
<b>Outcomes</b>	.177***	.233***	.353***	.451***	1		
<b>Panel B</b>							
	<b>Rank</b>	<b>Gender</b>	<b>EduPoint</b>	<b>FacilPoint</b>	<b>ServPoint</b>	<b>InsPoint</b>	<b>Inclined</b>
<b>Rank</b>	1						
<b>Gender</b>	.113**	1					
<b>EduPoint</b>	.127**	-.044	1				
<b>FacilPoint</b>	.110**	.034	.487***	1			
<b>ServPoint</b>	.114**	.031	.453***	.638***	1		
<b>InsPoint</b>	.157***	-.030	.517***	.555***	.556***	1	

<b>Inclined</b>	.083*	-.065	.250***	.267***	.289***	.318***	1
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Table 2 provides the correlation matrix of 400 respondents from 29 courses of 3 cluster I universities in East Java. The correlation coefficients above are *Pearson coefficient*. All of the coefficients are significant at the level of 1%, 5% and 10% with indicators \*\*\*, \*\*, and \*, except for italics. Variables are described in Appendix 2.

Panel B shows the correlation among variables used to examine the tendency of students in selecting courses. Almost all of the correlations are positive and significant, except *Gender* which does not contribute to the assessment of student towards the performance of each institution. University ranks (*Rank*) contribute to the student's judgement to the components of assessment, where the higher the ranking of a university, the better the students' judgement of the quality of faculties, facilities, academic services and overall assessment of the institution. In other words, the institution can satisfy stakeholders. Accordingly, the higher the quality of the assessment components mentioned above, the higher the probability of student will choose the course or the university.

Table 3 provides the findings of this study. Panel A provides the results of the determination analysis of inputs on the output of EDE model for each institution and for overall. It can be seen from Panel A that almost all inputs positively and significantly influence the *Outcomes* of institution 1, 3 and overall institutions. The quality of faculties (*Teacher*) significantly influences the graduates of each institution. This is proven by a positive and significant coefficient of *Teacher* for each university and the overall. Outcomes of each university cannot be differentiated based on *Gender*, but it has a negative and significant effect on the *outcomes* for overall institutions. This shows that female students tend to have a better quality than male students.

**TABLE 3. Analysis of Determination**

<b>Panel A: Outcomes</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>Overalls</b>
<b>Access</b>	1.121 (2.729)* **	-.371 (-.523)	1.503 (2.734)***	1.069 (3.574)***
<b>Infrastructure</b>	.314 (2.810)***	.232 (1.331)	.067 (.445)	.276 (3.383)***
<b>Teacher</b>	.194 (2.627)***	.334 (2.875)***	.194 (1.811)*	.198 (3.651)***
<b>Management</b>	.212 (5.811)***	.070 (1.079)	.351 (6.110)***	.227 (8.021)***
<b>Gender (1)</b>	-.539 (-1.419)	-.769 (-1.260)	-.891 (-1.536)	-.571 (-2.030)**
<b>Adj-R<sup>2</sup></b>	.253	.217	.415	.289
<b>Panel B: Inclined</b>				

	Exp (B)	
<b>EduPoint</b>	1.167	.155 (1.200)
<b>FacilPoint</b>	1.115	.109 (.973)
<b>ServPoint</b>	1.223	.201 (3.867)**
<b>InsPoint</b>	1.350	.300 (6.762)***
<b>Gender (1)</b>	.673	-.397 (2.457)
<b>Institution</b>	.663	.411 (5.836)**
<b>Rank</b>	.855	.157 (.483)
<b>Cox &amp; Snell R<sup>2</sup></b>		.134
<b>Nagelkerke R<sup>2</sup></b>		.195
<b>Percentage Correct (1)</b>		95.5%

Table 3 provides the findings of this study. Panel A is the results of determination analysis of inputs as independent variables on the output (*Outcomes*) as the dependent variable. The analysis is differentiated based on institutions (1 = "Universitas Brawijaya"; 2 = "Institut Teknologi Sepuluh Nopember"; 3 = "Universitas Airlangga") and as overall institutions. Panel B provides the results of student inclination analysis in selecting courses based on students' perspective regarding the performance of universities and the ranking system. The results obtained are significant at level 1%, 5% and 10% with indicators \*\*\*, \*\*, and \*, respectively. Variables used are described in Appendix 2.

Panel B presents the results of the student inclination analysis in selecting courses based on the assessment results of courses' performance by students as respondents in this research. From the results above, it can be seen that the quality of academic services and educational institutions based on student assessment affect the student tendency in selecting courses where they learn. Even after they undergo a learning process in that institution, the tendency of students in selecting courses is significantly influenced by the educational institutions (*Institution of 0.411 with Wald of 5.836 at level of 0.05*), where the tendency of students to keep choosing the same course is 95.5%. In addition, the results show that university ranks based on BAN PT (*Rank*), the quality of faculties and provided facilities do not contribute to the tendency of students in selecting courses.

### 4.3 The Determinant of Higher Education Outcomes

The assessment of higher education performance is generally carried out by the Government as the authorities in the determination of standards implementation and evaluation. The evaluation conducted by the Government of Indonesia on educational institutions generally includes criteria for performance evaluation based on the output of the purpose of achievement measurement adjusted with the criteria of learners on the benchmarking model

of educational development efficiency (EDE). The EDE model developed by Scheerens (2004) identifies the determinants of the quality and development of education from the accessibility to education, infrastructures, educators and the institution governance. From the research conducted in three cluster I universities in East Java, the results obtained are consistent with EDE model where overall factors in this model affect the higher education outcomes.

The accessibility to education, infrastructure, educators and the institution governance can be assessed effectively and efficiently when the institution can help students get a proper education in accordance with the purposes of the course or to gain knowledge, experience and expertise as learned. So, after graduated from the course, students can find a job in accordance with their talents and interests. The assessment of performance efficiency can be done by examining the perception and assessment of students who after a while they are proceed in that environment (Falk and Lieberman, 2012). Consistent with the previous research, this study also proves that the inputs on EDE model significantly affect the higher education outcomes, but it also depends on the respective educational institutions: whether the educational institutions have a very good reputation to the stakeholders, or whether the institutions have the significant inputs to produce credibility and competitiveness outcomes, that are always taken into account (Fishbein , 1979; Ajzen and Gilbert, 2008; Falk and Lieberman, 2012).

#### **4.4 The Inclination of Students in Selecting Courses**

Students consider many aspects to determine a course and an educational institution where they will pursue higher education. From the collected data, 41.2% of respondents chose a course based on their interests and talents, 23% based on the popularity and good name, many of them consider the academic services, and some consider the quality of educators and education costs. Information obtained by prospective students largely comes from third parties, neither directly related to the individual concerned or indirectly by inquiring the information from the provider. However, the most credible information is derived either from experience or directly obtained by means of their processes (Thrusthorne, 1928; Fishbein, 1979; Falk & Lieberman, 2012) that drives the trust (cognition) and the desire to act. Therefore, in this study, the assessment of students who have proceed for some times, is considered as a reference to analyze the needs that will determine the tendency of prospective students in selecting courses.

The results of this study show that students emphasize the importance of academic service quality and the quality of educational institutions, or the credibility of educational institutions in creating graduates that can meet the expectation of stakeholders. Consistent with previous research, this study is not able to see the contribution of university ranks issued by BAN PT in determining the students' inclination in selecting courses. This is due to the issuing of university ranks based on aggregate information (Smith, 2012; Smith, 2014; Asif, 2015) and it does not reflect all the information needed by stakeholders. In this case, the ranking system of higher education issued by BAN PT can be used as supporting information for stakeholders in assessing the educational institutions.

## V. CONCLUSION

This research aims to provide an analysis of needs in assessing the performance efficiency of educational departments and institutions with regard to the usefulness of efficiency assessment results for stakeholders in decision making. The performance assessment of universities in Indonesia has been performed by National Accreditation Institution of Higher Education (BAN PT) with the standards applicable to all institutions of higher education in Indonesia. Nonetheless, stakeholders can only obtain the aggregate results provided by BAN PT to making decision without knowing the assessment results of which components are needed for decision-making. Therefore, this research uses a model of *educational development efficiency* (EDE) for assessing the efficiency of educational departments and institutions by analyzing the determination of inputs towards the output (the assessment components of courses and institutions accreditation established by BAN PT).

To achieve the purposes above, this research uses *educational development efficiency* (EDE) model to identify the input and output variables that will be used as the basis for the performance efficiency assessment of higher education. Furthermore, the identification results are used to examine the tendency of prospective students in selecting courses. In other words, this research is intended to give an overview about the urgency of university performance assessment based on the efficiency level. Furthermore, the results will be used as the foundation to identifying the inefficiency of university performance.

The results of this study suggest that, consistent with previous research, accessibility of education, infrastructure, educators and educational institutions governance can be assessed effectively and efficiently when the educational departments have been able to help students to get the appropriate education in accordance with the programs planned or to gain knowledge, experience and expertise as learned, so that, after graduated from these programs,

students can find the job in accordance with their talents and interests. In other words, the components as the input variables determine the quality of *outcomes* produced by the educational institutions. In addition, the quality of academic service and the reputation of educational institutions significantly affect the tendency of students in selecting courses.

A few things that need to be highlighted and resolved in this research is that the analysis of assessment components is necessary from educational institutions. Therefore, the availability of data from the portfolio of institutions performance is desirable. In addition, it is also required to control the respondents based on the length of studying on related courses and educational institutions.

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### REFERENCES

- Abbott, M., & Doucouliagos, C. 2003. The efficiency of Australian universities: A data envelopment analysis. *Economics of Education Review*, Co. 22 (1), pp. 89–97.
- Agha, S. R., Kuhail, I., Abdelnabi, N., Salem, M., & Ghanim, A. 2011. Assessment of academic departments efficiency using data envelopment analysis. *Journal of Industrial Engineering and Management*, 4(2), pp. 301–325.
- Asif, M. 2015. Determining improvement needs in higher education benchmarking. *Emerald Insight*, Vol. 22 No. 1, pp. 56–74.
- Chakraborty, K., & Mohapatra, S. 1997. Dynamic productivity, efficiency, and technical innovation in education: a mathematical programming approach using data envelopment analysis. *Economic Research Institute Study Paper*, ERI #97-08, Department of Economics, Utah State University, Logan, UT.
- Fare, R., Grosskopf, S., Forsund, F. R., Hayes, K., & Heshmati, A. 2006. Measurement of productivity and quality in non-marketable services – with application to schools. *Quality Assurance in Education*, Vol. 14 No. 1, pp. 21–36.
- Falk, E. & Lieberman, M. D. (in press). The neural bases of attitudes, evaluation, and behavior change. In F. Krueger & J. Grafman (Eds.). *The Neural Basis of Human Belief System*. Psychology Press.
- Fishbein, M. 1979. A theory of reasoned action: some applications and implications.
- Fishbein, M., & Ajzen, I. 2010. *Predicting and changing behavior: The reasoned action approach*. Taylor & Francis.
- Gourishankar, V., & Lokachari, P. 2012. Benchmarking educational development efficiencies of the indian states: a dea approach. *International Journal of Educational Management*, Vol. 26 No. 1, pp. 99–130.
- Hu, Y., Zhang, Z., & Liang, W. 2009. Efficiency of primary schools in Beijing, China: an evaluation by data envelopment analysis. *International Journal of Educational Management*, Vol. 23 No. 1, pp. 34–50.

- Kao, C., & Hung, H. 2008. Efficiency analysis of university departments: An empirical study. *Omega*, Vol. 36 No. 4, pp. 653–664.
- Kong, W. H., & Fu, T. T. 2012. Assessing the performance of business colleges in Taiwan using data envelopment analysis and student based value-added performance indicators. *Omega* 40, pp. 541–549.
- Lopes, A., & Lanzer, E. 2002. Data envelopment analysis-DEA and fuzzy sets to assess the performance of academic departments: A study at Federal University of Santa Catarina-UFSC. *Perquisa Operacional*, Vol. 22 (2), pp. 217 – 230.
- Martin, E. 2003. An application of the data envelopment analysis methodology in the performance assessment of the Zaragoza University departments. University of Zaragoza.
- Moreno, A., & Tadeipalli, R. 2002. Assessing academic departments efficiency of a public university. *Managerial and Decision Economics*, Vol. 23 (7), pp. 385 – 397.
- Scheerens, J. 2004. The quality of education at the beginning of the 21th century. *The Quality Imperative*, UNESCO.
- Sutherland, D., & Price, R. 2007. Linkage between performance and institutions in the primary and secondary education sector. *Working Paper* (558), Economic Department, Organisation for Economic Co-operation and Development (OECD), Paris.
- Smith, P. 2012. Ranking and the globalization of higher education. *Silpakorn University Journal of Social Sciences, Humanities, and Arts*, Vol. 12, pp. 35–69.
- Smith, P. 2014. University ranking systems are always imperfect: why not aggregate them? *4<sup>th</sup> Annual International Conference on Political Science, Sociology and International Relations (PSSIR 2014)*, pp. 72–77.
- Thurstone, L. L. 1928. Attitudes can be measured. *American Journal of Sociology*, 33, pp. 529-54.
- Waldo, S. 2001. Municipalities as educational producers—an efficiency approach. *Working Paper*, Department of Economics, Lund University, Lund.
- Waldo, S. 2006. Competition and public-school efficiency in Sweden—an empirical evaluation of second stage regression results for different models of non-discretionary inputs in data envelopment analysis (DEA). *Working Paper*, Department of Economics, Lund University, Lund.
- Wooton, S., S. 2003. Data envelopment analysis: a tool for secondary education ranking and benchmarking. Miami University, *UMI Dissertation Pro-Quest*.

## APPENDIX A

### List of Public Cluster I Universities Holding the Accreditation Certificate 2015 in East Java, Indonesia

Universities	Bachelor Program	Accreditation Rank
<b>Institut Teknologi Sepuluh November, Surabaya (6)</b>	Interior Design	B
	Urban and Regional Planning	A
	Statistics	A
	Environmental Engineering	A
	Material and Metallurgical Engineering	A
	Civil Engineering	A
<b>University of Airlangga, Surabaya (5)</b>	Accounting	A
	Environmental Science and Technology	A
	Management	A
	Indonesian Literature	A
	Japanese	B
<b>University of Brawijaya, Malang (18)</b>	Biotechnology	A
	Business Administration Science	A
	Public Administration Science	A
	Law Science	A
	Library Science	A
	Management	A
	Mathematics	A
	Tourism	B
	Indonesian Language and Literature	B
	English Language and Education	B
	Japanese Language and Education	B
	Urban and Regional Planning	A
	Chinese Literature	B
	Fine Arts	B
	Architecture Engineering	A
	Electric Engineering	A
	Chemical Engineering	B
	Water Source Engineering	A

## APPENDIX B

### Description of Variables

Variable	Description
<b>Access</b>	Accessibility of prospective students to obtain higher education
<b>Infrastructure</b>	Infrastructure supporting teaching and learning process
<b>Teacher</b>	Lecturers with educational background and skills as required
<b>Management</b>	Good university governance
<b>Outcomes</b>	The quality of graduates and other outcomes of educational institution
<b>Rank</b>	University ranks issued by National Accreditation Institution in Indonesia
<b>Institution</b>	The Reputation of university
<b>Gender</b>	A dummy variable, 1 for male respondents and 0 for female respondents
<b>EduPoint</b>	Assessment performed by students toward the quality of faculties
<b>FacilPoint</b>	Assessment performed by students toward the quality of infrastructure
<b>ServPoint</b>	Assessment performed by students toward the quality of academic and non-academic services
<b>Inspoint</b>	Assessment performed by students toward the quality of overall institution
<b>Inclined</b>	A dummy variable of the tendency of students in selecting a course. 1 is for those who keep selecting the course after giving an assessment and 0 is for those who choose another course than their current course

# Fiscal Decentralization and Community Welfare in the Regional Areas of Indonesia

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## Abstract

The purpose of this study was to analyze the implementation of fiscal decentralization in Indonesia towards the welfare of the people of Central Java. Multiple regression analysis tool with Fixed Effects Model (FEM) method, using 7 years series of data panel (2009-2015) and 35 regencies/cities in Central Java Province was applied. The study found that fiscal decentralization in Indonesia has a positive and significant impact on people's welfare in the district/municipality of Central Java Province. The increased private investment and economic growth also have a positive and significant impact on people's welfare.

Keywords: Fiscal decentralization, investment, economic growth, Human Development Index, welfare.

## 1. Introduction

The policy of regional autonomy and fiscal decentralization in Indonesia has been implemented since 2001. Through these policies, local governments have a wide range authority to generate revenues and allocate budgets to funding the needs of the local community. The implementation of fiscal autonomy and decentralization is the answer to the people's demands for good public services, democratization, and prosperity.

People's welfare is the main goal to be achieved by all levels of government administrations in term of not only economic aspect, but the welfare in a broad sense. The community welfare as one indicator is measured by human development index (HDI) (Todaro and Smith, 2014). In this term, human development is essentially oriented towards improving the basic capacity of the population to increase the opportunity to fully participate in any development programs. As a reference, United Nations Development Program (UNDP) has published the first concept of human development especially Human Development Index (HDI) in the *Human Development Report* periodical since 1990.

In this paper HDI is used as an indicator of community welfare in the local regions. If the HDI in a region is high, then the welfare of the people in that region is also better. Furthermore, the performance of HDI as a representation of the community welfare can be achieved by government expenditure as a realization of fiscal decentralization. Central Bureau of Statistic (2016) reported that the HDI of Indonesia and Central Java tends to increase every year. The empirical data of HDI in Indonesia and the average HDI of Central Java in five years can be seen in Table 1.

Tabel 1. HDI Indonesia and Average HDI Central Java Province Period of 2011-2015

HDI	2011	2012	2013	2014	2015
Central Java	66,64	67,21	68,02	68,78	69,49
Indonesia	67,09	67,70	68,31	68,90	69,55

Source: Central Bureau of Statistic, 2016

The aggregate of the HDI of Indonesia and Central Java Province falls into medium category and tends to increase every year. The gap of the HDI among regions is expected to promote competition in order to improve a better performance. The implementation of autonomy and decentralization has to encourage competition among regions to be the leader in providing excellent service and improving welfare of the communities (Bahl dan Wallace, 2001).

Several factors might influence the attainment of the HDI in a region, such as government spending, investment, and economic growth. When the government spending reflected in fiscal decentralization is precisely allocated to programs related HDI elements such as economy, health, and education, the result will affect the performance of HDI. A study by Prasetyo dan Zuhdi (2013) about the efficiency of government spending to HDI in 81 countries revealed that Singapore and Zambia successfully maintain their spending efficiency proven by their HDI result compare to the whole sample countries.

The economic growth with equal income distribution affects the HDI to be higher. The economic growth describes the output improvement and job opportunity to foster community welfare that is part of the government responsibility. Economic growth provides direct advantages to the improvement of human development, especially the poor, through income raising, which is spent for household spending allocation such as healthy food and good education.

A positive trend of economic growth might attract investors to increase their investment in various development programs that absorb workforces. The more workforces get involve in development projects, the more income they will generate, and the better welfare they will become. However, the welfare is not only proven economically by the increase of their purchasing power, but, most importantly, by the improvement of their health and education. Given that situation, this study aims to analysis the implementation of fiscal decentralization on the welfare of the people of Central Java of Indonesia.

## 2. Literature Review

According to UNDP (1996), human development is a process of enlarging choices for human. This implies that the focus of development is either human or community in a region. The concept of human development has a broad meaning as it is not only about economically welfare aspect but also health and access to education. Human development is significant if people prosper economically, healthy, and have access to education to improve their life. To assess it, the index of the three components of the HDI is calculated by comparing the differences between the indicator value and the determinant of its minimum value with the difference between the determinants of the maximum and minimum indicators. Briefly it can be written as follows (UNSFIR, 2000):

$$HDI = 1/3 [ X(1) + X(2) + X(3) ] \dots\dots\dots (1)$$

Where :

X (1) = Life expectancy index

X (2) = Educational index (2/3 index of literacy and 1/3 index of average length of schooling)

X (3) = Live standard index

The range of minimum and maximum values for indicators covered as a component of HDI is as follows (UNSFIR, 2000):

- Life expectancy : 28 - 85 (UNDP Standard)
- Literacy rate : 0 - 100 (UNDP Standard)
- Average length of schooling : 0 - 15 (UNDP Standard)
- Adjusted consumption per-capita : IDR 300,000 - IDR 732,720

Central Bureau of Statistics (CBS) interprets human development index as development achievement measurement based on a number of basic components of life quality. Three aspects are used to measure HDI; economic, health, and education aspects. The economic aspect is assessed from real income per capita adjusted for purchasing power. Health aspect is measured from life expectancy; while, educational aspect is calculated from the average length of schooling and literacy rate.

In addition, Ranis et al. (2000) broadly define human development as human endeavor to live longer, healthier, and more meaningful. Restrictedly, human development is interpreted as a reflection of human health and education status. Based on the previous definitions, consequently, the efforts to improve the welfare of the community by increasing the HDI should continue be done through applicable budget allocation in economic and social by the government and private supports.

Through fiscal decentralization, local governments have the authority to explore and maximize local revenues and allocate them according to the needs of the people. Fiscal decentralization can be a means of encouraging people's welfare in the regions to be more rapidly realized, as local governments are more flexible in anticipating and responding to the changes in the environment and the needs of local communities. By having the authority, local government will be able to optimize its financial resources to be allocated to the related sectors such as health, education, and markets. Therefore, government expenditure especially in those three sectors will affect the HDI (Velástegui, 2013).

Many potential decentralization contributes to human development and HDI performance as decentralization might push the expansion of real capabilities of the regions. As local government is the closest entity to the community and understands their characteristics, local governments should allocate resources efficiently and adequately to the provision of certain goods and services according to local priorities. Transparency, economic facilities, security, and social security might be improved through decentralization. In its implementation, people can monitor the use of resources well, especially at the local level. Economic facilities can be enhanced by cooperation among local governments, markets, and civil society as coordination among these three sectors tends to be more effective at the local level (Velástegui, 2013).

The constraint to apply fiscal decentralization is that the weakness of the local fiscal capacity and; therefore, investment from private sectors is required. In fact, the growing investment has a positive impact on the regional economy for investment might create jobs, promote economic growth, reduce poverty, and encourage regional development that overall will improve the HDI of the community.

Moreover, Khater (2012) describes human development using Cobb Douglass production function approach, where inputs (capital and labor) affect output (human development). Nicholson and Snyder (2008) stated that the function is an action to optimize input to obtain maximum output. Generally the production function is written as follows:

$$Q = f(K, L) \dots\dots\dots (2)$$

Where Q: output; K and L are inputs.

Economic growth accompanied by an increase in income per capita illustrates that the economic capacity and purchasing power of the people increases. The increased purchasing power can affect the quality of a person's health because the person can meet the basic needs, access health care, and education.

### 3. Research Methods

To analyze the impact of the implementation of fiscal decentralization on welfare in the regional level, the dependent variable of the Human Development Index (HDI) was used as a proxy for community welfare. HDI is an index of development achievement measured from three aspects; economic, health, and education aspects. Meanwhile, the independent variables were 1). Fiscal decentralization which is the ratio of the government expenditure in each district/city to total central government expenditure. 2) .Investment which is an overall private investment covering Foreign Investment (FDI) and Domestic Investment (DI). 3). Economic Growth which is a change of Gross Regional Domestic Product (GDP) per year according to constant price in percent units in 2000. The data used in this study were secondary data obtained from Central Bureau of Statistics, Regional Investment Board, and the Ministry of Finance. The analysis time period was 2009 - 2015, and the scope of this study was 35 districts/municipalities in Central Java Province. So, the form of the data was panel data.

#### Data analysis method

The tool to analyze the data was multiple linear regression with Fixed Effect Model (FEM) method. The research model is formulated as follows:

$$HDI = f(DF, INV, EG) \dots\dots\dots (3)$$

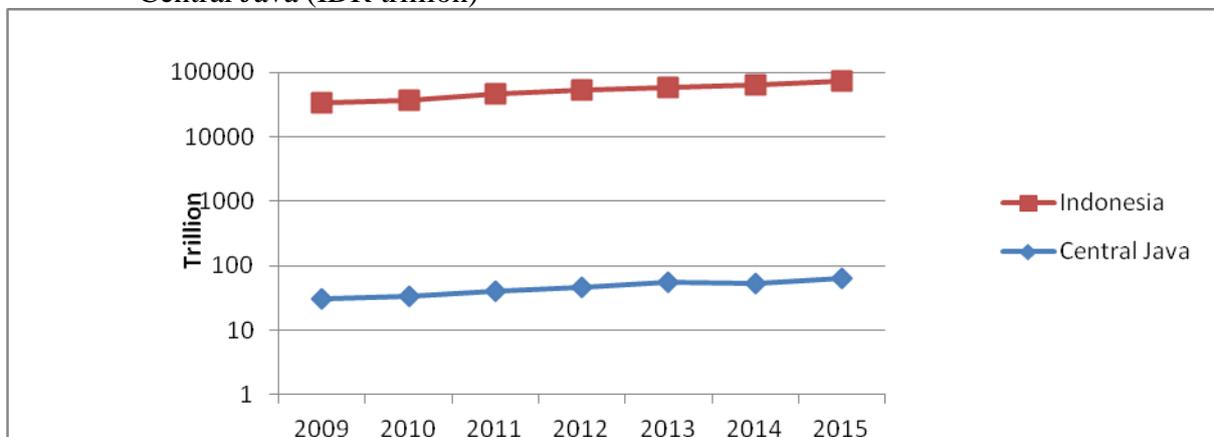
$$HDI_{it} = \beta_0 + \beta_1 DF_{it} + \beta_2 Inv_{it} + \beta_3 EG_{it} + \mu_{it} \dots\dots\dots (4)$$

where: HDI is Human Development Index (HDI); DF is Fiscal decentralization; Inv is Investment; EG is economic growth;  $\mu$  is the term Error;  $\beta_0$  is a constant;  $\beta_1$  .....  $\beta_3$  is the regression coefficient; i is cross-section data (35 regions); t is the time-series data (2009 - 2015).

### 4. Result and Discussion

The subject of this study was district/municipality government justified that the level of local government is directly related to public services and development. The consequence of the extent of decentralized authority by the central government to the regional level was followed by increased local government spending. The principle of money follow function was inherent in the decentralization of authority. The empirical data on local and central government expenditure from 2009 to 2015 are shown in Figure 1.

Figure 1. Central Government Expenditures and Total Expenditures of district/municipal in Central Java (IDR trillion)



Source: Ministry of Finance, 2016

Figure 1 shows that government spending, both central and local, is increasing every year. The fiscal policy taken by the central and regional governments was the expansionary fiscal policy aimed to improve community welfare through government spending. The estimation result of the independent variable to the dependent variable using Fixed Effect Model is shown in Table 1:

Table 1. Estimated Result of FEM on the Dependent Variables of HDI

Var. Independent	Coef.	Std. Error	t-Statistic	Prob.
Cons	75.80489	0.327532	231.4430	0.0000*
DF	0.155849	0.019559	7.968327	0.0000*
Inv	1.193507	1.333507	5.400995	0.0000*
EG	0.128929	0.056974	2.262955	0.0247*
R-squared	0.671373			
Adj. R-square	0.612633			
F-statistic	11.42955			
Prob (F-statistic)	0.000000			

Note: \*) Significant at  $\alpha = 5\%$

Based on the estimation result using FEM as shown in Table 1, the independent variable is able to explain the dependent variable of community welfare by 67%. Simultaneously, the independent variables of fiscal decentralization, private investment, and labor have a significant positive effect on HDI in the districts of Central Java. The analysis of each independent variable to the dependent variable is as follows:

#### **Fiscal Decentralization of Human Development Index (HDI)**

The result of the estimated regression showed that fiscal decentralization had a positive and significant impact on people's welfare. If there is an increase in fiscal decentralization, the people's welfare (HDI) will be pushed higher. The results of this study supported the earlier findings of Mehmood and Sadiq (2010) in Pakistan that there is a direct relationship between fiscal decentralization and community welfare. In the long run, effective implementation of fiscal decentralization would be able to improve human development, and autonomy in providing services could also improve the welfare of the people in the regional level.

The implementation of fiscal decentralization on the expenditure and income side positively influenced HDI as the tax autonomy and the effort to generate income from the available source was able to gradually reform the condition, while at the same time slowly decreases high distortion. The result of Soejoto et al. (2015) also proved that fiscal decentralization positively affects human development. In general, financial decentralization had a positive and significant impact on HDI. The improvement of the financial decentralization as a balance grant to an autonomous region could be used to finance local expenditures, particularly public spending on health and education. Qureshi (2008) suggested that high spending on education and health sectors will result in better outcomes in human development. Meanwhile, Mirza's findings (2012) also showed that capital spending has a positive effect on human development index.

The finding of this study was also in line with that of Edeme's (2014) in Nigeria that the impact of public spending on HDI proved to have a positive and significant impact. The government spending on education has the highest impact on HDI, followed by health, agriculture, rural development, energy, environmental protection, housing, and water resources; and has a marginal positive impact on human development. The findings of Ranis

et al (2000) showed that public spending on health and education has a significant effect on human development.

However, different finding was proposed by Ehimare et al. (2014) that government spending on education has a detrimental effect on educational performance, so policies relating to improving education should be reviewed. The formulation of a policy shall appropriately consider the increase of budget allocations to education sector. Incentives shall be given to teachers and trainers involved in human capital development in the education sector. Moreover, Udoh et al. (2015) found that decentralization of expenditure has a negative impact on human resource development. The pattern and characteristic of decentralized spending in Nigeria, in the long run, seems to support the adoption of inefficient resources as governance costs raises rather than to ensure cost-effectiveness in the provision of public services.

Under Law No.33 of 2014, the structure of local government spending in Indonesia is divided into direct and indirect spending. Direct spending are allocated for capital goods and productive sectors; while, indirect expenditures are allocated to civil service salaries and public goods maintenance. Empirical facts showed that the allocation of regional spending was dominated by indirect spending, resulting in the effect of economic and social multiplier had not touched small community. Therefore, to accelerate the achievement of HDI, local governments had to change the allocation of expenditure to direct expenditure with proportion of 65% for direct expenditure and 35% for indirect spending. The direct spending should primarily be invested on public goods such as infrastructure, education, and health to accelerate the achievement of HDI and community welfare.

### **Investment in Human Development Index (HDI)**

The estimated result of the investment variable on welfare (HDI) showed that investment had positive and significant effect to welfare (HDI). The increased value of investment (FDI and DI) would encourage economic and social activities and improve the achievement of HDI in Central Java. The realization of investment in Central Java tended to increase from year to year as in 2010, the realization of investment in Central Java was IDR 10.7 trillion, and increased to IDR 26.04 trillion in 2015 (Regional Investment Board of Central Java Province, 2016).

According to Neo Classical theory (in Todaro, 2011), economic growth requires investment, economic growth is part of economic development, and economic development will have an impact on human development as measured by HDI. Investments invested in a regional administration might take several forms; funds, projects, or other activities. Whenever the fund is allocated to activities related HDI indicators, the performance of HDI in that particular region will improve. Meanwhile, human resource investment in the form of education and training can develop skills and human resource capabilities and improve the quality of life of the community.

The finding of this study is in line with the study of Suwandi (2016) who argued that investment has a positive effect on HDI. HDI is defined as the level of persons' ability to meet their basic needs such as clothing, food, home, education and health. HDI is also defined as the level of accessibility of persons in having production factors that they can use in the production process; so that, they might get compensation from the use of the production factors. The compensation in the form of income might be used to meet the basic needs and improve the quality of life. The result of this study also supported the previous finding of Gohou and Soumare (2011) that Foreign Direct Investment (FDI) has a strong impact on people's welfare. Investments have proven positively and significantly reduce poverty and improve people's welfare/quality of life. Investments can create jobs, improve

employee skills, stimulate technological developments, reduce poverty, and improve wellbeing.

In addition, Reiter and Steensma (2010) pointed out that FDI has a positive and strong influence on human development improvement. The effect of investment on human development is also positive and strong when the level of corruption in a region is low. From the perspective of Neo-classical economy, FDI in developing countries is considered an integral part of economic growth, and the best economic development occurs when the nation plays a limited role in controlling the market (Cave, 1996, Hymer, 1976, Kindleberger & Herrick, 1977; Todaro, 1989 ; Vernon, 1966 in Reiter and Steensma, 2010). Developing countries directly get benefit from FDI through capital inflows, tax revenues, and employment, and indirectly through technological spillovers, and knowledge, and access to overseas markets. According to Ilegbinosa (2013), the accumulation of human capital by the nation is considered an investment decision. He argued that investment in human capital has been a major source of economic growth for individual, communal, and national in the developed countries.

Investment would encourage capital accumulation, increase potential output, and stimulate economic growth for a long period of time. Therefore, in the macroeconomic context, the role of investment was so important that the economy and prosperity grew and increased fast. However, it should be realized that the results of investment in the framework of human development could not be directly given benefits to the community as their impact to human development took time to be realized.

### **Economic Growth on Human Development Index (HDI)**

The estimation result indicated that economic growth had a positive and significant impact on welfare (HDI). The long-term of economic growth of a country needed to be supported not only by the increase of physical capital stock and of labor, but also the improvement of the quality of human capital and the utilization of technological progress. Economic growth increased the supply of resources for human development. The increased resources followed by proper allocation and wider distribution of opportunities, particularly employment opportunities, might encourage better human development.

Economic growth had to be accompanied by economic development. According to Todaro (2011), development is a process of improving the quality of all aspects of human life, one of which is the improvement of standard of living (income, level of food consumption, clothing, housing, health services, education, and others) through the process of economic growth. The growth of the economy is expected to improve the quality of human resources followed by the improvement of the quality of health and education. However, the finding of Palinescu (2015) revealed that there is a positive and significant relationship between human capitals with GDP per capita as human capital has proven to influence the rate of innovation and the rate of technological diffusion.

Meanwhile, the result of this study was in line with the previous findings from Ranis et al. (2000) that economic growth (proxy GDP per capita) significantly affects human development. GDP per capita illustrates the economic capacity of the community as the growth of GDP per capita or the improvement of the people's economy is proven to improve the quality of health, economy, and education of the community. Human development is defined as the extension of society's choice by enabling them to live longer, healthier, and more meaningful. There is a strong relationship between economic growth and human development. On one side, economic growth provides resources to enable sustainable improvements in human development and allows the enhancement and improvement of the society welfare from the aspects of health, education, and economy. On the other hand, improving the quality of the workforce is an important contributor to economic growth.

The result of this study was also in line with the study of Suwandi (2016) stating that there is a positive relationship between economic growth and HDI. When there is an increase in economic growth in a local area, the HDI in this area will also increase. Furthermore, he argued that economic growth has a positive impact on HDI in Fak-Fak, Papua. The economic growth in Papua leads to the increase social integration and solidarity and expands opportunities to access health facilities, education, housing, and social protection. The increase of the welfare of the community in a broad sense leads to the increase of the HDI as the economic growth has a positive impact on the HDI community in the local region.

Economic growth which increased the growth of output per capita intensified the purchasing power of the people and ultimately led to increase their prosperity. However, high economic growth did not always ensure that the welfare of the society might also be high. The economy grew well when the growth was accompanied by equal income distribution to avoid social inequality. Furthermore, the performance of HDI reflected the actual improvement of people's welfare identified from the aspects of health, education, and purchasing power.

## 5. Conclusion

Based on the empirical data and analyses in the previous section, it can be concluded that the implementation of fiscal decentralization in Indonesia can improve the welfare of the people living in the regency/municipality of Central Java Province. In addition, the increase in the realization of the number of private investment (FDI and DI) and economic growth positively affect the welfare of the community. This condition suggests that the increasing realization of private investment and economic growth will further encourage the welfare of people in Central Java.

The study recommends that local governments apply good governance principles, and are strongly committed to supporting economic growth and human resource development by implementing allocation functions effectively and efficiently. . Beside that, to accelerate the achievement of HDI, local governments had to change the allocation of expenditure to direct expenditure with proportion of 65% for direct expenditure and 35% for indirect spending. The direct spending should primarily be invested on public goods such as infrastructure, education, and health to accelerate the achievement of HDI and community welfare.

## 6. References

- Bahl, Roy W. and Sally Wallace.(2001). *Fiscal Decentralization: The Provincial-Local Dimension. Fiscal Policy Training Program 2001*. Fiscal Decentralization Course, July 23-Augst,2001. Atlanta-Georgia. World Bank Institute and Georgia State University, Andrew Young School of Policy Studies.
- Central Bureau of Statistics. 2016, Central Java In Figures, Semarang, Central Java Indonesia
- Human Development in Nigeria: Evidence from Panel Data. *IOSR Journal of Humanities and Social Science Volume 19, Issue 9 September 2014*.
- Ehimare, Alex Omankhanlen. Oghene, Ogaga Joshua O. Obarisiagbon, Imuetinyan, Emmanuel Barr. Okorie, Emena, Uchechukwu. (2014). The Nigerian Government Expenditure on Human Capital Development: An Efficiency Analysis. *European Journal of Business and Social Sciences*, Vol.3, No. 7, pp 0113,October2014.P.P.01-13URL:<http://www.ejbss.com/recent.aspx-/ISSN:2235-767X>
- Gohou, Gaston dan Issouf Soumare. (2012). Does Foreign Direct Investment Reduce Poverty in Africa and Are There Regional Differences. *Elsevier Volume 40 No. 1 pp. 75-95*.

- Ilegbinosa, I.A. (2013) Human Capital Investment As An Effective Tool For Economic Development in Nigeria, *International Journal of Management and Business Studies*, 3(1), 7-13. On European Journal of Business and Social Sciences, Vol.3, No. 7, pp 0113, October 2014. P.P.01-13 URL: <http://www.ejbss.com/recent.aspx-ISSN:2235-767X>
- Khater, E. (2012). A Cobb Douglass Function Based Index for Human Development in Egypt. *Int.J.Contemp.Math.Sciences*. Vol.7.2012.No.12.591-598.
- Law no. 32 of 2004 on Regional Government
- Mehmood, Rashid and Sara, Sadiq. (2010). Impact of Fiscal Decentralization on Human Development: a Case Study of Pakistan. *Biomedsearch Volume 49, Issue 4, 2010*.
- Ministry of Finance of the Republic of Indonesia, (2017). Transfer Policy to Local and Village Funds. Director General of Fiscal Balance.
- Nicholson, Walter and Christopher Snyder. (2008). *Microeconomic Theory: Basic Principles and Extention*. Tenth Edition. Thomson: South-Western.
- Palinescu, Elena. (2015). The Impact of Human Capital on Economic Growth. *Elsevier Procedia Economics and Finance 22 (2015) 184-190*.
- Prasetyo, DA. and Zuhdi Ubaidillah. (2013). The Government Expenditure Efficiency towards the Human Development. *Procedia Economics and Finance 5 ( 2013 ) 615 – 622*. Available online at [www.sciencedirect.com](http://www.sciencedirect.com)
- Ranis, Gustav. Frances Stewart, and Alejandro Ramirez. (2000). Economic Growth and Human Development. *World Development* Vol 28 No. 2 pp. 197-219.2000
- Ranis, Gustav. (2004). “Human Development and Economic Growth”, *Center Discussion Paper*, No. 887, p 1-13. Dalam Eka Pratiwi Lumbantoruan dan Paidi Hidayat. Analisis Pertumbuhan Ekonomi dan Indeks Pembangunan Manusia Provinsi-Provinsi di Indonesia (Metode Kointegrasi). [http://www.google.co.id/?ei=SEr1WLKOMYvSv3p\\_4Dg&gws\\_rd=cr#q=jurnal+pertumbuhan+ekonomi+dan+HDI&spf=68](http://www.google.co.id/?ei=SEr1WLKOMYvSv3p_4Dg&gws_rd=cr#q=jurnal+pertumbuhan+ekonomi+dan+HDI&spf=68)
- Regional Investment Board, 2016. Investment in Central Java, Semarang.
- Reiter, S.L. dan H. Kevin Steensma. (2010). Human Development and Foreign Direct Investment in Developing Countries: The Influence of FDI Policy and Corruption. *Elsevier Volume 38 No. 12, pp. 1678-1691*.
- Soejoto, A., Subroto W.T., Suyanto. (2015). Fiscal Decentralization Policy in Promoting Indonesia Human Development. *Scopus Volume 5 Issue 3, 22 July 2015, pages 763-771*.
- Suwandi. (2016). The Influence of Economic Growth on Poverty, Investment, and Human Development Index in Fak Fak District, West Papua, Indonesia. *IOSR Journal of Economics and Finance Volume 7, Issue 3, Ver. I, PP 69-72*.
- Todaro, Michael P. dan Stephen C. Smith. (2011). *Economic Development (The Pearson Series in Economics)*
- Udoh, Elijah. Afangideh, Udoma. and Udeaja, Elias A. (2015). Fiscal Decentralization, Economic Growth and Human Resource Development in Nigeria: Autoregressive Distributed Lag (ARDL) Approach. *CBN Journal of Applied Statistics* Vol. 6 No. 1(a) (June, 2015). [https://www.cbn.gov.ng/out/2015/sd/fiscal\\_decentralization\\_economic\\_growth\\_and\\_human\\_resource\\_development\\_in\\_nigeria\\_ardl\\_approach.pdf](https://www.cbn.gov.ng/out/2015/sd/fiscal_decentralization_economic_growth_and_human_resource_development_in_nigeria_ardl_approach.pdf)
- United Nations Development Programme. (1990). Human Development Report 1990. Concept and Measurement of Human Development.
- United Nations Development Programme. (1996). *Human Development Report 1996, Economic and Human Development*. Published for United Nations Development Programme. New York: Oxford University Press.
- UNSFIRS. 2000. *Indonesia: The National Human Development Report, (2000)*. Jakarta: United Nations Support Facility for Indonesia Recovery (UNSFIRS) and UNDP.

Velástegui, Pablo Garcés. (2013). Rethinking Development and Reassessing Decentralization: exploring the relationship between tridimensional decentralization and *human* development. *Dissertation for conferral of a Master of Public Administration*. Institute of Public Affairs London School of Economics and Political Science. <http://repositorio.educacionsuperior.gob.ec/bitstream/28000/1034/1/T-SENESCYT-0410.pdf>

## **RETHINKING MONEY STABILITY: SHIFTING VALUE AND TRANSFORMATION OF MONEY**

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### **ABSTRACT**

According to the history of money, in fact human beings have known money for long time, from money goods, coins (metal money), and paper money. The need for money in the past was dominated by the trading needs. In the current paper, the writers tried to review the stability of money based on its history and the reality of present by pounding the internal and external value of money on each type of money in every shift of money value and transformation itself. The writers used a graphic of the result of those pounding to know the ability of money in stabilize its value and tried to find the conclusion as the solution contribution on the stability of money value.

**Keywords** : Money; Stability; Shifting value

### **INTRODUCTION**

The history of money must have been long time. It was started by the money goods in BC 9000, the history of the Roman coin dominance in BC 300 up to 700 AD. The history of paper money started in China on the 1<sup>st</sup> Century, the domination of USD in the 19<sup>th</sup> Century and the transformation as well as the shifting of money value until today. In the era of 9000 BC – 6000 BC, human in the world used agricultural and breeding products as the money to comply the daily needs. In 2500 BC Greek used gold, silver, and bronze as money. In 700 BC the Turkey used coin as the currency and China used bronze as money since 600 BC (Abner, 2016; Lubbock, 1879).

More than thousand years (300 BC to 700 AD), Roman Kingdom has conquered many times and during its peak of 117 BC more than 20% of human population in the world was under the Roman authority. It leads the Roman currency dominated the world's currency. The Roman currency was based on the metal value used to produce the coins. In that era the metal used was copper, silver, and gold (Harl & Harl, 1996; Münkler, 2007; Temin, 2004). The history of paper money may be tracked through the history of Tang, Ts'ai lun Dynasty of China in the 1<sup>st</sup> Century. During that era, China used paper from mulberry bark as the material of paper money substituted

the metal. In the 13th Century or 1300 AD, the European Kingdoms used paper as the payment tools by underlying or based on their gold reserves on the Bank due to the limitation of gold material. Paper money at the time was the representative of gold should be paid by the government to the paper money's holder and since that paper money became commonly used as the money. Golds are saved in the Bank and substituted by paper money (Lubbock, 1879; Persson & Sharp, 2015)

The shifting of payment tools from gold and silver into paper reach the peak in the 18th Century where the Countries in the world have released their own currency thus the production process of payments tools are getting cheaper, which initially required gold and silver as the material for producing money while in 18th Century used paper. The paper money which may be produced cheaper than gold allowed the Countries in the world to be able to fulfill people needs on money. During that era the economy were growing. Many banks were emerged as the intermediary of Central Bank with the people with the main task of bank that generally we knew (Lubbock, 1879; Persson & Sharp, 2015).

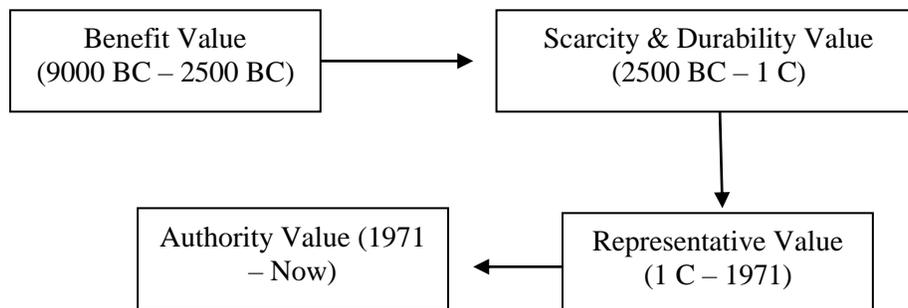
In 1861 the Financial Minister of Salmon Chase produced the first paper money of US. In the middle of 1800s, mostly Countries wanted to standardize the booming transaction in the market of world trading. The government guaranteed that will redeem some paper money for its gold values. In the World War I, America tried to be neutral and continually developed its industry so that its productivity kept increase. The emerging American economy has enabled America to give loan to Britain and France and conducting trading with European countries. America got involved into world war in 1917 because many American merchant vessels drowned by Germany in the North Atlantic so that America against Germany. In 1918 the World War I ended and America became the power of world economy and USD became the dominant currency ever since (Friedman & Schwartz, 2008; Horn, 2002; Lubbock, 1879).

In the 19th Century, economical depression occurred and federal reserve born in America. The role of paper money which initially as the representative of gold should be paid by the government to the paper money holder shifted to be the product named currency that forced all American on behalf of Laws used it without any obligation for Government to pay the gold to that paper money holder. On 15 April 1933, Federal Reserve command American to exchange their gold in return for the dollars. It was conducted to overcome the problem of lack of gold should be paid to the people to the dollar issued. In 1971 the USA government did not use gold as the underlying of value USD (Meltzer, 2010). In 1860, Western Union introduced the electronic funds transfer (EFT) which indicated the commencement of electronic money era. In 1886, Edward Bellamy for the first time introduced the term of "credit card". Credit card is the pioneer of plastic money. In 1960 Bank of America issued Visa as the first credit card. The card use as the payment tool was continually developed until now but not substitute yet the currency as product. Only as the representative of currency and at present in the inter-countries transaction plastic money only used as the payment tool which use exchange rate of such currency when conducting payment with price based on other currency (Jones, 2013; MacDonald, 2017; Smith, 2017).

In 2009, mysteriously born first crypto money or digital money named bitcoin. Bitcoin was considered made by anonymous group who pretend as a guy who has name from the combination of electrical company's name that is Samsung, Toshiba, Nakamichi dan Motorola become Satoshi Nakamoto. Digital money was developed with various type of crypto money. It allowed people to have transaction in the entire world without any valuable transaction fees. It means that no fee for foreign currency exchange, no taxes and anonymous. Therefore, ideally crypto money was more efficient in the case of transaction fees (Narayanan, Bonneau, Felten, Miller, & Goldfeder, 2016; Peterson, 2017). In the history of money from 300 BC until today, there are a lot of changing adjusted to the world community need on money. However, the problem arise on that changes is not settled yet until now, particularly the problem of money's value stability.

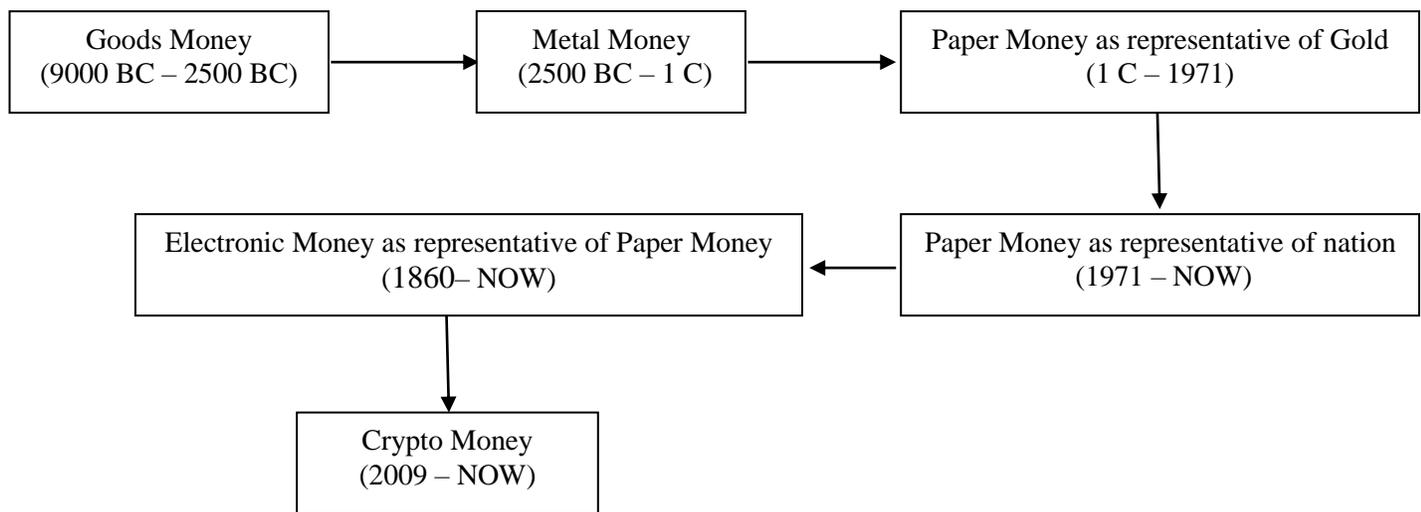
### LITERATURE REVIEW

In the various literature of history of money and financial journal, in fact for more than two thousands years the money we use have shifting value and transformation follows the history of world financial development (Friedman & Schwartz, 2008; Perera, 1981). The writers try to summarize that money shifting by the following flow chat:



In 9000 BC until 2500 BC, human used agricultural and breeding products as the currency. In that era the value of money was measured from the benefits of the goods exchanged (benefit value). The value of money shifted from based on the benefits became the value of scarcity and durability of the goods since 2500 BC until 1st century. It was motivated by the unbearability of agricultural and breeding products to be stored for long time so that the type of money which can be durable and changeable was required. However the money's value was shifted again since the paper money found in China in the 1st Century which considered to be easier to be used either to be moved or to be measured the value based on the nominal value stated on the paper money thus it was easier to be used based on the metal value represented by that paper money (Meltzer, 2010). However in the 19th century since the World War I, many countries in the world not able to exchange or back up their money with metal (generally gold) represented. Therefore the shifting value of money occurred since 1971 until now are based on the regulation of government laws. It is not separated from the problem of the unstability of world value of money (Horn, 2002; Lubbock, 1879)

The stability of money's value toward goods needed to keep the price certainty to decide the more efficient business provisions thus the trading transaction and property transfer may be managed by the rational decision among the actor inside. Therefore the human tendency in searching the exchange tool which have stable exchange rate is continually conducted (Ding, Xi, & Wang, 2006; S. Kim & Mehrotra, 2017; T. Kim, 2017; Mosler & Silipo, 2017). However, the property transfer in this case the money is also the important part in trading transaction so that the money is transformed to comply the money stability and the easiness of movement of the money itself with the cheaper transaction fee (Allen, Carletti, & Gale, 2014; Hevia & Nicolini, 2017; Nchor & Adamec, 2016). The money transformation in the case finding the money form that able to maintain the stability of exchange rate, the easiness to be used and to be transferred (money transfer) and the low transaction fee, in its history the money was transformed as follows:



The shifting value of money was stopped in the form of paper money. However since 2009 there was new type of money which against the paper money that was crypto money. Crypto money offers more efficient use of paper money with the ability of faster money movement (finance mobility) and lower in the point of view of transaction fee. However, crypto money itself has similar characteristics with gold that is the stable number and required to be mined (Andolfatto, Berentsen, & Waller, 2016; Dwyer, 2015; Friedman & Schwartz, 2008; Grillaert, 2007; Horn, 2002; Jones, 2013; MacDonald, 2017; Meltzer, 2010; Narayanan et al., 2016; Persson & Sharp, 2015; Peterson, 2017; Smith, 2017)

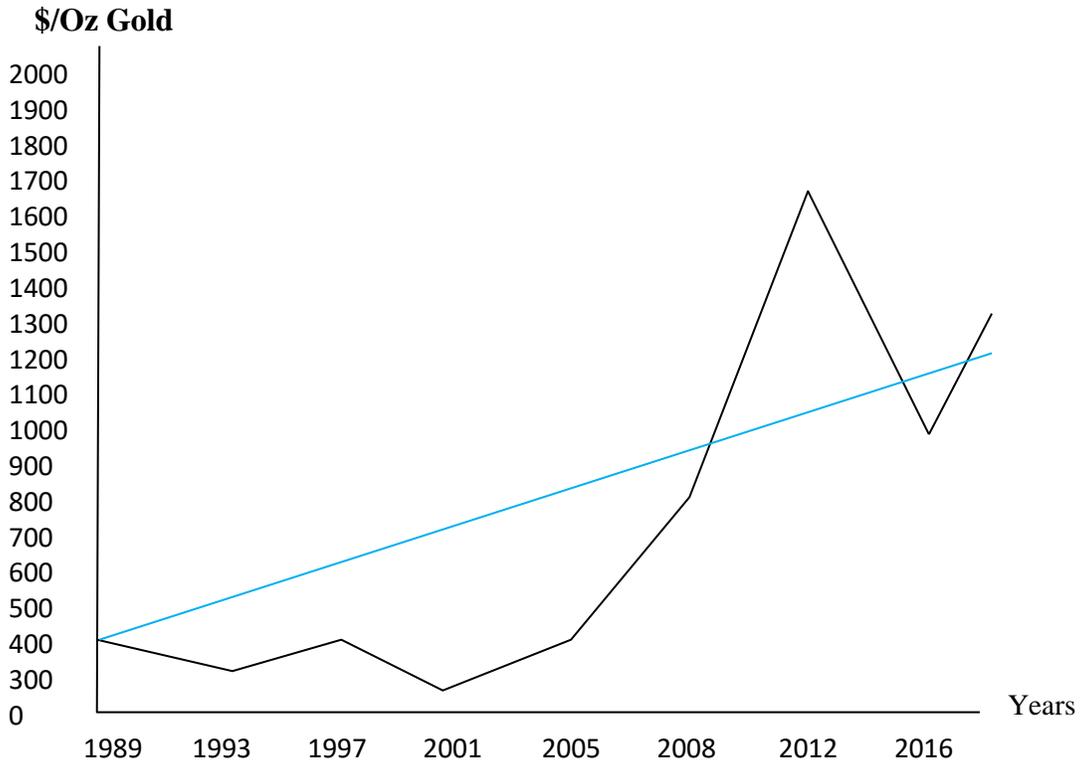
### **RESEARCH METHOD**

This study used in the research is a qualitative approach using data such as scientific literature, journals, articles, documents or visual material related to entrepreneurship, economics and sociology. The data collection techniques used in the research is literature survey techniques as explained by Bordens and Abbot (2005) that literature survey is the process of placing, obtaining, reading, and evaluating research literature. The inquiry approach is content analysis that analyzes the recordings or written words (Bordens & Abbott, 2008)

## FINDINGS AND DISCUSSION

In the current paper, the writers focus on the stability of money in each transformation and shifting using the following graphics:

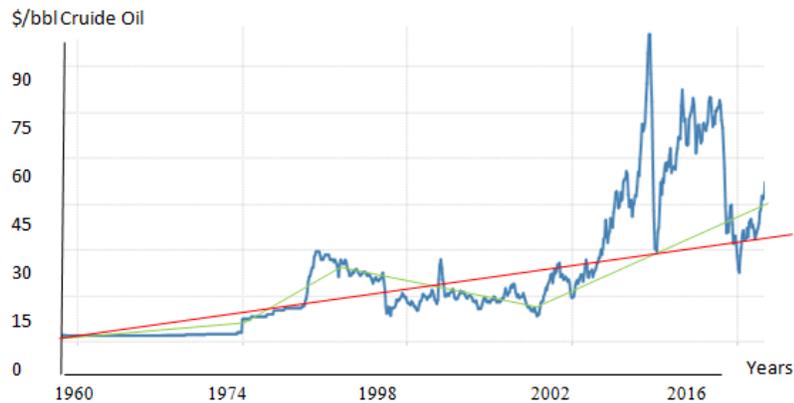
Graphic 1 USD VS Gold (Paper Money VS Metal Money)



Source : World Gold Council (2018)

From the graphic above, according to the data in 1989 up to 2017, the trend indicated by the blue line that USD toward gold, the value tend to decrease, indicated by the trend line was uphill or in other words the exchange rate of gold was tend to be stronger than paper money (represented by USD) from year to year.

Graphic 2 : USD VS Oil (Paper Money VS Goods Money)



Source : World Bank (2018)

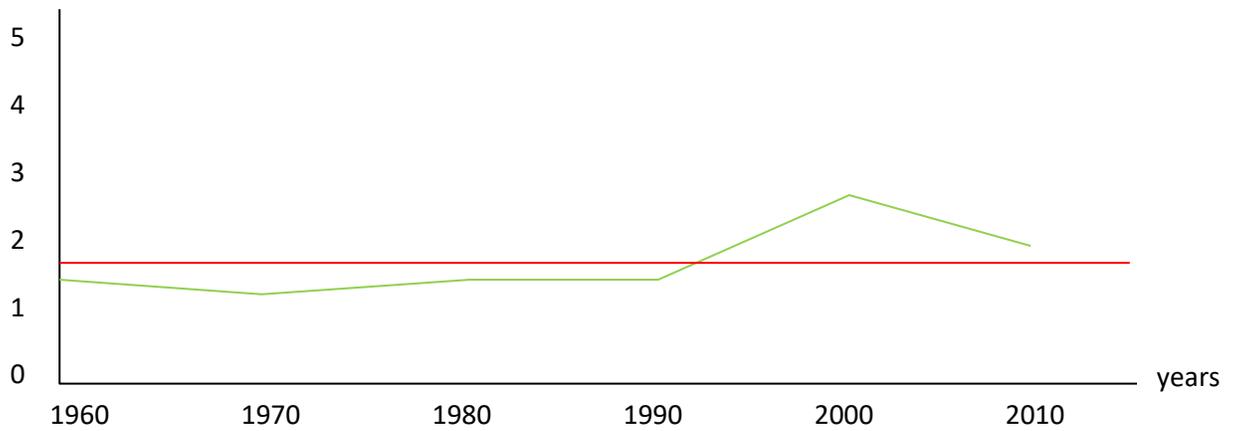
According to the data graphic above, we may know the occurrence of trend upheaval indicated by the blue trend line and in the long period of 1960 until 2017 have a tendency that USD towards oil, the exchange rate was weakened indicated by the red trend line. By the price upheaval was indicated by the green trend line.

Table 1 : Data of Crude oil toward USD and Gold

Years	\$/bbl crude oil	\$/Oz Gold	\$/gr gold	bbl oil/gr gold	Years	\$/bbl crude oil	\$/Oz Gold	\$/gr gold	bbl oil/gr gold
1960	8.51	184.25	5.924	1.437	1989	22.40	478.99	15.401	1.454
1961	8.05	180.63	5.808	1.385	1990	27.67	463.84	14.914	1.856
1962	7.65	177.22	5.698	1.342	1991	23.65	442.16	14.217	1.663
1963	7.69	179.81	5.782	1.329	1992	22.79	411.94	13.246	1.721
1964	7.33	177.38	5.703	1.285	1993	19.51	416.77	13.401	1.456
1965	7.11	175.79	5.652	1.257	1994	18.97	458.63	14.747	1.287
1966	6.57	169.59	5.453	1.204	1995	18.69	417.93	13.438	1.391
1967	6.36	167.25	5.378	1.183	1996	22.65	429.97	13.825	1.638
1968	6.37	187.91	6.042	1.055	1997	22.31	385.34	12.390	1.801
1969	5.82	188.25	6.053	0.961	1998	15.90	357.99	11.511	1.381
1970	5.21	154.82	4.978	1.047	1999	22.42	345.90	11.122	2.016
1971	6.92	167.13	5.374	1.288	2000	35.48	350.72	11.277	3.146
1972	6.83	218.38	7.022	0.973	2001	31.80	353.88	11.379	2.795
1973	9.09	315.11	10.132	0.897	2002	32.94	409.57	13.169	2.501
1974	29.16	423.07	13.604	2.143	2003	36.30	456.57	14.681	2.472
1975	24.96	385.21	12.386	2.015	2004	44.38	481.28	15.475	2.868
1976	27.48	294.96	9.484	2.898	2005	60.88	507.21	16.309	3.733
1977	27.47	322.94	10.384	2.645	2006	71.49	672.04	21.609	3.308
1978	24.30	363.52	11.689	2.079	2007	74.52	730.09	23.475	3.174
1979	52.22	517.16	16.629	3.140	2008	94.32	847.68	27.257	3.460
1980	56.53	931.96	29.967	1.886	2009	64.02	1008.65	32.433	1.974
1981	54.34	704.08	22.639	2.400	2010	79.04	1224.66	39.378	2.007
1982	51.53	593.17	19.073	2.702	2011	93.67	1413.22	45.441	2.061
1983	48.09	685.10	22.029	2.183	2012	95.27	1514.61	48.701	1.956
1984	47.35	597.64	19.217	2.464	2013	94.83	1286.11	41.354	2.293
1985	45.54	532.62	17.126	2.659	2014	88.90	1169.16	37.593	2.365
1986	20.90	535.60	17.222	1.214	2015	51.86	1185.95	38.133	1.360
1987	24.12	593.47	19.083	1.264	2016	45.53	1328.25	42.709	1.066
1988	18.37	545.54	17.541	1.047	2017	54.28	1292.65	41.564	1.306

Graphic 3 Gold Vs Cruide Oil (Metal Money Vs Goods Money)

gr gold/bbl cruide oil



Source : World Bank (2018)

According to the green graphic trend line, it may be seen that the price upheaval of crude oil toward gold was more stable than the price upheaval of crude oil toward USD (see Graphic 2). If the oil price using gold from 1960 until 2017 average form a normal line where the [price upheaval tend to close to the normal line that was 1.9445 gr gold / bbl crude oil. It was proven that when paper money became the representative of gold it will have stable exchange rate and characteristically anti-inflation where the other currency that not have underlying of gold will naturally replaced by the currency with underlying of gold.

Table 2 : Data of Bitcoin Price toward USD, Gold, and Cruide Oil

Years	USD/Bitcoin	USD/gr Gold	gr Gold/bitcoin	USD/bbl Cruide Oil	bbl Cruide oil/bitcoin
2009	0.0001	32.443	0	64.02	0
2010	0.07	39.378	0.002	79.04	0.000885619
2011	15	45.441	0.330	93.67	0.160136243
2012	7	48.701	0.144	95.27	0.073478498
2013	100	41.354	2.418	94.83	1.05447186
2014	600	37.593	15.960	88.90	6.74892389
2015	220	38.133	5.769	51.86	4.242319153
2016	750	42.709	17.561	45.53	16.47302701
2017	3451	41.564	83.029	54.28	63.57940225

Source : World Bank (2018)

From the table above, it may be known that the exchange rate of bitcoin toward USD, Gold, or oil tend to be stronger although there was shock in 2015. However the trend back to the origin that was bullish (appreciated).

## CONCLUSION

The stability of money exchange rate according to the reviews of graphics and tables based on the comparison of trend from each money ever applied in the world, can be concluded based on the the natural exchange rate which close to the normal line if compare to the commodity (see graphic 3). It is applied on paper money that the value was shifted from the representative of gold become representative of nation where the value of paper money since 1971 was based on the regulation of the country released. The money value based on the regulation proves be eroded over time as depicted by graphic 1, graphic 2, and table 2. Then according to the table 2 the pressure on bitcoin global regulation in 2015 indicated by the value shock on bitcoin in 2015, in fact it was not affected the bitcoin trend which continually stronger.

## REFERENCES

- Abner, D. J. (2016). *The ETF handbook: how to value and trade exchange traded funds*. John Wiley & Sons.
- Allen, F., Carletti, E., & Gale, D. (2014). Money, financial stability and efficiency. *Journal of Economic Theory*, 149, 100–127.
- Andolfatto, D., Berentsen, A., & Waller, C. (2016). Monetary policy with asset-backed money. *Journal of Economic Theory*, 164, 166–186.
- Bordens, K. S., & Abbott, B. B. (2008). *Research methods and design: A process approach*. New York, NY: McGraw-Hill.
- Ding, N., Xi, N., & Wang, Y. (2006). The economic mobility in money transfer models. *Physica A: Statistical Mechanics and Its Applications*, 367, 415–424.
- Dwyer, G. P. (2015). The economics of Bitcoin and similar private digital currencies. *Journal of Financial Stability*, 17, 81–91.
- Friedman, M., & Schwartz, A. J. (2008). *A monetary history of the United States, 1867-1960*. Princeton University Press.
- Grillaert, N. (2007). Chamberlain, Lesley, Motherland: a Philosophical History of Russia. *Studies in East European Thought*, 59(3), 255–257. <https://doi.org/10.1007/s11212-007-9034-7>
- Harl, K. W., & Harl, K. W. (1996). *Coinage in the Roman Economy, 300 BC to AD 700*. JHU Press.
- Hevia, C., & Nicolini, J. P. (2017). *Monitoring Money for Price Stability*. Federal Reserve Bank of Minneapolis.
- Horn, M. (2002). *Britain, France, and the financing of the First World War*. McGill-Queen's Press-MQUP.
- Jones, C. (2013). *The technical and social history of software engineering*. Addison-Wesley.
- Kim, S., & Mehrotra, A. (2017). Managing price and financial stability objectives in inflation targeting economies in Asia and the Pacific. *Journal of Financial Stability*, 29, 106–116.
- Kim, T. (2017). On the transaction cost of Bitcoin. *Finance Research Letters*, 23, 300–305.

- Lubbock, J. (1879). THE HISTORY OF MONEY. *The Nineteenth Century and after: A Monthly Review*, 6(33), 790–808.
- MacDonald, S. B. (2017). *A history of credit and power in the Western world*. Routledge.
- Meltzer, A. H. (2010). *A History of the Federal Reserve, Volume 2*. University of Chicago Press.
- Mosler, W., & Silipo, D. B. (2017). Maximizing price stability in a monetary economy. *Journal of Policy Modeling*, 39(2), 272–289.
- Münkler, H. (2007). *Empires: the logic of world domination from ancient Rome to the United States*. Polity.
- Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction*. Princeton University Press.
- Nchor, D., & Adamec, V. (2016). Investigating the stability of money demand in Ghana. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 64(6), 2075–2079.
- Perera, N. P. (1981). Mining and spoiled land in Zambia: An example of conflicting land use in the third world. *GeoJournal*, 2(2), 95–103. <https://doi.org/10.1007/BF00196328>
- Persson, K. G., & Sharp, P. (2015). *An economic history of Europe*. Cambridge University Press.
- Peterson, D. (2017). *Digital Currencies: Unlocking the Secrets of Crypto-Currencies*. Partridge Publishing Singapore.
- Smith, R. (2017). *Crime in the Digital Age*. Routledge. Newyork. Retrieved from <https://doi.org/10.1007/BF03339191>
- Temin, P. (2004). Financial intermediation in the early Roman Empire. *The Journal of Economic History*, 64(3), 705–733.

# MARITIME ECONOMY MODEL FOR TOURISM SPECIAL ECONOMIC ZONE (SEZ) CAPE KELAYANG TO PROMOTE PERFORMANCE OF TOURISM-BASED MICRO AND SMALL ENTERPRISES ON BELITUNG ISLAND

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## ABSTRACT

The aim of the research was to establish a Maritime Economy model for Tourism SEZ Cape Kelayang to promote the performance of tourism-based micro and small enterprises as an alternative economy following the closure of lead mining. The research was conducted using descriptive quantitative design. The sample consisted of 80 tourism-based micro and small enterprises. The data was analyzed using Partial Least Squares (PLS) and Lisrel 8.5. Research findings showed that the tourism development conducted on Belitung Island had yet to have a significant impact on the performance of micro and small enterprises. However, it had impacts on the economic, social and technological conditions on Belitung Island. The results of the research had an implication for managerial practices. To accelerate the impacts on the economy of Belitung Island, continuous synergy and coordination should be established with all stakeholders, particularly the Central and Regional Governments, private sector, micro and small entrepreneurs and society. Research originality: The research was conducted on Belitung Island, one of ten tourist objects in Indonesia established as Special Economic Zones.

**Keywords:** *Maritime Economy, Tourism Special Economic Zone, Performance of Micro and Small Enterprise*

## I. INTRODUCTION

Tourism is a leading sector. This is based on the following arguments: (1) improvements in tourist destinations and tourism investment make tourism a key factor in export revenue, employment creation and business and infrastructure development; (2) tourism has experienced sustainable expansion and diversification and has become one of the largest and most rapidly growing sectors worldwide; (3) despite several global crises, the number of international tourist trips still showed positive growth from 25 million in 1950 to 278 million in 1980 to 528 million in 1995 and finally to 1.14 billion in 2014 (Larasati Setdyaningshi, 2017).

In the office of Joko Widodo and Yusuf Kalla, five priority sectors have been determined in the Working Cabinet Development, namely (1) food, (2) maritime, (3) energy, (4) tourism and (5) SEZs and Industrial Estates. In the Indonesian Tourism Development Policy 222 KPPN, 88 KSPN, Cape Kelayang Tourism is set as a National Tourism Strategic Area (KSPN) based on the Government Regulation No. 50 of 2011 on the Master Plan of National Tourism Development year 2010–2025 (Witarsa, 2015).

As many as 10 priority tourist destinations have obtained Government Tourism Special Economic Zone, including: Lake Toba (North Sumatera), Cape Kelayang (Bangka Belitung), Mandalika (West Nusa Tenggara), Wakatobi (Southeast Sulawesi), Morotai Island (North Maluku), Thousand Islands (DKI Jakarta), Komodo (East Nusa Tenggara), Cape Lesung (Banten), Borobudur (Central Java) and Bromo Tengger Semeru (East Java).

The spatial planning of SEZ Cape Kelayang, Belitung regency, has been proposed pursuant to the Regional Regulation No. 3 of 2014 on the Regional Spatial Plan of Belitung Regency year 2014–2034 under Tourism Zoning, thus it is suitable with and support the tourism in the SEZ Cape Kelayang. The land acquired covered an area of 324.4 Ha under the Building Rights Title (HGB) (Januar Mahardhani, Ardhana, 2013).

The President Instruction of the Republic of Indonesia on SEZ Cape Kelayang, Belitung, dated June 20, 2015, underlined that tourism is a sector that should be focused on. Support for the plan of the establishment of SEZ Cape Kelayang by investors has been given in the form of an extension of runway of H.A.S. Hanajoeddin Airport from a length of 2,250 m to 2,800 m. Investors are requested to realize the construction plan immediately. Meanwhile, the Ministry of Tourism held a follow-up meeting with Dharmawangsa Group and the National SEZ Board on June 25, 2015 (Source: Deputy of Tourist Destination and Tourism Industry Development, Ministry of Tourism).

Ever since receiving the 18 trillion fund from the Central Government, the tourism in Belitung started to show signs of life. This was proved by the data showing that the number of tourists experienced an up trend from year to year and that tourism-based micro and small enterprises were increasingly developing in this region. This obviously impacted on the economy of Belitung Island, in particular, and Bangka Belitung Province, in general.

The aim of this research was to improve the competence in the managerial sector, especially the micro and small enterprises in the fields of entrepreneurial management, strategic management, human resource management and organizational behavior. Specifically, this research was aimed at (1) identifying and analyzing the effect of the development of Tourism SEZ Cap Kelayang on the performance of tourism-based micro and small enterprises on Belitung Island, (2) identifying and analyzing the effect of tourism-based micro and small enterprises on the economic, social and environmental conditions on Belitung Island and (3) formulating a development model for the improvement of micro and small enterprises in Tourism SEZ Cape Kelayang and identifying its impacts on the economic, social and environmental conditions of Belitung Island.

## **II. RESEARCH REVIEW**

### **2.1 Maritime Economy**

When we discuss the improvement of maritime economy, according to Ade Prasetya (2016, p. 54), it will mean that we talk about how to improve maritime-based demand as well as offer. This, by all means, cannot be achieved solely by boosting exports of domestic resources or manipulating citizens of the world to fulfil their needs from the sea. It will also be necessary to build facilities and infrastructure for facilitating distribution to expedite production and marketing. Kusumastanto (2012) stated that the concept of maritime economy stresses on the economy development which empower ocean-based resources and sea functions wisely as a drive for economic growth and improvement of the welfare of Indonesian people supported by land-based economy pillars that are robust and competitive at the worldwide competition level.<sup>(2)</sup>

Prasetya (2016) stated that various marine potential in Indonesia in the form of fisheries resources, oil and gas resources, marine tourism, maritime industry and service and Archipelagic Sea Lanes of Indonesia (ALKI) may generate a considerable economic value when managed maximally<sup>(3)</sup>. The Law Number 17 of 2007 on Long-Term Development Plan year 2005–2025 stipulates eight development missions in Indonesia, including developing marine economy in an integrated manner by optimizing the exploitation of the sea sustainably<sup>(4)</sup>.

### **2.2. Post-Lead Mining Economy**

Post-lead mining era in the Province of Bangka Belitung Islands according to Reniati (2016, p. 7) started in 2012 since which the market share in the mining sector (lead) and processing industry (lead) has been continuously decreasing to date. Reniati (2016, p. 2) furthermore stated that the continued decrease in the amount of lead deposit on land led to the removal of lead exploration to the sea. It is unfortunate since the sea in the Province of Bangka Belitung Islands hides astonishing beauty and may become tourism potential for the future.

### 2.3. Factors Influencing Tourism Development

The factors influencing tourism development according to I Gusti Bagus Rai Utama (2017, p. 59) encompass 1) government regulations, 2) political, economic, social and technological support, 3) marketing strategy, including programs and budget, 4) skills and expertise of other departments, 5) network, media and communication industry, 6) consumers' behavior and reactions, 7) industry and competitor actions and 8) natural environment.

### 2.4. The Impact of Events on Economic, Social and Environmental Conditions

The impact of events on economic conditions according to I Gusti Bagus Rai Utama (2017, p. 11–15) consists of five aspects, including (a) foreign exchange, (b) government revenue, (c) employment absorption, (d) infrastructure development and (e) improvement in the community's economy. Meanwhile, the social, cultural and environmental impacts of tourism according to Glen Kreag (2001) are as follows.

### 2.5. Tourist Destinations Marketing Strategy

As the largest economic sector, tourism creates employment and promote growth in many countries. According to supporting empirical data regarding the effects of tourism economy, it can be concluded that tourism will be considerably useful for the economy (Ayeni, D.A., 2013) [10]. The following is the mixture of tourism product marketing:

Table 2.1. Mixture of tourism product marketing

Attraction	Accessibility	Amenity	Ancillary
Cultures, recreational vehicles, temples, seas, mountains, beaches, places for amusement, and more	Airports, sea, land and air transports, highways, and more	Hotels, restaurants, rest areas, and more	Travel agents, tour guides, local tour guides, and the like.
Distribution	Promotion	Prices	
Distribution channels, scope of distribution and distribution location	Personal selling, public relation, advertisements, direct marketing, publicity	Catalogue prices, discounts, special discounts, payment period and terms of credit.	

Source: I Gusti Bagus Hal Utama (2017)

### 2.6. Performance of Tourism-Based Micro and Small Enterprises

Business performance is a condition to be achieved as the outcome of the business having been conducted by all components of a company. In this case, business performance indicators are measured using respondents' statements regarding changes in sales volume, which will maintain the company's existence and prevent the company from experiencing bankruptcy. Respondents stated that the efficiency in the business operation is constantly maintained. Thus, consumers' response to a company's product can be identified. Respondents revealed that sales constantly increased from time to time, which enabled the company to acquire wider market shares. Furthermore, respondents revealed that there had

been a continuous rise in the profit of their business, most of which was invested for the development of the company (Research Journal of Wayan Gede Supartha, 2009: 77). Performance elements are frequently used for rating an activity that is difficult to measure, such as benefit of leadership development, engagement, service and satisfaction. (Basuki Rahmat, 2007:373)

### III. RESEARCH METHODS

#### 3.1. Methods Employed

This study is an economic study, particularly in the field of management economics which focuses on the fields of entrepreneurial management, strategic management, marketing management, human resource management and organization behavior. The objects and scope of this research included analyses of maritime economy based on tourism SEZ and the performance of tourism-based micro and small enterprises in the post-lead mining era. To further investigate the relationship between variables, this research was designed using research qualitative methods with grounded theory and phenomenological approaches as well as quantitative methods.

#### 3.2 Sampling and Data Collection Technique

In relation to hypothesis testing, the most appropriate sample sizing technique to use was power analysis technique. The determination of sample size for SEM using power analysis was formulated as follows:

$$n = \frac{\hat{\lambda}}{RMSEA^2 \times db}$$

where:

$\lambda$  : Max(c-db), c :  $2nF_0$ , db : Degree of Freedom, RMSEA : *Root Means Square Error Approximati*

Therefore, the minimum sample size to be taken in this research was 80 units of tourism-based micro and small enterprises on Belitung Island (Belitung Regency and Belitung Timur Regency). The sample was divided into 7 (seven) clusters in the regencies/cities on Belitung Island, namely 1) hotels and lodgings, 2) tour and travel, 3) entertainment, 4) diners and restaurants, 5) snack and foods typical of Belitung, 6) crafts and 7) event organizers. Data were collected through direct or indirect combination of techniques, including literature study, observation, questionnaire distribution, interview and FGD (focus discussion group).

#### 3.3. Quantitative Analysis Plan

The verificative instrument used was Structural Equation Modeling (SEM) with the use of LISREL 8.5. SEM consists of five stages, including (1) model specification, (2) model identification, (3) model estimation, (4) model suitability testing and (5) model modification. The research model was comprised of two types of equations, namely deduction equation and structural equation.

### IV. RESULTS AND DISCUSSION

To answer the research objective, namely to explain the effect of tourism development on performance and the impacts of the development, we used the Structural Equation Modeling analysis technique. The selection of SEM technique was based on the grounds that effects analysis involves latent variable, which is a variable that is not measured directly but involves indicators and dimensions. The modeling was carried out in the following stages: model development, measurement and structural model analysis and hypothesis testing. All of the stages are explained below.

#### 4.1. Effects Analysis

Effect analysis was aimed at describing the effect of tourism development on the performance of micro and small enterprises and the impacts of the performance of micro and small enterprises on the economic, social and environmental conditions.

#### 4.2. Analysis of the Effect of Tourism Development on the Performance of Micro and Small Enterprises

The first hypothesis tested in this research was, ‘Tourism development affects the performance of micro and small enterprises’.

The analysis results showed that the effect of tourism development on the performance of micro and small enterprises had a standard deviation of 0.055. This was relatively small, thus it cannot be declared as significant. The results are presented as follows.

**Table 4. 1.Hypothesis Testing on the Effect of Tourism Development on the Performance of Micro and Small Enterprises**

Latent variabel	Value	Standard error	t	Pr >  t	f <sup>2</sup>
Tourism Development	0.055	0.113	0.487	0.628	0.003

Source: processed by the researcher, 2018

The calculation results showed a *t*-count value of 0.487 with a *p* value of 0.628 > 0.05, which means that tourism development had no significant effect on the performance of micro and small enterprises.

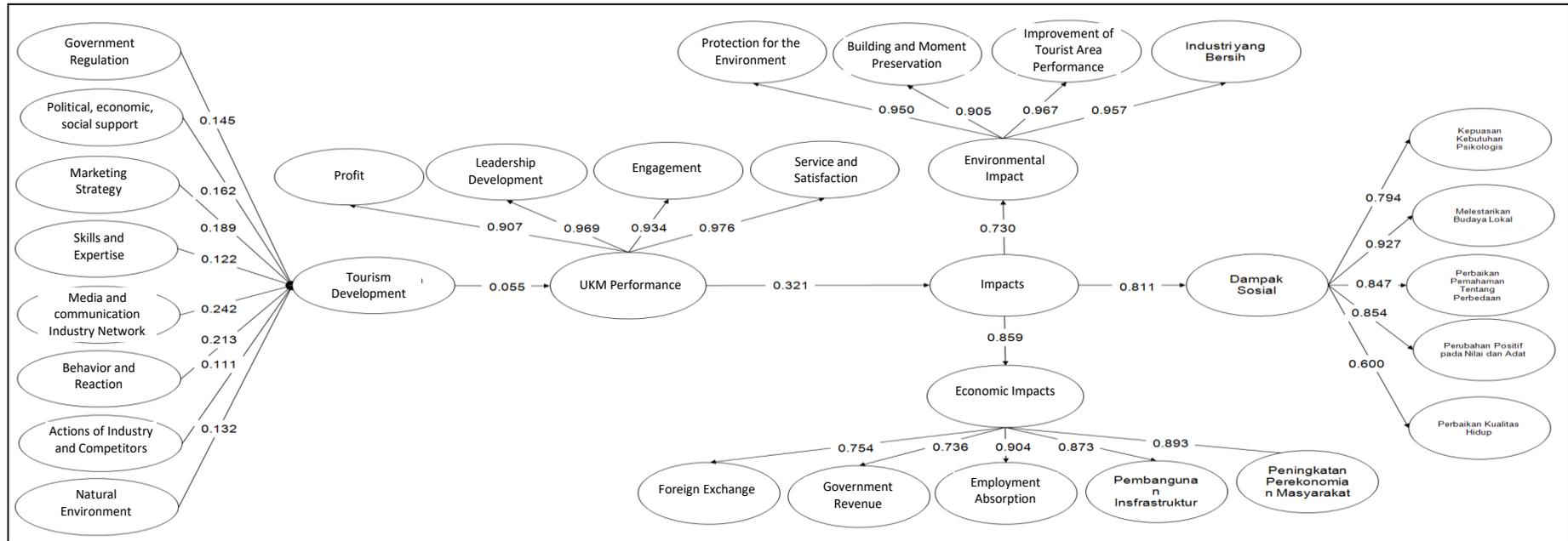
**Table 4.2. Coefficient of Determination**

R <sup>2</sup>	F	Pr > F
0.003	0.237	0.628

Source: processed by the researcher, 2018

The analysis results also showed an extremely low coefficient of determination, namely 0.003 or 0.3%, which means that in the meantime, tourism development has 0.3% effect on the performance of micro and small enterprises. This is due to the fact that the development of SEZ Cape Kelayang will only be complete by the end of December 2018 as quoted by newspaper Babel Pos, Saturday, May 26, 2018. The infrastructure developed includes road access from the gateway to the hotel. The development of SEZ Cape Kelayang was expected to be complete in March 2019 but expedited to December 2018. Upon the completion of the development of the area, electricity supply of 24 megawatts and clean water supply of 100 to 150 liters per second will be required.

There are four key factors that affect tourists’ satisfaction with hotel services. A significant relationship between satisfaction and revisit intention has also been identified. It is recommended that hotel managements develop a strategy to improve employees’ self-confidence, fast service delivery and provide service-related materials (Amisah, E. F., 2013) [17].Kartika (2017)(14) stated that the elements that have a vital role in the implementation of maritime development are country (unsure vertical), civil society (unsure horizontal) and knowledge as well as ability (augmented product). Therefore, micro, small and medium enterprises must be developed by the government with the following aspects (Kartasmita, 1996) <sup>(15)</sup>: 1) an increase in the access to productive assets, especially capital, in addition to technology and management; 2) training on the knowledge and skills to conduct business; 3) economic institutions, which in a wider sense means market; and 4) business partnership.



**Figure 4.1.**

**Model of Analysis of the Effect of Tourism Development on the Performance of Micro and Small Enterprises and the Impacts on the Economic, Social and Environmental Conditions**

Source: processed by the researchers, 2018

### 4.3. Analysis of the Effect of the Performance of Micro and Small Enterprises on the Economic, Social and Environment Conditions

The second hypothesis tested in this research was, ‘The performance of micro and small enterprises affects economic, social and environmental conditions.

The analysis results showed that the effect of tourism development on the performance of micro and small enterprises had a standard deviation of 0.321. The value was relatively great, thus it is declared as significant. The results are presented as follows.

**Table 4.3. Hypothesis Testing on the Effect of the Performance of Micro and Small Enterprises on Economic, Social and Environmental Condition**

Latent variabel	Value	Standard error	t	Pr >  t	f <sup>2</sup>
Performance of Micro and Small Enterprises	0.321	0.107	2.998	0.004	0.115

Source: processed by the researcher, 2018

The calculation results showed a *t*-count value of 2.998 with a *p* value of 0.004 > 0.05, which means that the performance of micro and small enterprises had a significant effect on the economic, social and environmental conditions.

**Table 4.4. Coefficient of Determination of the Effect of the Performance of Micro and Small Enterprises on the Economic, Social and Environmental Conditions**

R <sup>2</sup>	F	Pr > F
0.103	8.987	0.004

Source: processed by the researcher, 2018

The analysis results also showed an extremely low coefficient of determination, namely 0.103 or 10.3%, which means that in the meantime, performance has 10.3% effect on the impact. Although the effect of the development of SEZ Cape Kelayang on the performance of Micro and Small Enterprises was not significant, the latter had significant economic, social and environmental impacts. This means that the incomplete infrastructure development in the SEZ Cape Kelayang had received good response from micro and small entrepreneurs on Belitung Island, which was evidenced by relatively great economic, social and environmental impacts. It was expected that Belitung Island would have even more developed and advanced economic, social and environmental conditions after the completion of SEZ Cape Kelayang development.

The SEZ and industrial estate (IE) development will attract economic growth in the region and boost the economy equally across the region (Farole, 2011) <sup>(5)</sup>. SEZ has an important role in improving the economy, especially in the industrial sector, where SEZ can trigger improvements of technology, national productivity and structural transformation (Asian Economic Integration Report, 2015) .

SEZ is a means a country uses to promote trading and development and to attract investment (Rodrik, 2013) <sup>(7)</sup>. The development of medium industry in the SEZ of Bitung City offers multiplier effect for the improvement of economic growth in the Province of North Sulawesi, especially in the employment absorption and contribution of medium industry to the economic structure GRDP (Makalew et al, 2017).

## V. CONCLUSIONS AND SUGGESTIONS

### 5.1. Conclusions

According to the discussion above, it can be concluded that:

1. The development of Tourism SEZ Cape Kelayang for the time being has yet to have a significant effect on the performance of tourism-based micro and small enterprises on Belitung Island.
2. The performance of tourism-based micro and small enterprises had economic, social and environmental impacts on the community on Belitung Island.
3. The model of the development of Tourism SEZ Cape Kelayang for the improvement of the performance of micro and small enterprises and the impacts on the economic, social and environmental conditions on Belitung Island has already been able to be implemented to encourage accelerations in the tourism sector.

### 5.2. Suggestions

The suggestions of this research are as follows.

1. To accelerate the impact on the economy of Belitung Island, it is necessary to have constant synergy and coordination with all stakeholders, especially the Central and Regional Governments, private sector, micro and small entrepreneurs and community.
2. Further research should incorporate variables related with digital economy, which currently becomes a principal issue in the disruption era.

## VI. ACKNOWLEDGEMENTS

First of all, we would like to express our gratitude for Allah SWT it is due to His mercy and guidance we were able to carry out the research of *Hibah Kompetensi* for the First Year, 2018. Without His help, this research would have been certainly difficult to complete. Secondly, we would like to express our deep appreciation for the Ministry of Research, Technology and Higher Education through the Directorate of Research and Public Service (DP2M) as funders of for this research. Last but not the least, we would like to thank the LPPM UBB for having facilitated the research from the beginning through the end of the research.

## REFERENCES

- Ajake, A.O. 2015. Assessing the Impacts of Hospitality Industry in Enugu City, Nigeria. *American Journal of Tourism Management* 4(3): 43-53
- Amissah, E.F. 2013. Tourist Satisfaction with Hotel Services in Cape Coast and Elmina, Ghana, *American Journal of Tourism Management* 2(A): 26-33
- Arieta, Siti. (2010). *Community Vased Tourism Pada Masyarakat Pesisir; Dampaknya terhadap Lingkungan dan Pemberdayaan Ekonomi*. Jurnal Dinamika Maritim, Vol. 2, No.1, September 2010.
- Asian Economic Integration Report. 2015. Special chapter: How can special Economic Zone Catalyze Economic Development.
- Ayeni, D.A., 2013. Predicting the Effects of Economic Diversification on Sustainable Tourism Development in Nigeria. *American Journal of Tourism Management* 2(1): 15-21
- Badan Perencanaan Pembangunan Daerah Pemerintah Kabupaten Belitung. *Pengembangan KEK Tanjung Kelayang, Belitung*. Manggar, 30 Mei 2016.
- Bagus Rai Utama, I Gusti (2017), Pemasaran Pariwisata, Penerbit Andi, Yogyakarta.
- Binol, Budi Rizanto (2017), Sosialisasi Branding Dalam Rangka Kegiatan Dekonsentrasi Provinsi Bali Denpasar, 21 Maret 2017. Makalah Tim Branding-Ogilvy-Kementrian Parawisata.
- Denver E. Severt, Dana V. Tesone, Timothy J. Bottorff and Monica L. Carpenter. (2009). *A World Ranking of the Top 100 Hospitality and Tourism Programs*. *Journal of Hospitality & Tourism Research*. DOI: 10.1177/1096348009344210 33: 451
- Dzintra Atstaja. (2013). *The Main Aspects of Safety of Rural Tourism in Latvia*. *Journal of Tourism and Services*.
- Farole, T. 2011. Special Economic Zone: Progress, Emerging Challenges, Future Directions International Trade Department World Bank.
- Glenn Kreag. (2001). *The Impacts of Tourism*. Sea Grant Minnesota.
- Januar Mahardhani, Ardhana. (2013). *Pengembangan Masyarakat Pesisir di Kabupaten Tulung Agung*. Prosiding Seminar Nasional Multi Disiplin Ilmu & Call Papers UNISBANK (Sendi\_U). Kajian Multi Disiplin untuk Mewujudkan Poros Maritim dalam Pembangunan Ekonomi Berbasis Kesejahteraan Rakyat. ISBN: 978-979-3649-81-8
- Kartasmita, G. 1996. *Pemberdayaan Masyarakat Konsep Pembelajaran yang Berakar pada Masyarakat*. Bappenas. Jakarta
- Kartika, C. 2017. *Model Pengembangan Strategi Pembangunan Negara Maritim melalui Elemen Aktivasi dan Pengembangan Teknologi Maritim untuk Meningkatkan Daya Saing Kamaritiman dan Kesejahteraan Masyarakat Maritim dalam Asean Economic Community 2016*. Thesis. Fakultas Ekonomi. Universitas Wijaya Putra. Surabaya.
- Kusumastanto, T. 2010. *Ekonomi Kelautan*. Pusat Kajian Sumberdaya Pesisir dan Lautan. IPB. Bogor.
- Kusumastanto, T. 2012. *Strategi Pembangunan Indonesia sebagai Negara Maritim*. IPB. Bogor.
- Makalew, V.N., Vecky A.J.M., dan Een N. Walewangko. 2017. *Analisis Kontribusi Kawasan Ekonomi Khusus (KEK) terhadap Struktur Perekonomian Sulawesi Utara*. Thesis. Ekonomi Pembangunan. Fakultas Ekonomi dan Bisnis. Universitas Sam Ratulangi.
- Mazidi, S.F. 2017. *Coastal Tourism Development Management (Sea Therapy) of Kish Island*. *American Journal of Tourism Management University of Tehran Kish International Campus Kish Island, Iran*, 6(1): 1-4

- Mirtaghiyan, M.R. , Najmeh, G, and Hamid, A. A Study of Factors Influencing Food Tourism Branding: The Case of Iranian Tourism. *American Journal of Tourism Management* 2(3): 63-68
- Nugroho, I, Fiqih H. P., Purnawan D. N., Wiwin, P., Wahyu W. 2016. Promoting the Rural Development through the Ecotourism Activities in Indonesia. Scientific & Academic Publishing.
- Prasetya, Ade (2016), *Ekonomi Maritim Indonesia*, Penerbit Diandra Kreatif, Yogyakarta.
- Prasetya, W.B. 2014. Poros Maritim dalam Perspektif Pembangunan Nasional. Worldmaritimenews. <http://www.beritasatu.com/ekonomi/234464>.
- Reniaty (2016), Menuju UMKM Berdaya Saing Pada Era MEA di Provinsi Kepulauan Bangka Belitung, Penerbit Alfabeta-Bandung.
- Rodrik, D. 2013. Structural Change, Fundamentals and Growth: an Overview.
- Sedyaningsih, Larasati (2017), Percepatan Pembangunan Destinasi Pariwisata Nasional (DPN) Tanjung Kelayang-Negeri Laskar Pelangi. Makalah Tim Percepatan Destinasi Pariwisata Prioritas, Kementerian Pariwisata Republik Indonesia
- Soebagyo. (2012). *Strategi Pengembangan Pariwisata Di Indonesia*. *Jurnal Liquidity*, Vol. 1, No. 2, Juli-Desember 2012, hlm. 153-158.
- Taylor, T.K. Chikondi B. T. 2013. Tourism Development Potential of the Northern Province of Zambia. *American Journal of Tourism Management* 2(A): 10-25
- Undang-undang No 17 tahun 2017 tentang Rencana Pembangunan Jangka Panjang Nasional tahun 2005 – 2025.
- Witarsa. (2015). *Model Pengembangan Ekonomi Masyarakat Pesisir Berbasis Co-Management Sumberdaya Perikanan Di Kabupaten Pontianak*. *Jurnal Economia*, Volume 11, Nomor 1, April 2015.

# MOBILE COMMERCE IN INDIA AND ROLL OF M/s BSNL PSU TELECOM SERVICE PROVIDER

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## ABSTRACT

*This article deals with the influence of latest telecom and internet advancements on m-commerce, a new wave of technology-driven commerce, started before Internet-facilitated e-commerce has begun to take hold. There are tremendous changes in the business by the increasing saturation of mobile technology, such as smart phones and personal digital assistants (PDAs). m-commerce promises to inject considerable change into the way certain activities are conducted. Equipped with micro-browsers and other mobile applications, the new range of mobile technologies offer the Internet 'in your pocket' for which the consumer possibilities are endless, including banking, booking or buying tickets, shopping, service industry and real-time news. Focusing on business-to-consumer markets, this paper examines how value is added in the stream of activities involved in providing m-commerce to the consumer. As such, it analyses the key players and technologies that form part of the m-commerce value chain, providing a foundation for future strategic analysis of the industry. Drawing on some of the key factors that may influence the take-up of m-commerce—including technological changes, consumer needs, satisfaction and role of M/s BSNL (India's public sector undertaking mobile company) in the m-commerce.*

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# Adoption of Solar Energy: A Study on Enablers and Inhibitors

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## **Abstract**

Energy plays a key role in the socio-economic growth of any country. Demand for energy is growing due to rapid industrialization, urbanization and burgeoning population. India being the fifth largest energy consumer in the world facing numerous challenges to bridge the gap between energy demand and supply with its limited fossil fuels. For an emerging economy like India renewable energy, solar energy in particular proves to be the best substitute as alternate energy sources. The current research focused on various factors influencing customer adoption of solar energy products for business purpose. The main predictor variables include solar energy awareness, cost, environmental concern and functionality of solar energy products. Data is collected from 136 solar energy users and analyzed using exploratory factor analysis and multiple regression using SPSS 20 version. Solar energy awareness, cost and functionality have a signification relationship with the adoption levels where as environmental concern has no impact on the adoption of solar energy. The findings of the study have important implications to both the marketers and the policy makers.

**This model can be replicated across the world, especially developing nations, who have potential for solar energy, there by using green energy and reducing carbon foot prints. This model can be emulated by African and Sub –Saharan Countries like Kenya, Rwanda, Ethiopia, etc. (215 words)**

**Keywords:** Solar energy, Solar energy awareness, Cost, Environmental concern, Functionality.

## **1. Introduction:**

Energy is a critical commodity. It functions as a factor of production, as well as a consumer good. Availability of energy determines quality of the life style of individuals and that of the total economy. It is the lifeblood of economic development as it is a crucial input to majority of the goods and services of the modern era. Solar energy has emerged as an alternative source, but its marketing has not been successful despite the advantages. As the demand for energy in emerging nations is increasing tremendously, it is of immense importance to understand the user's adoption levels of solar energy and the factors influence. Therefore, the current research focused to study the various factors influence the customers' adoption levels of solar energy products.

## **2. Literature review and Hypotheses development:**

Energy is considered a prime agent in the generation of wealth and a significant factor in economic development. Energy is also essential for improving the quality of life. Limited fossil resources and environmental problems associated with them have emphasized the need for new sustainable energy supply options that use renewable energies. (Atul Sharma, 2011).

Therefore, alternative sources of energy have become very important and relevant to today's world. These sources such as the sun and wind, can never be exhausted and therefore are called renewable. They cause less emissions and are available locally.

According to Hae-Kyong Bang et.al. (2000) Renewable energy comes from easily replenishable natural resources and technologies that are environmentally sound. Surendra Kumar Yadav and Govind Chandra Mishra (2013) defined Renewable energy is energy that comes from resources which are continually replenished such as sunlight, wind, rain, tides, wave sand geothermal heat. India, being the first country in the world to have established an exclusive ministry, Ministry of New and Renewable Energy (1992) to meet the growing energy demands of the country. It launched its flagship programme Jawaharlal Lal Nehru National Solar Mission (JNNSM) in 2010 to capitalize the solar potential to cater the energy needs.

It is evident from past research that, most consumers in developed countries resort to solar energy mainly due to its positive impact on the economy and environment.

### **2.1 Solar energy awareness :**

Renewable technology awareness is a concept where potential users can collect or have access to necessary information about the basic use, financial prospects and environmental impact of renewable energy (Sidiras & Koukios, 2004).

A higher level of awareness enables the users to make informed decision and it also increases the level of acceptance among new users

Higher level of awareness towards renewable energy technologies enables the users making informed decision and increases the level of acceptance among new users. To make information cheap and accessible by mass users, government can undertake extensive marketing plans. Large scale training and community awareness programs can be carried out to facilitate an easy transition. Higher benefit-cost trade-off, higher

level of awareness and higher ease of use directly influence intention to use renewable energy (Syed Shah Alam, Mamunur Rashid, S. S., 2012; Mirza, Ahmad, Harijan & Majeed, 2009).

Empirical study in Bangladesh proved that lack of public awareness is the major reason for the adoption of renewable energy technologies (Md. Alam Hossain Mondal *et.al.* 2010).

Solar energy awareness is positively related to the adoption of solar energy products.

**H1: There is a significant relationship between solar energy awareness and adoption of solar energy.**

## **2.2 Cost**

Cost is the amount of money customer pays to install solar energy products. The most frequently cited reason for non-subscription was the relatively higher monetary cost of purchasing green electricity compared to conventional energy sources, with almost 40% of non-subscribers citing financial reasons (Elizabeth V. Hobman, E. R., 2014).

The literature on solar home systems and other stand-alone systems deals with issues related to financing, repair and maintenance, capacity building, marketing, subsidy arrangements, socio-economic impacts on people and communities, accessibility, affordability and benefits for people, typical barriers and opportunities for the disseminations of the systems, and strategies for implementation ( Chaurey and Kandpal 2006, Chaurey and Kandpal 2010, Kumar *et al.* 2009, Miller 2009, Palit 2003, Ulsrud 2004, Urme *et al.* 2009).

**H2: There is a significant relationship between cost of solar energy and its adoption.**

## **2.3 Environmental concern**

Environmental concern represents a broad concept referring to a wide range of indicators such as beliefs that the environment is under threat, that there are adverse consequences to environmental degradation and general concern for human-caused environmental problems (Schultz, 2001).

Past research has found that environmental concern is positively and significantly correlated with environmentally friendly behaviour (Kinnear *et al.*, 1974; Roberts, 1996; Roberts and Bacon, 1997), and consumers with higher levels of such concern are more likely to purchase green products (Banerjee and McKeage, 1994; Chan, 1999) stipulated that ecologically conscious consumers will try to protect the environment in various ways, by performing such activities as purchasing green products, engaging in recycling activities and favoring packaging made of recycled materials.

The literature strongly suggests that concern for the environment manifests itself in consumers' purchasing behaviors. Therefore, the current research anticipated a positive relationship between concern for the environment and willingness to pay more for renewable energy (Hae-Kyong Bang *et.al.* 2000; Bang, H.K., Ellinger, A.E., Hadjimarcou, J. and Traichal, P.A., 2000)

**H3: There is a significant relationship between environmental concern and adoption of solar energy.**

## 2.4 Functionality

Functionality refers to the reliability and efficient operating of a system.

Reinders *et al.*, (1999) study found that technically the solar home systems performed well. The users are satisfied about the performance. Rishi Raj Borah, Debajit Palit, Sadhan Mahapatra (2014) found in their survey that majority of the customers were satisfied with the performance of solar energy products. Lack of confidence in the long-term performance of the solar systems is limiting widespread adoption (ETSU, 2001; Timilsina *et al.*, 2000).

**H4: There is a significant relationship between functionality of solar energy products and the adoption.**

## 3. Conceptual framework:

Based on the extant literature review the below conceptual framework has been framed where solar energy awareness, cost, environmental concern and functionality have positively related to the adoption levels of solar energy products. Conceptual framework can be seen from figure 1.

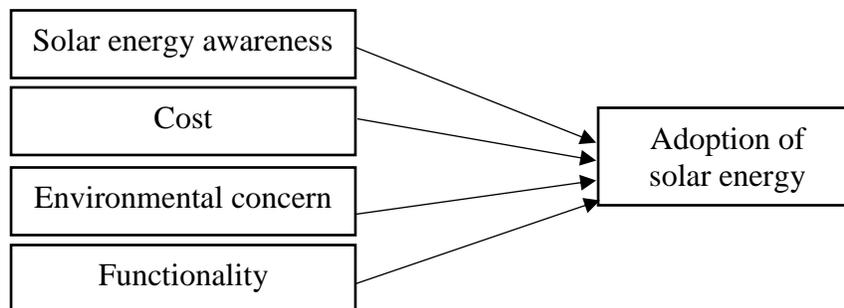


Figure 1: Conceptual framework

## 4. Research Methodology:

The paper aims to study the various factors leading to customer adoption of solar energy products who use for business purpose. For the current study data were collected from 136 solar energy customers from Telangana and Andhra Pradesh states. There are 14 items were used to collect primary data from the respondents which have been drawn from the previous literature. The survey was conducted using a structured questionnaire. Responses from the participants were captured using a five point Likert rating-scale ranging from 5 (strongly agree) to 1 (strongly disagree). Snow ball sampling technique has been adopted for data collection as this method allows the researcher to get the referrals. Respondents for the study include owners, tenants, builders, developers who installed solar energy products. Data were analyzed by utilizing SPSS 20 version. Exploratory factor analysis technique was used for extraction of factors later multiple regression was conducted to the test the framed hypotheses.

## 5. Data analysis and findings:

### 5.1 Factor analysis results:

Factor analysis is predominantly used in social sciences research as a technique for data reduction. The data for the study comprises responses from 14 items. Before proceeding to exploratory factor analysis some preliminary tests were conducted. Questionnaire reliability was assessed and the Cronbach's alpha value was 0.796 which was above 0.70 as suggested by George, D. (2003). Sampling adequacy was checked using Kaiser-Meyer-Olkin (KMO) value, which was 0.711 above the threshold value, 0.70 as recommended by Tabachnick, B.G. and Fidell (1989). Bartlett's test value was found to be significant,  $p < 0.001$  as recommended by Hair, Anderson *et al.* (1995). From the results, it is concluded that the scale was reliable and the sample data was adequate enough to proceed to exploratory factor analysis.

There are 14 linear components included in the data set. Item value with Eigen value more than one was taken as factor. Four factors were extracted finally which explained 72.35 percentage variance. The output of factor analysis is shown in Table 1. Further, multiple regression was carried in order to examine the effects of predictors i.e. solar energy awareness, cost, environmental concern and functionality on the dependent variable i.e. adoption of solar energy.

**Table 1 Reliability and Factor Loadings**

Description of variables	Factor Loading	Cronbach' Alpha
<b>Solar Energy Awareness</b>		0.931
SEAW1: I am aware of solar energy	0.912	
SEAW2: I am familiar with solar-generated electricity	0.908	
SEAW3: I can recognize the solar energy products (systems) easily	0.914	
SEAW4: I have adequate knowledge about solar energy	0.875	
<b>Cost</b>		0.918
Co1: Renewable energy more costly than conventional fossil fuel systems	0.916	
Co2: Solar energy is an affordable technology	0.895	
Co3: Initial investment costs for solar energy are too high	0.854	
Co4: Cost of maintenance of solar energy is low compared to conventional energy	0.926	
<b>Environmental Concern</b>		0.689
EC1: I am concerned about the environment (air, water and land use) before purchasing any product	0.785	
EC2: I am concerned about pollution before purchase any product.	0.793	
<b>Functionality</b>		0.768
FC1: Solar energy systems are reliable enough to safely provide electricity	0.747	
FC2: Solar energy is robust enough to meet the energy needs	0.754	
FC3: Solar energy systems are efficient to meet the energy needs	0.670	
FC4: Level of performance of solar energy systems is satisfactory	0.816	

## 5.2 Multiple regression analysis

5.2.1 *Model fit*: from the table 2 The multiple regression model was significant i.e.  $p < 0.001$ . the predictors i.e. solar energy awareness, cost, environmental concern and functionality able to explain 58.9 percent of the total variance in the dependent variable, adoption of solar energy. For an accepted model fit the difference between  $R^2$  and adjusted  $R^2$  should not exceed 0.05. In this case the difference is 0.017 ( $R^2 - \text{adj } R^2 < 0.05$ ), which suggests a good model fit. Durbin-Watson test was performed to assess auto correlation, the value was found to be 2.027 which was close to 2, suggests that there is no auto correlation problem in the model. Table 2 displays the summary of the regression model, and table 3 provides the ANOVA results.

**Table 2 Regression Model Summary**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R square	Std. Error of the Estimate	Durbin-Watson
1	0.767 <sup>a</sup>	0.589	0.572	0.978	2.027

**Table 3 ANOVA results**

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	378.062	4	94.515	96.124	0.000 <sup>b</sup>
1 Residual	124.672	128	0.974		
Total	502.734	134			

a. Outcome Variable: Adoption of Solar Energy

b. Predictors: Solar Energy Awareness, Cost, Environmental Concern, Functionality.

**Table 4 Multicollinearity Analysis**

**Multicollinearity statistics<sup>a</sup>:**

Model		Collinearity statistics	
		Tolerance	VIF
1	Solar Energy Awareness	0.632	1.583
	Cost	0.617	1.621
	Environmental Concern	0.944	1.059
	Functionality	0.686	1.457

Note: <sup>a</sup>Dependent Variable: Adoption of Solar Energy

### 5.2.2 *Multicollinearity diagnostics*:

The multiple regression concept is based on the inter correlations among the predictors. Therefore, it is suggested to check the data for multicollinearity i.e. high inter correlations of predictor variables. Multicollinearity is calculated using Tolerance and Variance Inflation Factor (VIF). Tolerance value is

calculated using  $1-R^2$  formula. Tolerance should be higher the lower the collinearity. The tolerance value more 0.50 is considered as no multicollinearity problem. Similarly VIF value less than 3 suggests there is no multicollinearity problem in the data set. From the table 4 it is evident that there is no multicollinearity problem.

**Table 5 : Multiple regression coefficients and critical ratios**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.217	0.293		-.697	0.468
1 Solar Energy Awareness → Adoption of Solar Energy	0.364	0.042	0.364	6.879	0.000
Functionality →Adoption of Solar Energy	0.279	0.053	0.245	5.186	0.000
<b>Environmental Concern</b> →Adoption of Solar Energy	-0.056	0.041	-0.039	-1.059	<b>0.274</b>
Cost →Adoption of Solar Energy	-0.179	0.049	0.147	2.785	0.005

## 6. Hypothesis testing and results:

**H1:** There is a significant relationship between solar energy awareness and adoption of solar energy.

From the results of multiple regression from the table 5, that customer's awareness levels towards solar energy products can predict customer's adoption of solar energy ( $t = 6.879$ ,  $p = .000$ ).  $\beta = 0.364$  which indicates that these two variables are positively related. Hence, H1 is accepted.

**H2:** There is a significant relationship between cost of solar energy and its adoption.

Based on the results from the table 5, it is observed that  $t = 2.785$ ,  $p = 0.005$  ( $p < 0.05$ ), cost of solar energy products can predict the adoption of solar energy products.  $\beta = 0.147$  suggests that there is positive effect of cost with respect to the adoption of solar energy. Therefore, H2 is accepted.

**H3:** There is a significant relationship between environmental concern and adoption of solar energy.

Multiple regression analysis results revealed that environmental concern and adoption of solar energy are not related and environmental concern cannot predict adoption of solar energy products as the value of  $\beta = 0.274$  ( $> 0.05$ ). Hence H3 is not accepted.

**H4:** There is a significant relationship between functionality of solar energy products and the adoption.

The results of multiple regression analysis,  $t = 5.186$ ,  $p = 0.000$  ( $p < 0.05$ ) indicate that functionality of solar energy products can predict the adoption of solar energy products. Furthermore,  $\beta = 0.245$ , means that functionality of solar energy products is directly proportional to adoption of solar energy products. H4 is accepted.

### **Limitations and directions for future research:**

The current study was conducted in only two States i.e. Telangana and Andhra Pradesh with a limited sample size, hence findings of the study cannot be generalized. The study was confined only to four variables i.e. customer awareness, cost, environmental concern and functionality of solar energy products. There are other variables could focus on different attitudinal and behavioural dimensions. Sample size for the study includes the customers who use solar energy products for business operations/ purposes, future studies could be directed at household customers and rural customers. A major limitation of the study is that the study is conducted from the customer's perspective, hence the studies could be aimed at other stakeholders in the market such as solar energy dealers, marketers, policy makers, manufactures.

### **Implications of the study:**

Results of the study indicate that customer adoption levels of solar energy is positively influenced by solar energy awareness and functionality where as it is negatively influenced by cost of solar energy products due to high initial investment for setting up solar energy. Manufactures need to focus more to bring down the solar energy equipment cost down by incorporating innovative Research and Development activities. At the same time, the policy makers can encourage the customers for the installation of solar energy by providing some incentives and subsidy facilities. Policy makers need to focus on the behavioural aspects of the customers with regard to environmental concern.

### **Discussion and Conclusion:**

The current paper empirically examined the various factors influencing adoption of solar energy products. From the study, it was found that solar energy awareness and functionality of solar products have a positive impact on purchase of solar energy products. Results of the study revealed that cost of solar energy has a major impact on adoption compared to other variables. It is due to high initial cost, cost of solar energy is negatively impacting purchase of solar energy due to high initial cost. Environmental concern levels are very low in majority of the customers which need to be addressed both by the marketers and policy makers by creating awareness and the importance of environmental conservation through aggressive campaigning.

## References:

- Alzola J. A. Vechiu I. Camblong H. Santos M. Sall M. Sow G. (2009). Microgrids project, Part 2: design of an electrification kit with high content of renewable energy sources in Senegal. *Renewable Energy*, 34(10), 2151-2159.
- Atul Sharma (2011). A comprehensive study of solar power in India and World. *Renewable and Sustainable Energy Reviews*, 15, 1767–1776
- Banerjee, B. and McKeage, K. (1994). How green is my value: Exploring the relationship between environmentalism and materialism. *Advances in Consumer Research*, 21 (1), 147-152.
- Bang, H.K., Ellinger, A.E., Hadjimarcou, J. and Traichal, P.A. (2000). Consumer concern, knowledge, belief and attitude toward renewable energy: An application of reasoned action theory. *Psychology and Marketing*, 17(6), 449-468.
- Chan, K. (1999). Market segmentation of green consumers in Hong Kong. *Journal of International Consumer Marketing*, 12(2), 7-24.
- Chan, R.Y.K. and Lau, L.B.Y. (2000). Antecedents of green purchases: A survey in China. *Journal of Consumer Marketing*, 17(4), 338-357.
- Chaurey A, Kandpal TC (2010). A techno-economic comparison of rural electrification based on solar home systems and PV microgrids. *Energy Policy*, 38 (6):3118–29
- Elizabeth V. Hobman, E. R. (2014). Barriers to green electricity subscription in Australia: “Love the environment, love renewable energy . . . but why should I pay more?”. *Energy Research & Social Science*, 78-88.
- Fredric, B. and E. Martinot, (2004). *Renewable Energy Policies and Barriers*. Amsterdam: Elsevier Academic Press.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference 11.0 update*. (4<sup>th</sup> edn). Boston: Allyn & Bacon
- Hae-Kyong Bang et.al. (2000). Consumer Concern, Knowledge, Belief, and Attitude toward Renewable Energy: An Application of the Reasoned Action Theory. *Psychology & Marketing*, 17(6), 449–468
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1995). *Multivariate Data Analysis with Readings*, 4th Ed., London: Prentice Hall.
- Kee Kuo Chen. (2014). Assessing the effects of customer innovativeness, environmental value, and ecological life styles on residential solar power systems install intention. *Energy Policy*, 951–961.
- Kumar A, Mohanty P, Palit D, Chaurey A. Approach for standardization of off-grid electrification projects (2009). *Renew Sustain Energy Rev*, 13, 1946–56.
- Laroche, M., Bergeron, J. and Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503-520.
- Md. Alam Hossain Mondal et.al. (2010). Drivers, barriers, and strategies for implementation of renewable energy technologies in rural areas in Bangladesh—An innovation system analysis. *Energy Policy*, 38, 4626–4634
- Miller D. (2009). *Selling solar: the diffusion of renewable energy in emerging markets*. London: Sterling, VA: Earthscan
- Naveen Kumar Sharma, Prashant Kumar Tiwari, Yog Raj Sood (2012). Solar energy in India: Strategies, policies, perspectives and future potential. *Renewable and Sustainable Energy Reviews*, 16, 933– 941
- Roberts, J.A. and Bacon, R. (1997). Exploring the stable relationship between environmental concern and ecologically conscious consumer behaviour. *Journal of Business Research*, 40(1), 79-89.

- Schelly, C. (2014). Residential solar electricity adoption: What motivates, and what matters? A case study of early adopters. *Energy Research & Social Science*, 183–191.
- Schultz PW (2001). The structure of environmental concern: concern forself, other people, and the biosphere. *J. Environ. Psychol.* 21(4):327-339.
- Sidiras, D.K. & Koukios, E.G. (2004). Solar systems diffusion in local markets. *Energy Policy* 32(18), 2007-2018.
- Srinivasan Chinnammai (2014). A Study on Energy Crisis and Social Benefit of Solar Energy. *International Journal of Environmental Science and Development*, 5(4).
- Surendra Kumar Yadav and Govind Chandra Mishra (2013). Renewable Energy Potential in India. *International Journal of Engineering Research and Technology*, 6 (5), 709-716
- Syed Shah Alam, Mamunur Rashid, S. S. (2012). Intention to use renewable energy: Mediating role of attitude. *Energy Research Journal*, 3 (2), 37-44.
- Tabachnick, B.G. and Fidell, L.S. (1989). *Using Multivariate Statistics*, Harper & Row, Cambridge, MA.
- Tania Urmee, David Harries (2009). Issues related to rural electrification using renewable energy in developing countries of Asia and Pacific, *Renewable Energy*, 34, 354–357
- Ulsrud K. Winther T. Palit D. Rohracher H. Sandgren J. (2011). The solar transition research on solar mini-grids in India: Learning from local cases of innovative socio-technical systems. *Energy for Sustainable Development*, 15(3), 293-303.
- Velayudhan, S. (2003). Dissemination of solar photovoltaics: a study on the government programme to promote solar lantern in India. *Energy Policy*, 31, 1509–1518.

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## **4P Concept of Marketing Mix, needs to be redefined for B2G type of Business Units/Organizations**

**Keywords:** Marketing Mix for Government Organization, B2G Marketing Strategy, Government Dealings, Price is the last strategy, Caveat of being lowest price bidder, Relations matter in B2G organizations, Price Vs ROI, Innovative Vs Reliable Product, Quality comes at a price, Technology comes at a price, Bidding high and staying relevant, Using bureaucracy for the business advantage.

### **INTRODUCTION**

The interference and involvement of Government in the businesses, is though not seen as a very encouraging step in the developed economies, yet it is considered to be a powerful tool by the Governments in the developing economies; for not only controlling the prices, of essential commodities, but also, serve the purpose of ensuring availability in the case of unforeseen social/economic crisis.

Economy of India got global in the year 1992. The markets got free and multiple MNCs entered in various sectors. In most of the sectors, the Government organizations are losing race to these MNCs. However the Government bodies remain instrumental in capital intensive businesses and certain sectors of National importance like Defense and Railways.

There are big business opportunities that are created in sectors with significant government expenditure, which many organizations may target for business generation; but these businesses come with a caveat of 'L1'.

With the inception of this caveat of being the lowest price bidder, the 4P concept of Marketing Mix, comes down to 1P, where price is the last strategy. It is therefore evident that while dealing with the Government organization, all the very focus of a corporate team is shifted on finding ways to reduce costing, than anything else. At times this is on the cost of quality and reliability, which becomes main reason of failing of businesses and brands.

In our research, we were able to find some MNCs which already failed while some are on the verge of failing, which had Govt. as their only customer. On the contrary most of the homegrown organizations were not only able to sustain with the Govt. but were also able to create value and wealth. This prompted us to dig in deep and do some research to establish, an alternative strategy which could be used when Govt. is a customer, where the 4P concept miserably fails, because of price war. We in this study were able to propose a better concept than 4P; the 4R concept, we also have some testimonials, stories and experiences, where we were able to make business out of the strategy formulated on 4R concept. In the end we have also extended the 4R to 7R, not only to stay relevant with the extended 4P concept of marketing mix i.e. 7P concept, as well as draw some relevance of the new model (Read 4R/7R), with existing model (Read 4P/7P). This will not only help in increasing the acceptability of the concept but also will be great help to increasing academic understanding.

### **LITERATURE REVIEW**

The 4P concept of marketing mix is believed to be having originated in the year 1940 Professor of Marketing at Harvard University, Prof. James Culliton, 8 years later, he published an article entitled, The Management of Marketing Costs in which he described the marketers as 'mixers of ingredients'. Culliton's this conceptual starting of Marketing Mix as Marketing Mixer was taken to a higher dimensions by his colleague, Professor Neil Borden, who published an article, completely retrospective, and accepting to be inspired by the Idea of

Marketing Mixers and detailed the early history of the marketing mix. He was quick to credit himself as the first proposer of the idea of Marketing Mix. It is claimed from Borden's account, that the term, 'marketing mix' was consistently used by him from the late 1940s. It is also established from the literatures that in his presidential address given to the American Marketing Association in 1953, he used the term Marketing Mix.

The idea of marketers to be the 'mixers of ingredients' was though widely accepted but, marketers differed on the elements which may be included to form a real marketing mix till 1960s. It was then in the year 1960 when E. Jerome McCarthy; presented the well known, widely accepted modern form of 4P within a managerial approach which was able to include analysis, consumer behavior, market research, market segmentation, and planning, all in the said 4P framework. The Bible or Marketing, 'Marketing Management', by Phillip Kotler, spread the 4 Ps model, to the Marketing world, since he used it through the length and breadth of his book exhaustively. As of today McCarthy's 4 Ps are widely adopted by Professors of Marketing, which become a major reason, that the practitioners, use it invariably, since they are taught about this concept, when they are in the initial stages of their Management education.

In the inaugural AMA Conference which was dedicated to Services Marketing in the early 1980s, built on earlier theoretical works and listed out some significant limitations of the McCarthy's 4 Ps model. On digging deep it was later established, the papers presented the said conference mainly pointed out that there was an immediate need of revision of general marketing mix for service marketers because of an analogous understanding that services were fundamentally different to products, and should therefore be treated differently by using different tools and strategies. It was because of this that an year later in 1981, Booms and Bitner proposed an extended version of 4P model as 7P model, which apart from having the normal 4Ps, also had process, people and physical evidence, and the new model was able to limit the challenges arising in services marketing.

There have been numerous case studies and paper presentations, on the said concepts since then, however, the 7P in its current form, remained globally accepted, despite the deviations, so as to reduce further complexity. However as a practitioner, we would contend again, that this concept totally fails, in a case where the business has to go through the process of 'lowest bidding', since in this type of marketing, supplier are bound to lose a business, if the supplier does not guarantee the lowest price, with his offering, and the product quality, branding, promotions or sometimes even the requirements becomes irrelevant.

Apart from the attached table from Wikipedia, we refrain to go into details and in-depth of 4Ps/7Ps, and understand that the existing concept is self explanatory, owing to its wide acceptance.

**Table 1. Defining the 7Ps**

Category	Definition/ Explanation	Typical Marketing Decisions
<b>Product</b>	A product refers to an item that satisfies the consumer's needs or wants. Products may be tangible (goods) or intangible (services, ideas or experiences).	<ul style="list-style-type: none"> <li>• Product design – features, quality</li> <li>• Product assortment – product range, product mix, product lines</li> <li>• Branding</li> <li>• Packaging and labeling</li> <li>• Services (complementary service, after-sales service, service level)</li> <li>• Guarantees and Returns</li> <li>• Managing products through the life-cycle</li> </ul>
<b>Price</b>	Price refers to the amount a customer pays for a product Price is the only variable that has implications for revenue. Price also includes considerations of customer perceived value.	<ul style="list-style-type: none"> <li>• Price strategy</li> <li>• Price tactics</li> <li>• Price-setting</li> <li>• Allowances – e.g. rebates for distributors</li> <li>• Discounts – for customers</li> <li>• Payment terms – credit, payment methods</li> </ul>
<b>Place</b>	Refers to providing customer access Considers providing convenience for consumer.	<ul style="list-style-type: none"> <li>• Strategies such as intensive distribution, selective distribution, exclusive distribution</li> <li>• Franchising;</li> <li>• Market coverage</li> <li>• Channel member selection and channel member relationships</li> </ul>

		<ul style="list-style-type: none"> <li>• Assortment</li> <li>• Location decisions</li> <li>• Inventory</li> <li>• Transport, warehousing and logistics</li> </ul>
<b>Promotion</b>	<p>Promotion refers to marketing communications May comprise elements such as: advertising, PR, direct marketing and sales promotion.</p>	<ul style="list-style-type: none"> <li>• Promotional mix - appropriate balance of advertising, PR, direct marketing and sales promotion</li> <li>• Message strategy - what is to be communicated</li> <li>• Channel/ media strategy - how to reach the target audience</li> <li>• Message Frequency - how often to communicate</li> </ul>
<b>Physical evidence</b>	<p>The environment in which service occurs. The space where customers and service personnel interact. Tangible commodities (e.g. equipment, furniture) that facilitate service performance. Artifacts that remind customers of a service performance.</p>	<ul style="list-style-type: none"> <li>• Facilities (eg. furniture, equipment, access)</li> <li>• Spatial layout (eg. functionality, efficiency)</li> <li>• Signage (eg. directional signage, symbols, other signage)</li> <li>• Interior design (eg. furniture, color schemes)</li> <li>• Ambient conditions (eg. noise, air, temperature)</li> <li>• Design of livery (e.g. stationery, brochures, menus, etc.)</li> <li>• Artifacts: (eg. souvenirs, mementos, etc.)</li> </ul>
<b>People</b>	<p>Human actors who participate in service delivery. Service personnel who represent the company's values to customers. Interactions between customers. Interactions between employees and customers.</p>	<ul style="list-style-type: none"> <li>• Staff recruitment and training</li> <li>• Uniforms</li> <li>• Scripting</li> <li>• Queuing systems, managing waits</li> <li>• Handling complaints, service failures</li> <li>• Managing social interactions</li> </ul>
<b>Process</b>	<p>The procedures, mechanisms and flow of activities by which service is delivered.</p>	<ul style="list-style-type: none"> <li>• Process design</li> <li>• Blueprinting (i.e. flowcharting) service processes.</li> <li>• Standardization vs customization decisions</li> <li>• Diagnosing fail-points, critical incidents and system failures</li> <li>• Monitoring and tracking service performance</li> <li>• Analysis of resource requirements and allocation</li> <li>• Creation and measurement of key performance indicators (KPIs)</li> <li>• Alignment with Best Practices</li> <li>• Preparation of operations manuals</li> </ul>

### OBJECTIVES OF PRESENT STUDY

The objective of this research paper is to understand the applicability/relevance of the concept of Marketing Mix (4P), for the organizations having Government as its customer. The Authors have good experience of dealing the Government authorities (as customer), and have concluded that the 4P concept, has limited or no applicability, when the customer is Government agency/department. However, this research may be felt biased or incomplete, since the authors, have minimal interactions, with a Government of a country other than India. To mitigate the said error the authors, had some interactions with the employees of other countries (Pakistan, Srilanka, Mexico, South Africa, Albania and Indonesia), who were involved in day to day dealing with Government departments/businesses in their countries. Authors were able to establish that with some differences in the thought processes and working methodology of the bureaucrats in different countries, the proposed concept in this paper holds firmly, despite the geographical boundaries, and is deemed to be a better concept than 4P, while deciding the Marketing Strategy in an attempt to make more business sense for the Government bodies.

## RESEARCH METHODOLOGY

For the businesses having Government as their customer, it is important to understand what makes a customer to buy a product. Here in when we say customer, we at the very end, refer to a bureaucrat, since in all the cases of Government being a customer, the final decisive and selection power comes to a bureaucrat or group of bureaucrat who have their own perceptions, rules, biases and limitations.

One of the author of this paper being a psychologist, it was easy for us to jump to a conclusion to the ‘Theory of mind failures’, for bureaucrats, where they being subject matter experts, believe everyone (suppliers, organizations, project managers, or even salesman) to know everything, and most of the time, end up not saying, what is required to be said, thinking it to be obvious and making errors at the end. Taking care of the said theory, the interview questionnaire was well designed to find out any biases or mind failures, which may lead to wrong outcome of the study.

**Selection of Interviewee:** With reference to the Herbert A Simon’s book ‘Administrative Behaviour’ (1976[1945]), we decided to interview only those bureaucrats, who we complying with following points.

- The Bureaucrat should be involved in day to day tendering, order finalization and decision making process.
- Should be highly educated, have done very well in school, and successful in all the ventures of his life since it will ensure his openness to new ideas and opinions.
- Should be having good relations, with their peers, staff and family, since it ensures there trustworthiness.
- Should have a preference of social order, since it will ensure that they are clear about their organizational goals, and will abide to the rules and exercising duties.
- Should be anxious and uneasy people but not emotionally unstable, since they are expected to be reasonably rationale.
- Apart from above, those having a group identity of Gender, Race or other socio demographic characters, shall not be considered for the questionnaire, since their thought process may be biased.
- Politically influenced/influential Bureaucrats are always considered in the sample; despite they may or may not meet the above criterion, since their decisions will always have priority over all the rationale, and so their thought processes cannot be ignored in the study.

To carry out the said short listing, we did some primary research, on linked in, and some secondary research, by asking certain set of questions, from their staff. After short listing on the above factors, we were able to find only seven bureaucrats that could be considered for this research. Below are the questions asked to Bureaucrats, about their preferences while finalizing a contract.

**Table 2: Questions to Bureaucrats for understanding their preferences**

Question	Rationale	Outcome
Are you in a good state of mind now?	So as find, if answers, may be affected by a bad mood	Most of the officers answered to be in stable state of mind.
What is most important for you while deciding to buy a product for your organization? 1. Innovative Product 2. Proven Product 3. Imported Product 4. Reliable Product.	So as to find out the real preference of a bureaucrat while buying the product.	While some insisted more on Proven product, most insisted on Reliable product. However, digging further, a proven product was also chosen since it was thought to be reliable.
Which Price is the best Price for a Product?	We expect answer to be L1 in all the case, but this question is expected to be prequel to next question.	All of them said that, the cheapest price is the best price of a product

If a product is expected to return its investment in next 3 years, will you buy that product at a higher price, when compared to cheaper product, which will take 10 years to return the investment	This question will establish, if Return on Investment is more important than the price of the product.	For All of them, the Return of Investment was more important than the price. However a period of 10 or more years was considered equal as very long time.
Do you decide to buy the Product, based on its Promotions?	This is a straight forward question to establish if Relations are more important than promotions.	A firm 'NO' from all the officers.
Do you push for a product, whose representative has good relations with you?	We prefer to see the non verbal cues, for this answer, during the interview, since we expect an always 'NO'	Got a mixed response to this question, where no one directly admitted to benefit a person with Good relations with them
If a product comes at a higher price but is able to affect 10 lakh of population, while the product with lower price affects 2 lakh of population, will you pay the higher price.	This question is to check how significant is the reach of a Product while deciding to buy a product.	Reach of the product was important for all the officials, also they prioritize the tasks based on the public reach.
Which organization will you prefer? The one which offers low price products, or another which answers to your queries/suggestions/requirements promptly, keeping product quality same.	This question is to check how significant is the response time of an organization while deciding to buy a product.	Though the officials were not very sure on this questions, yet they accepted, that its good if some organization responded in a time bound manner.
If an organization shares the failure risk, both in terms of monetary value and brand image, with your organization, will you mind if we quote higher price?	This question will add to the surprise of interviewee and will break the monotony, since; it will require some serious thinking from his side, as the answer is not obvious.	A risk sharing will increase the chances of awarding a contract to an organization, as said by all the officials.
How important is for you, that your supplier, complies with all the regulations, all the time, and if he does so, are you comfortable to go extra step, and ensure he gets the order?	Straight question, to check the requirement of meeting the regulations for an organization, and its affect on the decision making process of the bureaucrat.	Though the officials expect, every supplier to meet the laid regulations, however they were negative, to consider an organization, which has defaulted previously on regulations.

## CONCLUSION

The results of the above interviews, do not come as a surprise to us, since based on our earlier discussions, we already knew that apart from price nothing is more important for a Government official (Read Bureaucrat), and the organizational culture of the Government organizations, has got significantly rigid on it. Today no official wants to break the L1 jinx and persuade its peers for considering other important factors, apart from price. However, based on our straight forward questions, Bureaucrats were ready, to come out of L1 jinx and decide, on other factors, apart from price, provided they are having sufficient grounds/data/reason to defend their decision of going away from the lowest price bidder.

Bureaucrats understand that in the long run the policy of going with lowest price bidder, will result in loss of quality and prevent the new technologies to penetrate into the system, since good things come at a price. However to stay relevant the organizations involved in Government dealings need to find a way, to do businesses with the Government organizations, in the existing mechanism. With the help of above questions, we are able to propose a 4R concept, for B2G type of business units/organizations, which will contribute in understanding/building the marketing strategy better and relevant for the said businesses.

#### *4R Concept*

The 4R concept can be broadly explained in following four self explanatory points, though we plan to elaborate them further.

- **Reliability**
- **ROI**
- **Relations**
- **Reach**

**Reliability:** This goes in line with the fundamental concept of Product in 4P concept, however, in 4R (for B2G), the reliability of the product is much more important than the product itself. To summarize, a new product, with many more features, will always be marred by an old, outdated but reliable product. Coz bureaucrats (deciding authority), are questioned less about the inception of new and better products, and more about the product they have selected/accepted but failed regularly. This also explains that an organization with innovative product line will always be defeated by an organization with reliable product line.

**ROI:** This is again in line with the concept of Price in 4P concept, but the L1 barrier could be defeated, by establishing/finding/highlighting the Return of investment, which comes significant and deciding while searching for a market in Government units. Bureaucrats show significant interest in the products, which can recover their cost in short time frame.

**Relations:** They go in line with the concept of Promotions in 4P, since the Relations with the Govt. staff is the only way to let your product seep deep into the bureaucratic system. They come handy to create buzz, which will eventually effect the decisions of the purchaser.

**Reach:** This is in line with Place concept of 4P. Since the government organizations have significant socio-economic responsibility, therefore the public reach of the outcome of business dealing plays significant role in affecting the decision making of the Government. A high public reach will be far more important than the price itself.

As explained in introduction, we propose another 3Rs, so as to complete the 7Rs, based on the outcome of the study. They are:-

- **Response**
- **Regulations**
- **Risk Aversion**

**Response:** Response is in line with People in the 7P concept. Government officials normally, prefer and organization that are quick in answering to their queries, Proactive in organizing trainings and prompt in giving comments and suggestions to the specifications. This helps to minimize the pending tasks, which bureaucrats are very fond of.

**Regulations:** This is in line with the Processes in 7P. Regulations are an integral part of Government organization, and the study, explains that Government officials tend to support the organizations, that have past history of strictly adhering to the regulations. While awarding contracts, they tend to consider, an organization that they think to be serious in following the laid down regulations, as it will reduce the chances of failure of processes due to non compliant behavior, which at the end may be considered as the failure of bureaucratic system.

**Risk Aversion:** Government officials tend to avoid risk, coming out of uncertainty, however in case and organization makes the necessary changes in its contract to share the risk with the Government bodies, it gets an upper hand in getting the Government contracts. Government officials can pay higher, to transfer risk from them to the supplier, which could be in any form ranging from monetary loss to image loss.

## REFERENCES

1. Kotler, P., Marketing Management, (Millennium Edition), Custom Edition for University of Phoenix, Prentice Hall, 2000, p. 9.
2. McCarthy, Jerome E. (1964). *Basic Marketing. A Managerial Approach*. Homewood, IL: Irwin.
3. Grönroos, Christian. "From marketing mix to relationship marketing: towards a paradigm shift in marketing." *Management decision* 32.2 (1994): 4-20.
4. Booms, Bernard H.; Bitner, Mary Jo (1981). "Marketing Strategies and Organization Structures for Service Firms". *Marketing of Services*. American Marketing Association: 47–51.
5. Kotler, Philip (2012). *Marketing Management*. Pearson Education. p. 25.
6. Needham, Dave (1996). *Business for Higher Awards*. Oxford, England: Heinemann.
7. Rodríguez, Ismael; Rabanal, Pablo; Rubio, Fernando (2017). "How to make a best-seller: Optimal product design problems". *Applied Soft Computing*. 55(June 2017): 178–196. doi:10.1016/j.asoc.2017.01.036. ISSN 1568-4946.
8. Groucutt, J. and Leadley, p., Marketing: Essential Principles, New Realities, <https://books.google.com/books?id=cd6Sjxu2lesC&pg=PA17>, Kogan Page, 2004 ISBN 978-0-7494-4114-2, p.17.
9. Hunt, S.F. and Goolsby, J., "The Rise and Fall of the Functional Approach to Marketing: A Paradigm Displacement Perspective," (originally published in 1988), reprinted in: Review of Marketing Research: Special Issue - Marketing Legends, Vol. 1, Naresh K. Malhotra,(ed), Bingley, UK, Emerald, 2011
10. Banting, P.M. & Ross, R.E., "The marketing mix: A Canadian perspective," *Journal of the Academy of Marketing Science*, vol. 1, no. 1, 1973, doi:10.1007/BF02729310
11. Culliton, J. The Management of Marketing Costs, [Research Bulletin] Harvard University, 1948).
12. Borden, N.H., "The Concept of the Marketing Mix," *Journal of Advertising Research*, 1964, pp 2-7 and reprinted in: Baker, M.J. (ed), *Marketing: Critical Perspectives on Business and Management*, Vol. 5, Routledge, 2001, pp 3-4 and available online at Google Books
13. Dominici, G., "From Marketing Mix to E-Marketing Mix: A Literature Review," *International Journal of Business and Management*, vol. 9, no. 4. 2009, pp 17-24
14. W. Waterschoo; C. van den Bulte (1992). "The 4P Classification of the Marketing Mix Revisited". *Journal of Marketing*. 56 (4): 83–93. JSTOR 1251988.
15. McCarthy, E.J., *Basic Marketing: A Managerial Approach* Irwin, Homewood, Ill., 1960
16. Keelson, S.A>, "The Evolution of the Marketing Concepts: Theoretically Different Roads Leading to Practically the Same Destination!" in *Global Conference on Business and Finance Proceedings*, Volume 7, Number 1, 2012, ISSN 1941-9589
17. Constantinides, ,, "The Marketing Mix Revisited: Towards the 21st Century Marketing," *Journal of Marketing Management*, vol. 22, 2006, pp. 407-438.  
Online: [http://intranet.fucape.br/uploads/MATERIAIS\\_AULAS/25112-8.pdf](http://intranet.fucape.br/uploads/MATERIAIS_AULAS/25112-8.pdf)
18. Fisk, R.P., Brown, W. and Bitner, M.J., "Tracking the Evolution of Services Marketing Literature," *Journal of Retailing*, vol. 41, (April), 1993
19. Booms, B. and Bitner, M. J. "Marketing Strategies and Organizational Structures for Service Firms" in James H. Donnelly and William R. George, (eds), *Marketing of Services*, Chicago: American Marketing Association, 47-51.
20. Bitner, M.J., "The Evolution of the Services Marketing Mix and its Relationship to Service Quality," in *Service Quality: Multidisciplinary and Multinational Perspectives*, Brown, S.W., Gummesson, E., Edvardson, B. and Gustavsson, B. (eds), Lexington, Canada, 1991, pp. 23-37.
21. Wright, R., *Marketing: Origins, Concepts, Environment*, Holborn, London, Thomson Learning, 1999, pp. 250-251.
22. Hartley, K. and Rudelius, W., *Marketing, The Core*, 4th Ed., McGraw-Hill, 2001.
23. Blythe, Jim (2009). *Key Concepts in Marketing*. Los Angeles: SAGE Publications Ltd.
24. Ivy, Jonathan (2008-05-16). "A new higher education marketing mix: the 7Ps for MBA marketing". *International Journal of Educational Management*. 22 (4): 288–299. doi:10.1108/09513540810875635. ISSN 0951-354X. (Subscription required (help)).
25. Bitner, M.J., "Servicescapes: The Impact of Physical Surroundings on Customers and Employees," *Journal of Marketing*, vol. 60, no. 2, 1992, pp. 56-71.
26. Hoffman, D., Bateson, J.E.G., Elliot, G. and Birch, S., *Services Marketing: Concepts, Strategies and Cases*, (Asia-Pacific ed.), Cengage, 2010, pp. 226-274.

27. Zeithaml, V. Bitner, M.J. and Gremler, D.D., *Services Marketing: Integrating Customer Focus Across the Firm*, (6th ed), New York: McGraw-Hill, 2013.
28. Shostack, G. L.. "Designing Services that Deliver", *Harvard Business Review* , vol. 62, no. 1, 1984, pp. 133–139.
29. McLean, R. (October 19, 2002). The 4 C's versus the 4 P's of Marketing, Custom Fit Online. Retrieved from <http://www.customfitonline.com/news/2012/10/19/4-cs-versus-the-4-ps-of-marketing>
30. G. David Dodd (February 8, 2015) B2B Market Directions from <http://b2bmarketingdirections.blogspot.com/2015/02/for-effective-marketing-you-need-both.html>
31. Ira Hyman (May 30, 2017) Why Bureaucrats are like three year olds from <https://www.psychologytoday.com/gb/blog/mental-mishaps/201705/why-bureaucrats-are-three-year-olds>
32. Judith Orloff (February 26, 2014) Three Techniques to read People from <https://www.psychologytoday.com/us/blog/emotional-freedom/201402/three-techniques-read-people>
33. Wendy Lustbader (August 3, 2016) When you don't know what to say from <https://www.psychologytoday.com/us/blog/life-gets-better/201608/when-you-dont-know-what-say>
34. Asbjørn Sonne Nørgaard, Human behavior inside and outside bureaucracy: Lessons from psychology *Journal of Behavioral Public Administration* Vol 1(1), pp. 1-16 DOI: 10.30636/jbpa.11.13
35. Sheth, Jagdish N.; Parvatiyar, Atul; Sinha, Mona, The conceptual foundations of relationship marketing: Review and synthesis from <http://hdl.handle.net/10419/155992>

**CHANGING REGULATORY REGIME: AN IMPETUS  
FOR INNOVATION FOR INDIAN  
PHARMACEUTICAL INDUSTRY**

**(Working Paper)**

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## **CHANGING REGULATORY REGIME: AN IMPETUS FOR INNOVATION FOR INDIAN PHARMACEUTICAL INDUSTRY**

### **Abstract**

The pharmaceutical industry in any country is fostered with a culture of radical innovation. However, the importance of radical innovation is still unrealized by Indian Pharma firms which succumb to internal as well as external pressures that often push them to low risk-immediate profit avenues. Therefore, this study is an attempt to reflect upon the strategic interventions used by firms operating in India with special emphasis on innovation in the pre and post TRIPS era. The authors focus on investment in R&D, patents filed by firms and new product development with reference to generic as well as patented drugs.

The study gains relevance as in the last 15 years India's IPR and FDI regime has become more conducive to big foreign players with huge investment budgets. The fact that Indian pharmaceutical sector accounts for almost 3.5% of the total global pharmaceutical industry and its exports are expected to grow to almost 30 per cent by 2020 reflects upon its huge size and market potential.

The kingpin of the pharmaceutical industry lies in its R&D potential, which poses limits to complete realization of product innovation by these firms. Before the TRIPS agreement, product innovation was synonymous to incremental innovation and reverse engineering with more focus on generic drugs rather than on the development of new patented drugs.

Fundamental changes in the regulatory environment of the Pharma industry have triggered the Pharma firms operating in India to make significant changes apropos to their perspectives on innovation which is reflected in their R&D budgets. Therefore, the aim of the study is to assess the post-TRIPS initiatives by firms operating in India in the area of innovation in an effort to improve their performance and build sustainable competitive advantage by way of strengthening their institutions in R&D for new product development.

## Introduction

It has long been known that competition in the pharmaceutical industry primarily takes place through innovation (Arrow, 1962) which is driven by the research based sectors of the firms. The Indian pharmaceutical industry is driven by intense competition among domestic and foreign multinationals ever since the economy opened its doors for FDI. This sector has made a significant presence in the domestic as well as the global markets since the inception of the TRIPS in 1995. The TRIPS implementation in 2005 has called upon a large number of pharma firms both big and small to make significant changes in terms of a number of aspects that are major determinants of their performance. These changes pertain to its composition, inclusion and exclusion of drugs, health and safety standards, R&D, patent policies, and their internal and external perspectives towards acquiring strategic competence. The adoption of the TRIPS in order to be compliant with the WTO's principles has given more prominence to foreign multinationals operating in the country in the area of new drug development. The objective of this paper is to determine the relationship between R&D expenditure and innovation of firms measured by way of patents and ANDA (Abbreviated New Drug Applications) filed in the pre and post TRIPS era.

According to the report published by IBEF (Indian Brand Equity Foundation), the Indian pharmaceutical contributes almost 3.1 – 3.6 per cent of the global pharmaceutical industry in value terms and 10 per cent in volume terms. The pharma sector is one of the leading producers of generic drugs and is also leading filer of ANDA in the USA, receiving 304 ANDA approvals from the US Food and Drug Administration in 2017. The fact that exports are expected to grow to almost 30 per cent by 2020 reflects upon its huge size and market potential. The country's export composition is mainly dominated by the generic drug segment. Also the share of patented Indian drugs in the market is fairly low and its success is therefore largely driven by the generic drugs segment. The patented drugs segment, though progressing over the years is yet to make its meaningful presence (Gokhale & Kannan, 2017). Thus, this sector calls for rapid innovation through heavy investments in research and development activities by firms to survive the increasing competition from the foreign counter parts (Solow, 1957).

There is a wide gap in literature when researchers have discussed innovation in the pharmaceutical sector. A number of studies on innovation in technology intensive industries have presented innovation as a theoretical concept driving out of an organization's culture (Ling, 2003; Schein, 1990; Khazanchi, Lewis, & Boyer, 2007). These studies have not focused on external factors present in the firm's environment that may compel a firm to undertake innovation efforts by way of their R&D. Also, there is a dearth of studies when overall industry performance has been measured post TRIPS period in India.

In this paper, the authors examine the critical outputs of innovation that is, patents and ANDA filed and their relationship to R&D expenditures made by firms in this industry. Moreover, the authors tend to reflect upon the performance of Indian pharma sector especially in the post product patent regime in terms of innovation reflected through their R&D efforts which is at its most critical stage of growth.

## Literature Review

### *Indian Intellectual Property Rights Regime-The background*

India is not new to innovations and patents. The patent laws were introduced in India by the Britishers in the year 1856. The first major changes in this law were made in 1859. In 1872, 1888 and 1911, Indian Patents & Designs Protection Act, Indian Inventions and Designs Act and Indian Patents and Designs Act, were respectively introduced. During 1912-1969, many minor amendments were made to these Indian Patent laws (Haley and Haley, 2012).

In 1947, when India became independent, the indigenous pharma industry was modestly sized - about US\$ 28.5 million (Haley & Haley, 2012). It was majorly dominated by foreign multinational companies and there was a heavy reliance on imported drugs. In order to decrease this reliance, the Indian government invested in some public sector enterprises such as Hindustan Antibiotics Limited (HAL) and Indian Drugs and Pharmaceuticals Limited (IDPL). However, this was not sufficient to curb the heavy reliance on imported highly priced drugs. In 1970, India brought “drug price control” wherein it controlled the prices of a number of drugs. This led to foreign companies decreasing their investment and slowly withdrawing from India.

Post-independence, the first set of major changes were made in the year 1972, when India enacted the Indian Patents Act. This act introduced the process patent regime that is, granting patent to the process and not the product itself. Under its process-patent regime from 1972 to 2004, the pharmaceutical industry in India grew and became the world's fourth largest in the world recording a growth rate of 21.9% (Haley and Haley, 2012). Herein, the patents were given to processes and not to products. The Indian pharma companies exploited this loophole in the law. They used to extensively study the molecular structure of the patented product and then come up with a very similar product having the same effect and efficacy as that of the patented drug by minutely tweaking the process. By slightly changing the process, they used to avoid infringement of the law, and thus avoid any legal complications in manufacturing the same patented product. This was highly profitable for Indian companies since the investment was very little compared to manufacturing a patented drug and they were coming up with a much cheaper version of the patented drug as soon as it was introduced in the market.

In 1994, India signed the TRIPS agreement wherein it pledged to introduce the product patent regime by 2005. Following this, 1995-2005, saw a major overhaul in the Indian Patent laws. The first set of changes was introduced in March 1999, wherein the provision for exclusive marketing rights was introduced. The second major changes were brought about in May 2003. The Patents Act was amended to increase the duration for which the patent was granted from 7 years to 20 years. Also, an Appellate Board was established that would exclusively deal with cases regarding the Indian Patents Act. The third set of amendment was introduced in January 2005 wherein the product patent regime was also established. This granted exclusive patenting rights to both the process of manufacturing as well as the final product manufactured for 20 years (Law Commission of India, 1999). These reforms have been undertaken with a view to encourage domestic firms in this sector to invest more in R&D in case of patented drugs.

A number of researchers have studied the trends in the R&D activity, innovation led exports growth pattern, and patenting activity in the Indian pharmaceutical industry in the pre and

post TRIPS period. (Annual Report 2013-14; Thomas, Narayanan, Kathuriya, Tyagi, Mahajan, & Nauriyal, 2014; Achilladelis & Antonakis, 2001)

## **Hypothesis Development**

### *Innovation & R&D in pharmaceutical Industry*

Innovation can thus be thought of as a function of R&D efforts of firms. For instance, Schwartzman (1976) opened his now-classical analysis of innovation in the Pharmaceutical Industry with these words: “Pharmaceutical manufacturers compete for sales chiefly by seeking to discover and develop new drugs, and unless this is kept in mind, the behavior of the industry is likely to be misunderstood”. Innovations in this sector require devoting specialized resources as competition can only be eliminated through breakthrough drug discoveries (Schwartzman, 1976). Hence, innovation as contended by Menguc & Auh, (2006), should be viewed as an outcome oriented construct measured through new product/process launch (Dewar & Dutton, 1986) or modification of an existing product, that improves a firm’s strategic position internally or externally. The authors in this study view innovation in the implementation context enabling firms to come out with new products or patents.

The premise for using R&D as a measure to predict innovation is that firms spend more resources on searching for new discoveries that result in increased likelihood of innovation (Simanjutak & Tjandrawinata, 2011). The empirical study of Bean (1995) on 15 drug firms between 1971 and 1990 finds very strong positive correlation between R&D investments in basic research, product and process development and productivity growth.

It is therefore hypothesized that,

H1: Increase in R&D investment positively affects innovation

### *Innovation and IPR Regime in the country*

The TRIPS agreement which was agreed upon in 1995 but amended in phases changed the strategic perspectives of firms in this industry. Industry quickly transformed itself from a process based protectionist regime to a strict product patent edict wherein firms needed to establish themselves by way of innovative R&D rather than imitative R&D to cut through competition from MNCs (Saranga, 2007).

An increasing number of countries have provided some form of patent protection to the pharmaceutical firms operating in the country as it has been realized that the absence of such protection parameters would deter firm’s interest in continuing its operations. Without significant protection, drugs can be reverse engineered, manufactured, and marketed by competing firms (Popper & Nason, 1994).

It is inferred from here that innovation would be the key to deal with turbulence in the dynamic business environment (Tellis, Prabhu, & Chandy, 2009; Baker & Sinkula, 2002). Thus, in dynamic environments, innovation is thought as an obligation the environment imposes on firms and in turn improves performance (Miller & Friesen, 1983).

The Government through the patents essentially grants monopoly rights to the inventor for his invention. During the patent period, the patentee has the right to prohibit the commercial manufacturing of his invention. And when firms innovate they receive patents which give

them monopoly and protected income. Patent should thus be viewed as a prize or reward for a new discovery which lets firms enjoy extra profits by way of protected income for a considerable period of time.

Previous studies measure innovation through a number of ways- new products or processes or R&D expenditure or timing (pioneers, quick seconds, or late followers), and patents. Acemoglu and Linn (2004), measure innovation using new drugs launched, though their study has included generic drugs in much of their analysis. The post TRIPS era has seen firms engaging vigorously in R&D activity and coming out with increased number of patents, also proven by a number of studies (Mahajan *et al* , 2014; Nauriyal & Sahoo, 2008; Majumdar & Feinberg, 2001) Thus, it can be seen that a country's IPR regulations influence firm's policy on innovation.

It is therefore hypothesized that,

H2: Highly regulated IPR Regime enhances the positive effect of R&D on innovation in Pharma industry

### Data sources

The present study is based on secondary data. In order to study industry level determinants of R&D and Innovation, the data set used for this preliminary investigation consists of a sample of Indian Pharmaceutical firms covered by the Center for Monitoring of Indian Economy (CMIE), Prowess Database.

**Descriptive Statistics (Table 1)**

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
<b>Year</b>	14	2000	2013	2006.5	4.1833	17.5
<b>R&amp;D</b>	14	526	6659	3330.643	2098.201	4402449
<b>ANDA</b>	14	9	201	86.5714	66.25326	4389.495
<b>Total Patents</b>	14	56	635	407.1429	195.4249	38190.9

Dependent Variable: Innovation has been taken as the dependent variable being measured by Patents filed by the Indian pharmaceutical firms and ANDA applications during 2000-2013. This time period represents the pre- and post- TRIPS era. The patent data has been taken from WIPO IP statistics Data Center. ANDA approvals data has been extracted from the US Food & Drug Administration and is used as a proxy for regulatory filings for new products and processes.

Independent Variable: The independent variable, R&D expenditure of the Indian pharmaceutical firms has been taken from CMIE-Prowess database for the period 2000 to 2013.

All data points were converted to natural log to make them stationary (LNR&D, LNANDA, LNTotalpatent) (Banerji & Suri , 2017).

## Results

Pearson correlation was used to determine the association between R&D, patents and ANDA. The correlations were found to be highly significant and positive for all the three variables, in both the pre and post TRIPS era (Tables 2, 3 and 4).

**Correlations - Overall (Table 2)**

	Year	LN R&D	LN ANDA	LNTotal Patent
Year	1			
Ln R&D	.964**	1		
Ln ANDA	.954**	.977**	1	
Ln Total Patent	.858**	.954**	.909**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations - Pre-TRIPS (Table 3)**

	Year	Ln R&D Pre 2005	Ln ANDA Pre 2005	Ln Total Patent Pre 2005
Year	1			
Ln R&D Pre 2005	.993**	1		
Ln ANDA Pre 2005	.955*	.954*	1	
Ln Total Patent Pre 2005	.999**	.992**	.946*	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Correlations-Post TRIPS (Table 4)**

	Year	Ln R&D Post 2005	Ln ANDA Post 2005	Ln Total Patent Post 2005
Year	1			
Ln R&D Post 2005	.986**	1		
Ln ANDA Post 2005	.872**	.903**	1	
Ln Total Patent Post 2005	.736*	.721*	.716*	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Regression Analysis (Table 5)**

	Ln Total Patent	Ln ANDA	Ln Total Patent Pre 2005	Ln ANDA Pre 2005	Ln Total Patent Post 2005	Ln ANDA Post 2005
Ln R&D	0.862***	1.315***				
	-0.0939	-0.0664				
Ln R&D Pre 2005			1.376***	0.810**		
			-0.0982	-0.122		
Ln R&D Post 2005					0.333 <sup>+</sup>	1.261**
					-0.149	-0.248
Constant	-0.95	-6.311***	-4.471**	-2.919*	3.471*	-5.808*
	-0.757	-0.536	-0.711	-0.848	-1.26	-2.105
<i>N</i>	14	14	5	5	9	9
<i>R</i> <sup>2</sup>	0.909	0.955	0.983	0.91	0.52	0.815
adj. <i>R</i> <sup>2</sup>	0.902	0.951	0.978	0.88	0.451	0.789
F	84.3	392.6	196.1	44.01	5.031	25.87

Standard errors in parentheses

<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The hypotheses were tested using OLS regression (Table 5).

The first hypothesis, increase in R&D expenditure positively affects innovation, was found to be true. The relationship between R&D expenditure and innovation was found to be highly significant ( $p$ -value < 0.001).

The second hypothesis, highly regulated IPR regime enhances the positive effect of R&D on innovation in Pharma industry, was also found to be true. The relationship between R&D and innovation during Pre-TRIPS era was found to be significant. The post- TRIPS relationship between R&D expenditure and innovation was found to be stronger than the Pre-TRIPS era.

## Conclusion

Literature provides ample evidence that the Indian Pharmaceutical industry has largely been driven by imitation rather than innovation (Banerji & Suri , 2017) . With the IPR regime strengthened in 2005, the Indian patent law defines patentable pharmaceutical drugs as new products but does not recognize modification of existing drugs as patentable. Thus, this has been to the advantage of the large firms operating in this sector which by way of large capital budgets invest in infrastructure and conduct research in unexplored areas.

This study enhances the understanding of innovation as an outcome being determined by patenting activity and ANDA filing in the pharma industry. The results from the analysis indicate that innovation in the Indian Pharmaceutical industry has been strongly driven by

R&D expenditure in the post TRIPS era considering the increased amount of competition from foreign counterparts who had greater protection for their products due to product patent introduction in 2005. It also implies that with greater R&D activity there has been an increase in their patenting activity directly indicating their willingness for innovation. Indian pharmaceutical contributes almost 30 per cent of the total exports to the US, and their share in the ANDA has also gradually expanded indicating that a highly regulated regime is a positive harbinger of innovation.

It is thus true that TRIPS has altered firm's perspective on research and development and innovation, but considering the competition and growth shown by foreign multinationals, they still have a long way to go.

## **Bibliography**

- Acemoglu, D., & Linn, J. (2004). Market size in innovation: theory and evidence from the pharmaceutical industry. *The Quarterly Journal of Economics*, 1049-1090.
- Achilladelis, B., & Antonakis, N. (2001). The dynamics of technological innovation: the case of pharmaceutical industry. *Research policy*, 30, 535-588.
- (n.d.). *Annual Report 2013-14, Ministry of chemicals and Fertilizers*. Department of Pharmaceuticals, Government of India.
- Arrow, K. (1962). The Economic Implications of Learning by Doing. *Review of Economic Studies*, 29, 155-173.
- Baker, W. E., & Sinkula, J. M. (2002). Market orientation, learning orientation and product innovation: delving into the organization's black box. *Journal of market-focused management*, 5-23.
- Banerji, A., & Suri, K. F. (2017, May). Patents, R&D Expenditure, Regulatory Filings and Exports in Indian Pharmaceutical Industry. *Journal of Intellectual Property Rights*, 22, 136-145.
- Bean, A. S. (1995). Why some R&D organizations are more productive than others. *Research-Technology Management*, 38(1), 25-29.
- Dewar, R. D., & Dutton, J. E. (1986). The adoption of radical and incremental innovations: An empirical analysis. *Management science*, 32, 1422-1433.
- Gokhale, P., & Kannan, S. (2017, December). Patenting trends in Indian pharmaceutical industry. *Annals of Library and Information Studies*, 64, 260-267.
- Haley, G. T., & Haley, C. V. (2012). The effects of patent-law changes on innovation: The case of India's pharmaceutical industry. *Technological Forecasting and Social Change*, 79(4), 607-619.
- IBEF. (2018). *Indian Pharmaceutical Industry*.
- Khazanchi, S., Lewis, M. W., & Boyer, K. K. (2007). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, 25, 871-884.
- (1999). *Law Commission of India*. One Hundred and Sixty Seventh Report on the Patents (Amendment) Bil, 1996.

- Ling, F. (2003). Managing the implementation of construction innovations. *Construction Management and Economics*, 21, 635–649.
- Mahajan, V., Nauriyal, D. K., & Singh, S. P. (2014). Technical efficiency of Indian drug and pharmaceutical industry: A non-parametric approach. *Benchmarking: An International Journal*, 21(5), 734-755.
- Majumdar, S. K., & Feinberg, S. E. (2001). Technology spillovers from foreign direct investment in the Indian pharmaceutical industry. *Journal of International Business Studies*, 32(3), 421-437.
- Menguc, B., & Auh, S. (2006). Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness. *Journal of the academy of marketing*.
- Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: the third link. *Strategic management journal*.
- Nauriyal, D. K., & Sahoo, D. (2008). The new IPR regime and Indian drug and pharmaceutical industry: An empirical analysis. Paper presented at 3rd Annual Conference of the EPIP Association.
- Popper, K. L., & Nason, R. W. (1994). The Drug Lag: A 20-Year Analysis of Six Country Markets. *Journal of Public Policy & Marketing*, 13(2), 290-299.
- Saranga, H. (2007). Multiple objective data envelopment analysis as applied to the Indian Pharmaceutical Industry. *Journal of the Operational Research Society*.
- Schein, E. H. (1990). Organizational culture. *American Psychologist*, 45, 109-119.
- Schein, E. H. (1990). Organizational Culture: What it is and How to Change it. *Human resource management in international firms*, 56-82.
- Schwartzman, D. (1976). *1976) Innovation in the Pharmaceuticals Industry*. Baltimore: The Johns Hopkins University Press.
- Simanjutak, D. G., & Tjandrawinata, R. R. (2011, Oct 20). <https://papers.ssrn.com/sol3/papers.cfm?abstract-id=1946761>. Retrieved from Social Science Research Network: <https://papers.ssrn.com/sol3/papers.cfm?abstract-id=1946761>
- Solow, R. (1957). Technical change and the aggregate production function. *Rev Econ Stat*, 39, 312-320.
- Tellis, G. J., Prabhu, J. C., & Chandy, R. K. (2009). Radical innovation across nations: The preeminence of corporate culture. *Journal of marketing*, 3-23.
- Thomas, R., Narayanan, K., Kathuriya, V., Tyagi, S., Mahajan, V., & Nauriyal, D. K. (2014). Innovation in Indian drug and pharmaceutical industry: Have they impacted exports? *Journal of Intellectual Property Rights*, 19, 243-252.

**EFFECT OF DIVIDEND POLICY ON SHAREHOLDERS' VALUE: A STUDY OF  
INVESTMENT COMPANIES LISTED IN THE NAIROBI SECURITIES EXCHANGE**

**JOSHUA KENGERE MOGAKA**

**A RESEARCH PROPOSAL SUBMITTED TO THE ANNUAL GLOBAL BUSINESS  
ADVANCEMENT CONFERENCE TO BE HELD IN THAILAND IN REGARD TO MY THESIS  
IN DOCTER OF PHILOSOPHY OF THE UNIVERSITY OF NAIROBI KENYA.**

**JULY, 2018**

## **ABSTRACT**

Value of a firm determines the financial performance of organizations. Finance theory's premise is that the goal of management should be to maximize the market value of the company's shareholder equity through investments in an environment where outcomes are uncertain. In order to ensure that financial risk strategy add value for shareholders therefore, a sound relationship between the effect of dividend policy and shareholder value has to exist. The general objective of this study will be to determine the effect of dividend policy on shareholders' value in investment firms listed in the Nairobi Securities Exchange (NSE). The specific objectives of the study include to : To establish the relationship between dividend payout and shareholder value. To assess the effect of corporate profitability on the value of shareholders. To determine the effect of retained earnings on shareholders' value. This study will adopt a diagnostic research design. The target population for the study will comprise of five investment companies listed in Nairobi Securities Exchange in Kenya. Stratified sampling techniques will be used to arrive at the sample size, in order to gather the data required. Data will be collected using document review. The researcher will use descriptive statistical methods of Mean standard deviation, percentages and frequencies to understand the characteristics of the variables. Inferential statistical tool multivariate regression analysis will also be used. The results will be presented in the form of tables and graphs.

### **1.1 BACKGROUND INFORMATION TO THE STUDY**

Diverse studies distinguish the fact that dividend documentation makes a considerable impact on the assessment of the firm whenever attentive assessment is followed. The firm's ambition of prosperity maximization may be accepted as an aspiration of the business because it reconciles the wide ranging and inconsistent of stakeholders. The value approach estimates the EV of a firm by discounting future cash flows using cost of capital (Kapoor, 2009). Cash streams supply the underpinning of shareholder returns due to the resultant dividends as well as share rate augmentation. Firm's going concern must strive in order to enhance its cash generating ability. Firm's ability to pay dividends is dependent on its ability to

generate positive cash flows from its operations and its ability to obtain capital from its creditors and equity holders. Firm's borrowing power and share price for its common stock heavily depends on its ability to generate positive cash flows (Hussainey et al., 2011). Studies on dividend policy decisions have been carried out extensively in developed economies i.e. mainly in the USA. Lintner (1956) carried out a study on how USA managers make decisions on dividend payment. A finding of the study revealed that dividend payment pattern of a firm is influenced by the current year earnings as well as the previous year earnings. Fama and Babiak (1968) conducted a study on the determinants of dividend payment pattern by individual firms. The study results revealed that net income provides a better measure of the amount to be declared dividends than cash flows. In reference to the findings of Fama and Babiak (1968) the study sought to establish whether net income in form of high dividend payout ratio has a positive association with shareholders value as opposed to the type of positive relationship that high cash flow has with shareholders value. On the local scene, Ochuodho and Murekefu (2012) conducted a research that sought to establish the kind of association that exists between dividend payout and firm performance. The study found out that a positive relationship exists between profitability and dividend payout ratio, i.e. increase in profitability translates to firms declaring paying more dividends. Wasike (2015) conducted a study on the determinants of dividend policy in Kenya.

Mark Mizruchi and Howard Kimeldorf offer an explanation of the rise in prominence of institutional investors and securities analysts as a function of the changing political economy throughout the late 20th century. The crux of their argument is based upon one main idea. The rise in prominence of institutional investors can be credited to three significant forces, namely organized labor, the state and the banks. The roles of these three forces shifted, or were abdicated, in an effort to keep corporate abuse in check. However, "without the internal discipline provided by the banks and external discipline provided by the state and labor, the corporate world has been left to the professionals who have the ability to manipulate the vital information about corporate performance on which investors depend" This allowed institutional investors and securities analysts from the outside to manipulate information for their own benefit rather than for that of the corporation as a whole.

Though Ashan and Kimeldorf (1990) admit that their analysis of what historically led to the shareholder value model is speculative, their work is well regarded and is built upon the works of some of the premier scholars in the field, namely Frank Dobbin and Dirk Zorn.

During the 1970s, there was an economic crisis caused by stagflation. The stock market had been flat for nearly 12 years and inflation levels had reached double-digits. Also, the Japanese had recently taken the spot as the dominant force in auto and high technology manufacturing, a title historically held by American companies. This, coupled with the economic changes noted by Mizuchi and Kimeldorf, brought about the question as to how to fix the current model of management. Though there were contending solutions to resolve these problems, the winner was the Agency Theory developed by Jensen and Meckling, which will be discussed in greater detail later in this entry. As a result of the political and economic changes of the late 20th century, the balance of power in the economy began to shift.

Today, power depends on the capacity of one group of business experts to alter the incentives of another, and on the capacity of one group to define the interests of another. As stated earlier, what made the shift to the shareholder value model unique was the ability of those outside the firm to influence the perceived interests of corporate managers and shareholders, Azhagaiah and Sabaripriya (2008)

However, Dobbin and Zorn argue that those outside the firm were not operating with malicious intentions. "They conned themselves first and foremost. Takeover specialists convinced themselves that they were ousting inept CEOs. Institutional investors convinced themselves that CEOs should be paid for performance. Analysts convinced themselves that forecasts were a better metric for judging stock price than current profits". Overall, it was the political and economic landscape of the time that offered the perfect opportunity for professionals outside of firms to gain power and exert their influence in order to drastically change corporate strategy, Bawa and Kaur (2013)

Frankfurter and Wood (1997) provide an excellent comprehensive survey of the history of corporate dividend policy since the inception of shareholder-held corporations. It was noted early in the sixteenth century captains of sailing ships in Great Britain and Holland began selling to investors' claims to the financial payoffs of the voyages. At the conclusion of the voyages, proceeds from the sale of the cargo

and shipping assets, if any, were divided among the participants proportionate to ownership in the enterprise. These distributions were, in fact, payments that effectively liquidated the venture, or liquidating dividends. By this practice, claimholders avoided complex accounting practices, such as accrual accounting procedures. In addition, the liquidation of ventures minimized potentially fraudulent bookkeeping practices. By the end of the century, these claims on voyage outcomes began trading in the open market. These claims to outcomes were later replaced by share ownership. Even before the development of modern capital market theory, along with the statistical measurement of the impact of diversification on portfolio risk, investors in these sailing ventures regularly purchased shares from more than one captain to diversify the inherent risk in these endeavours. Also, as in the modern corporation, investors provided capital for these ventures, while the captains offered their specialized skills for instance, seafaring and management skills. However, as time passed owners began to realize that the complete liquidation of assets at the end of each voyage was inefficient; startup and liquidation costs for new ventures were significant. A track record of success for a captain, and increasing confidence by shareholders in the accountability of the management of the firm. This section draws heavily from the thorough review provided by Frankfurter and Wood. Way to a system of partial liquidation at the termination of specific ventures dividends in the range of 20 percent of the profits but not liquidating dividends.

The concept of firms as "going concerns" without a finite life corresponding to the length of a "voyage" persisted and produced the first dividend payment regulation. Corporate charters included limitations of dividends to payments from profits only. By 1700, the British Parliament had passed two standards that regulated dividend payments: the profit rule and the capital impairment rule. The profit rule was intended to protect creditors from de facto liquidations of the firm to the benefit of shareholders. The capital impairment rule, which restricted transfers from retained earnings to dividends, was adopted to provide for the firm's continuing existence.

The success of the stock ownership structure of shipping companies spread to numerous new industries in the latter part of the seventeenth century—for example, mining, banking, retailing, and utilities. The first

dividend statute in the United States was enacted in New York in 1825 and was quickly emulated by other states. Following the Civil War, the majority of northern manufacturing firms paid regular dividends in the range of 8 percent of profits. The general lack of financial information resulted in investors trying to establish firm value by analysing the firm's dividend track record. The general increases in dividend payments were reflected in rising share prices. After 1920, U.S. firms for the first time began to "smooth" dividend payments, that is, create a relatively stable dividend payment stream less volatile than earnings. During the 1920s, average payout ratios grew to about 70 percent of profits.

In the years following World War II, corporate dividend policy remained relatively unchanged, and payout levels have stayed fairly constant. By 1960, the payout level for all corporations was slightly in excess of 60 percent. Management continued to smooth dividends and, indeed, does so to this day. Thus, the history of dividends began with the payout of liquidating dividends when sailing ventures were terminated upon completion and the profits and proceeds from asset sales were distributed to claimholders. However, due to inefficiencies induced by total liquidation, dividends began being paid from profits. Earnings were retained to finance new investments, and dividend payments became only small partial, or symbolic, liquidations.<sup>5</sup>

Frankfurter and Wood (1997) concluded their study on the evolution of dividends with the following observation: Dividend-payment patterns (or what is often referred to as "dividend policy") of firms are a cultural phenomenon, influenced by customs, beliefs, regulations, public opinion, perceptions and hysteria, general economic conditions and several other factors, all in perpetual change, impacting different firms differently. Accordingly, it cannot be modeled mathematically and uniformly for all firms at all times. Corporate dividend payments to shareholders began more than 300 years ago and have continued as an acceptable, if not, required, activity of corporate managers, despite the apparent contradictory economic nature of these payments. It seems that the corporation progressed from original liquidating dividend, to distribution of all profits (retaining some capital), to a token dividend payment, the size and frequency of which are left to the discretion of management. At the same time, alternative schemes of distribution (such as repurchase of stock, green mail, etc.) and quasi-distribution

such as stock dividends and splits have been devised and accepted. Clearly, this evolution could not have occurred in vacuum. It has been paralleled, if not participated, by systematic removal of the owners from management, i.e., the separation of control from ownership.

Dividend policy is one of the three major decisions of financial management. The decision of the firm regarding the extent of earnings that could be paid as dividend and the extent that of could be retained by the firm is the concern of dividend policy. In other words, the Dividend determines what proportion of earnings is to be paid to shareholders by way of dividends and what proportion is ploughed back in the firm itself for its reinvestment purposes. The development of such a policy will be greatly influenced by investment opportunities available to the firm and the value of dividends as against capital gains to the shareholders. Each firm should develop such a DP, which divides the net earnings in to dividends and retained earnings in an optimum way to achieve the objective of maximizing the shareholders wealth as it is represented by market price of the firm's common stock which, in turn, is the function of the firm's investment, financing and dividend decision. For studying the impact of Dividend policy on shareholders wealth maximization, Kumaresan (2014)

Dividend policy is one of the most complex aspects in finance. Three decades ago, Black (1976) in his study on dividend wrote, "The harder we look at the dividend picture the more it seems like a puzzle, with pieces that just don't fit together". Why shareholders like dividends and why they reward managers who pay regular increasing dividends is still unanswered. Dividend policy can be of two types: managed and residual. In residual dividend policy the amount of dividend is simply the cash left after the firm makes desirable investments using NPV rule. Normally, the amount of dividend is highly variable and often zero. If the manager believes dividend policy is important to their investors and it positively influences share price valuation, they will adopt managed dividend policy. Firms generally adopt dividend policies that suit the stage of life cycle they are in. For instance, high- growth firms with larger cash flows and fewer projects tend to pay more of their earnings out as dividends. Dividend policy has been an issue of interest in financial literature since Joint Stock Companies came into existence. Dividends are commonly defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in

proportion to their ownership. Dividend policy connotes to the payout policy, which managers pursue in deciding the size and pattern of cash distribution to shareholders over time. Managements' primary goal is shareholders' wealth maximization, which translates into maximizing the value of the company as measured by the price of the company's common stock. This goal can be achieved by giving the shareholders a "fair" payment on their investments. However, the impact of firm's dividend policy on shareholders wealth is still a debatable issue Salman (2013)

## **1.2 Problem Statement**

Studies have shown that for the goals to be achieved a finance manager should strike to achieve an optimal dividend policy which will enhance value of the firm(Kapoor, 2009) Dividend policy is among one of the four key decisions of finance manager among working capital, investment, operating and financing decisions. The Kenyan corporate history is beset with a number of companies that have gone into insolvency but only a handful of companies have managed to come out of it in sound financial health (Sitati&Odipo, 2011). Consequently, the suppliers of capital, investors and creditors, as well as management and employees are severely affected from business failures making it important for the management and investors to be conversant with determinants of financial risk in order to put in place mechanisms to minimize their effects It implies to the payout strategy that finance managers take into consideration when making decision on the size and the pattern of cash to be distributed as dividends to shareholders. The goal of the firm and that of all employees and management is

Profit maximization and the wealth maximization of the owners for whom it is being operated (shareholders value).The study will seek to explain the kind of relationship that exists between the variables that are considered in arriving at the dividend policy that enhances shareholders value. Analysis of annual reports for listed Firms at NSE will be analysed so that the goals of a firm are realized. This means that listed companies will be assessed to determine if there is a balance in maximizing shareholders value through this dividend policy on shareholders value as retained reserves for purpose of investment in viable projects.(Shisia et al., 2014). The study will seek to establish the kind of association that exists

between dividend policy and shareholders value as a variable of dividend policy so as to justify the relationship.

### **1.3 Research Objectives**

#### **General Objective**

The general objective of the study is to determine the effect of dividend policy on shareholders' value in investment firms listed in the Nairobi Securities Exchange.

#### **1.3.1 Specific Objectives**

- i. To establish the relationship between dividend pay-out and shareholder value.
- ii. To assess the effect of corporate profitability on the value of shareholders.
- iii. To determine the effect of retained earnings on shareholders' value.

#### **1.4 Research Questions**

- i. Is there a relationship between dividend pay-out and shareholders value?
- ii. What is the effect of corporate profitability on shareholders' value?
- iii. How do retained earnings affect shareholders' value?

### **1.7 Justification of the Study**

Different studies have applied various theories and variables to assess determinants of the value of the firm such as (Hall, Hutchinson & Michaelas, (2004), Fama & French (2002), and Noe *et al*, (2003)). Chao and Zeng (2005) employed liabilities scale, interest rate, debt structure, profitability, operation ability and solvency as the factors. Wang and Chen (2010) selected solvency, profitability and operation management to investigate the value of the firm. It therefore appears that numerous factors are considered in developing models for predicting value of the firm. This study attempts to converge numerous factors into three main determinants that influence the performance of investment firms listed in the NSE with the aim of providing the much needed information, relevant to all stakeholders.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Dividend theories are of two main schools of thought. The first is that dividends have an effect on firm value and the second is that dividends do not have an effect on firm value. This section presents a review of existing theories on dividend policy and their empirical evidence. The theories on dividend policy are divided into two groups that include dividends irrelevant theories and dividends relevant theories.

#### **2.2 Theoretical Literature**

##### **2.2.2 Dividend Irrelevancy Theory**

According to this theory, investors do not pay any importance to the dividend history of a company and therefore, dividends are irrelevant in calculating the value of a company.

It was proposed by Franco Modigliani and Merton Miller in 1961. They were the pioneers in suggesting that dividends and capital gains are of equal weight when an investor is considering returns on investment. The only thing that affects the valuation of a company is its earnings, which is a direct result of its investment policy and its future prospects. According to this theory, once the investment policy is known to the investor, he will not require any additional input on the dividend history of the company.

The investment decision is said to be dependent on the investment policy of the company and not on the dividend policy. Modigliani – Miller theory illustrates practical situations where dividends are not relevant to investors. Whether a company pays a dividend or not, the investors are capable enough to make their own cash flows from the stocks depending on their need for the cash. If the investor needs more money than the dividend he received, he can sell a part of his investments to make up for the difference and if he has no present cash requirement, he can always reinvest the received dividend in the stock. Thus, the Modigliani – Miller theory firmly states that the dividend policy of a company has no influence on the investment decisions made by the investors. This theory also states that dividends are irrelevant through the arbitrage argument. The distribution of dividends to shareholders is compensated by the external

financing. Due to the distribution of dividends, the price of the stock falls and nullifies the gain made by the investors because of the dividends. This theory also implies that the cost of debt is equal to the cost of equity since the cost of capital is not affected by the leverage. The theory is based on certain assumptions. First assumption is that there is existence of 'perfect capital markets'. It assumes that all the investors are rational and they have access to free information. There are no floatation or transaction costs and that no large investors are available to influence the market price of the share. Secondly, it assumes that there is no existence of taxes. Thirdly, that the company does not change its existing investment policy. This means new investments financed through retained earnings do not change the risk and required rate of return of the firm. Lastly, it assumes that there is no risk of uncertainty. All the investors are certain about the future market prices and the dividends and that the same discount rate is applicable for all types of stocks in all time periods. However, Modigliani-Miller theory has been criticized on the assumptions it holds and suffers from inherent limitations. Perfect capital markets do not exist and taxes are present in capital markets. Flotation costs exist and therefore the cost of internal and external financing cannot be the same. There are transaction costs in the market associated with sale of shares to make cash inflows and thus the investor preference for dividends. The assumption of no uncertainty is unrealistic as the market is prone to many uncertainties and is driven by multiple factors some of which cannot be controlled.

### **2.2.3 The Bird in the Hand Theory, (John Lintner 1962 and Myron Gordon, 1963)**

The name "bird in hand" is the umbrella term for all studies that argues that dividends are positively correlated to the company's value. It is based on the expression that "a bird in the hand is worth more than two in the bush". Expressed in financial terms the theory says that investors are more willing to invest in stocks that pay current dividend rather than to invest in stocks that retain earnings and pay dividends in the future. This is due to the high degree of uncertainty related to capital gains and dividends paid in the future. Current dividends are more predictable than capital gains, since the stock price is determined by market forces and not by the managers it has a higher degree of uncertainty Keown et.al, (2007).

Myron J. Gordon was the pioneer of dividend relevance theory Pandey, (2005). He based his model on the assumptions that: The company is all equity financed and no external financing is used, the company finances all investment with retained earnings, Internal rate of return, cost of capital and the retention ratio is constant and the company has an eternal life.

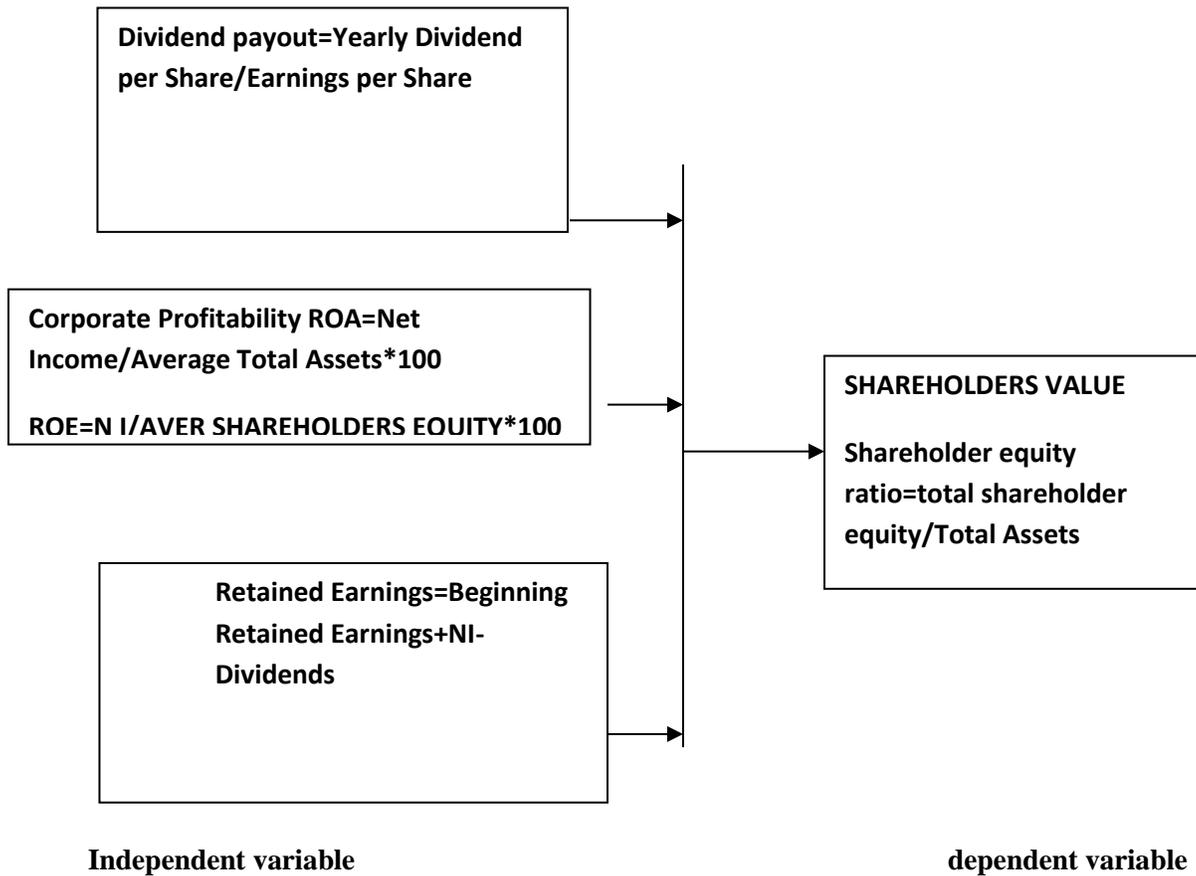
The underlying assumptions of Gordon's model is based on the idea of what is available today compared to what may be available in the future Khan & Jain, (2008). It states that the more distant the future is, the higher the uncertainty regarding capital gains and future dividends. Even though the capital gains in the future may provide a higher return than the current dividends, there is no guarantee that the investor will accumulate a higher return due to the high degree of uncertainty (Gordon 1962). Investors are unwilling to invest in companies where the time until the dividend payments is far away because the length of time and the level of risk is correlated. An investor would therefore be willing to pay a higher price for firms that pay current dividends. For firms that do not pay current dividends, the investor would use a higher discount rate in order to discount the earnings and the value of these companies should therefore be lower than the companies who pay current dividends Khan & Jain, (2008). Keown et.al (2007) argues against the theory and says that increases in current dividends do not decrease the riskiness of the company, it does work in fact work in the opposite direction., this is because if an increase in dividend payments are made, managers have to issue new stocks in order to raise the needed capital. Therefore, a dividend payment just transfers the risk from the old to the new shareholders. But even though the theory contains some limitation Keown et.al (2007) argues that there are still many individual investors and financial institutions who consider that dividends are important and it is therefore of importance to include the theory even though it has some limitations. The essence of this theory is that stockholders are risk averse and prefer current dividends due to their lower level of risk as compared to future dividends. Dividend payments reduce investor uncertainty and thereby increase stock value. This theory is based on the logic that ' what is available at present is preferable to what may be available in the future'. Investors would prefer to have a sure dividend now rather than a promised dividend in the future

(even if the promised dividend is larger). Hence dividend policy is relevant and does affect the share price of a firm.

## **2.5 Research Gap**

A number of findings in the literature reviewed show the total assets turnover, net profit margin; owner's leverage return on assets and return on Equity are positively related. Much has not been done on the value of listed firms in the NSE. According to Boadi, et al (2013), studies on the value of listed firms have not been widely conducted especially in emerging and developing markets. Cagil and Karabay (2010) asserts that most of the studies on the firms in NSE have used data analysis to assess their value with a few studies using multivariate analysis. There exists a wealth of literature on the determination of the value of the firm but only a few studies have been carried out in Kenya. Earlier studies on the value of the firm conducted use cross sectional data of the firms to compare dividend ratios and do not incorporate ratios in their models. In studying the determinants of profitability, most of these studies examined the internal and external factors of the firms. These studies conclude that internal factors explain a large proportion of firm's value however, the results are not constant across countries or different periods within the same country. As there are differences in the findings in the firms in the exchange securities, it is still worthwhile to observe if the previous results are applicable to Kenya. It is because of this reason that this research will use multivariate analysis to study, the effect of dividend policy on the value of the firm of firms listed in the NSE with a concentration on adverse selection problem on the firms.

## 2.5 Conceptual Framework



The conceptual framework of the study will be derived as per the views of different authors.

According to the Encyclopedia Britannica (2010) a conceptual framework refers to a group of concepts that are broadly defined and systematically organized to provide a firm's rationale and a tool for the integration and interpretation of information usually expressed abstractly through word models. In this study, a conceptual framework involves the relationship between dividend policy (Independent variable) and the value of the firm (dependent variable)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter presents the research design and methodology that will be used to meet the objectives of the study. It stipulates the systematic research procedure and techniques the researcher will apply in the collection and analysis of the secondary data. It will also describe the target population and instruments that will be used in data collection.

#### **3.2 RESEARCH DESIGN**

The research design will be a diagnostic approach. Diagnostic approach is used to develop a snapshot of a particular phenomenon of interest since they usually involve large sample.

There will be careful mapping out of circumstances, situations or set of events to describe what is happening or what happened. It can be used when the purpose is to test hypothetical or certain forward statements (Orodho, 2009).

#### **3.3 TARGET POPULATION**

The population of the study will be Investment and Investment services on the firms listed in Nairobi Securities Exchange, Kenya.

**TABLE 3.1 TARGET POPULATION AND SAMPLE SIZE**

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<b>Classification forms</b>	<b>Population</b>	<b>Percentages</b>	<b>Sample size</b>
Investment	4	80	4.0
Investment services	1	20	1.0

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<b>Totals</b> 5	100	5
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$$n = N/1 + N (0.05)^2$$

$$n = 5/1 + 5(0.05)^2$$

$$= \frac{5}{1 + 5(0.0025)}$$

$$1 + 5(0.0025)$$

$$= 4.9 = 5$$

### 3.5 Sample Size

According to (Nachemias&Nachemias 2004), researchers select sampling unit subjectively in an attempt to obtain a sample that appears to the representatives of the population. In this case, the chance that the particular unit will be selected as a sample depends on the subjective judgement of the researchers. To arrive at representative sample the study by Cochran (1963) and later simplified by Yamane (1967) will be used.

The formula is  $n = N/1 + N (e)^2$

Where n is the sample size, N is the population size and e is the level of precision at 95% confidence level. Then the sample size of the study will be:

$$n = N/1 + N (0.05)^2$$

$$= 5(1 + 5(0.0025))$$

$$= 4.9 = 5$$

### 3.9 Data Analysis and Presentation

Data collected will be analyzed through both qualitative and quantitative data analysis techniques in order to determine the extent to which the main study variables are related, namely;

STATA will be used to establish the actual relationship between the two sets of study variables.. Specifically, the Pearsons correlation coefficients will be calculated in order to indicate the correlation level between the two main sets of variables in the study (Saunders et al, 2008).The ANOVA technique in the study will determine the effect of the model at  $\alpha=0.05$  level of significance. All the four variables based on the data will be tested independently against dependent variable (Value of a firm) using t-test at 5% significance level, ( $P<0.05$ )), with five degrees of freedom. This will be deemed to be convenient given the study will adopt sociological research approaches and principles. A suitable regression model will be adopted to investigate the relative strength of the relationship between the dependent variable, value of the firm on one hand and the independent variables, To ensure an in-depth, detailed coverage and understanding of the study findings, the results will be represented using tables, histograms and pie chart where necessary.

The researcher will use the regression model below to analyze the data.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \mu$$

Where;

Y = Value of listed firms in the NSE measured by ROA

X<sub>1</sub>= Relationship between dividend pay-out and shareholder value.

X<sub>2</sub>=Effect of corporate profitability on the value of shareholders.

X<sub>3</sub>=effect of retained earnings on shareholders' value.

$\mu$ = error term

$\beta_1$ ,  $\beta_2$  and  $\beta_3$  =will be used to measure the dependent variable (Y) to unit change in the predictor variables.

## References

- Journal of Financial Economics 7:117-61. Smirlock, M. (1985). Evidence on the Relationship between Concentration and Profitability in Banking, *Journal of Money, Credit and Banking*, 17. 69. 83.
- Santomero, A. M. (1995). Financial Risk Management: The Whys and How, *Financial Markets, Institutions and Instruments* 4(5):1-14)
- Schmit, J. T. & Roth K. (1990). Cost Effectiveness of Risk Management Practices, " *Journal of Risk and Insurance*, 57, 455-470
- Shafiq A. & Nasr M. (2010). Risk Management Practices Followed By the Commercial Banks in Pakistan. *International Review of Business Research Papers*, 6, 308-325.
- Smith, C. & Watts, R. (1992). The investment opportunity set and corporate financing, Dividend and compensation policies.
- Staikouras, C. & Wood, G, 2004. The determinants of European bank profitability. *International Business and Economics Research Journal* 3 (6), 57-68.
- Stulz R. (2008). Risk Management Failures: What Are They and When Do They Happen? *Journal of Applied Corporate Finance*, 4, 58-67.
- Stulz, R. M. (1984). Optimal Hedging Policies, *the Journal of Financial and Quantitative Analysis*, 19, 127-140.
- Sufian. F. & Chong, R., (2008). Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from the Philippines. *Asian Academy of Management Journal of Accounting and Finance*, 4, 91-112.
- Toutou J. (2011). The Relationship between Liquidity Risk and Performance.
- Mugenda M. O., & Mugenda A. (1999). *Research Methods: Qualitative and Quantitative Approaches*. African Centre for Technology Studies, Nairobi, Kenya.
- Naceur, S. B. (2003). The Determinants of the Tunisian Banking Industry Profitability:

- Panel Evidence, UniversiteLibre de Tunis Working Papers. Neely, M. & Wheelock, D. (1997). Why does bank performance vary across states? Federal Reserve Bank of St. Louis Review, 27-38.
- Ngugi R. W. 2001. An Empirical Analysis of Interest Rate Spread in Kenya. African Economic Research Consortium (AERC) Research Paper No. 106.
- Ogilo, F. (2012). The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Kenya. DBA Africa Management Review 2012, 22-37.
- Oloo, O. (2010). Banking Survey Report, The best banks mis decade 2000-200, Think Business Limited, Kenya. Ongore
- V.O & Kusa G.B (2013). Determinants of Financial Performance of Listed firms in Kenya. International Journal of Economics and Financial, 3, 237-252.
- Pandey , I. M (1996). Financial Management, 7th Edition Vikas Publishers House New Richardson. D.C.
- (2002) PEARLS monitoring system, World Council Information Center, Madison, WI, World council of Credit Unions Toolkit Series No. 4.
- Said, R.M. & Mohd. H.T. (2011). Performance and Financial Ratios of Commercial Banks in Malaysia and China.
- Sangmi, M. & Tabassum, N. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model. Pakistan Journal Commercial Social Sciences.
- Klimczak, D., (2005). The use of asset management companies in the Resolution of Banking crises: Cross-country experiences Mimeo. World Bank.
- Kosmidou, K., (2008). The determinants of banks " pro fits in Greece during the period Of EU financial integration. Managerial Finance, 34, 146-159.
- Kosmidou, M. & Pasiouras, F. (2007). Factors influencing the Profitability of Domestic and foreign Commercial Banks in European Union, Research in International Business and Finance, 21, 222-237.
- Liyuqi (2007). Determinants of Banks profitability and its implication on Risk Management

- practices: Panel Evidence from the UK. University of Nottingham.
- Mamatzakis, E. & Remoundos, P., (2003). Determinants of Greek Commercial Banks Profitability. *Spoudai*, 53, 84-94.
- Markowitz, H., (1952). Portfolio Selection, *Journal of finance*, 7(1), 77-91.
- Mason G & Roger B, (1998). A capital adequacy framework for Islamic banks: the Need to reconcile depositors' risk aversion with managers' risk taking, *Applied Financial Economics*, 14, 429-41.
- Miller, S. & Noulas, A. (1997). Portfolio Mix and Large-bank Profitability in the USA, *Applied Economics*, 29, 505-12.
- Molyneux, P. & J. Thornton (1992). Determinants of European Bank Profitability: A Note, *Journal of Banking and Finance*, 16, 1173-8.
- Hosna, A. Manzura, B & Juanjuan S. (2009). Credit risk management and profitability In commercial banks in Sweden, School of Business Economics and Law.
- Ilhomovich, S.E. (2009). Factors affecting the performance of foreign banks in Malaysia. Malaysia: A thesis submitted to the fulfillment of the requirements for the degree Master of Science (Banking) College of Business (Finance and Banking.)
- Jeon, Yongil, Miller & Stephen M. (2002). Bank Concentration and Performance, *Economie Working Papers*. Paper 200225.
- Rappaport, Alfred (1986). *Creating shareholder value: The new standard for business performance*. New York: Free Press. ISBN 0-02-925720-4.
- Lazonick, William; O'Sullivan, Mary (2000). "Maximizing shareholder value: a new ideology for corporate governance". *Journal of Economy and Society*. **29** (1): 13–35.  
doi:10.1080/030851400360541
- Lazonick, William; Mary O'Sullivan (2 December 2010). "Maximizing shareholder value: a new ideology for corporate governance". *Economy and Society*. **29** (1): 13–35.  
doi:10.1080/030851400360541.

## **Impact of Mode of Entry Decision on Financing Strategy of Indian MNEs undertaking Outward Foreign Direct Investment**

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### **Abstract**

With the sparse literature on the relationship of host country factors and the ownership of the foreign affiliates (joint venture or wholly-owned foreign affiliates), the present study adds to the literature by investigating the impact of shared ownership of parent firm with local partners on the financing strategy of parent firm in financing their outward direct investment in foreign affiliates. The results of random-effects panel regression reveal that controlled for parent firm's ownership advantages, and the factors of the industry to which it belongs in home country, the propensity of providing parent debt to foreign affiliates reduces. This is attributed to the easy availability of external loans by dispelling the uncertainties posed by external environment with the help of knowledge possessed by local partners. So, sharing the ownership with local partners results in transaction cost economies. On the contrary, when controlled for host country factors, shared ownership increases the provision of parent debt. This indicates that the parent firm may not be reaping the benefit of shared ownership in its financing strategy, resulting in cost of shared ownership.

### **1. Introduction**

The outward foreign direct investment (OFDI) from emerging economies has been increasing unabatedly (UNCTAD, 2010). The literature has mainly focused on the determinants of the OFDI. Robbins and Stobaugh, 1972 discuss about the financing of foreign affiliates. Errunza, 1979; Chowdhry and Nanda, 1994; Desai et al., 2004 and Aggarwal and Kyaw, 2008 makes a distinction between parent vs. subsidiary financing. Delving deeper into internal financing, Chowdhry and Coval, 1998 develop some propositions on financing of foreign affiliates via internal funds of the parent by differentiating between parent debt financing and parent equity financing.

Very recently the empirical literature has garnered attention on the financing pattern of OFDI. Tripathi & Thukral (2016) has shown that imperfections in the foreign country environment that affect the financing strategy of the Indian parent multinational to finance their foreign affiliates. Studies have shown that the innovativeness of the parent firm's industry reduces the propensity of providing parent debt to the foreign affiliates (Tripathi & Thukral, 2019, forthcoming).

Growth firms tend to provide more parent debt financing to their affiliates abroad while the ones undertaking increasing R & D and advertising expenditures are found to investing more via parent equity financing. The traditional factors viz., profitability, age and size of the firm are losing their lustre in significantly shaping the financing decision of the Indian parent firms (Tripathi & Thukral, 2018, forthcoming). The 'strategy tripod' framework suggested by Tripathi and Thukral (2019b, forthcoming) residing on a three-level analysis – country, firm and the industry finds the distinctive role played by external factors viz., the institutional environment of the host country and the industry dynamics of the home country in shaping financing of OFDI by Indian

multinationals. The resource-based view does not seem to offer a strong explanation for shaping the financing of OFDI.

The affiliates into which the parent multinational makes investment (OFDI) may be either partially-owned or fully-owned. The instability in the external environment (host and industry) may be contained by the selection of appropriate mode of entry in host country. The present paper attempts to explore the research question - Does the ownership structure of the affiliates (mode of entry) impact the financing decision of parent? Are Indian parents more likely to finance wholly-owned affiliates vis-à-vis partially-owned affiliates via parent debt? The paper analyses the relationship in the presence of host country environment, industry characteristics to which the parent firm belongs, and Indian parent firm's characteristics. For meeting the objective, the study focuses on parent firms from emerging economy, India that has witnessed an exponential increase in its outward foreign direct investment, OFDI (UNCTAD, 2010).

## 2. Review of Literature

The foreign affiliates of a multinational parent can either be fully owned by the parent or partially owned. The entry-mode decision involves determining the level of control that the parent firm should have in operations of its foreign affiliate. When deciding about entry-mode in foreign market the parent has to take into consideration transaction costs relating to potential partners, their opportunism, and costs related to acquiring information about new institutional environments and their workings. Joint ventures vis-à-vis wholly-owned affiliates help to reduce costs and uncertainty related to foreign markets. Studies on US MNEs and their affiliates (Aggarwal & Kyaw, 2008; Desai et al., 2004) and German parent firms and their affiliates (Buettner, Overesch, Schreiber, & Wamser, 2009) show that firms use internal debt to save tax payments. But the impact of ownership on the decision of financing OFDI is not well explored in the literature.

Multinational affiliates can seek a tax shelter especially through loans from their parent firms. Buettner et al. (2009) find that leverage ratio of internal debt of German affiliates is 5 percentage points higher in wholly-owned subsidiaries compared to non-majority owned ones. Mintz and Weichenrieder (2005) also explain that the minority owners of German affiliates do not benefit from the tax minimizing strategies of the parent and so minority ownership tends to exert a negative effect on the use of internal debt. Empirical predictions by Schindler and Schjelderup (2010) attribute the reason of partially-owned affiliates being less effective vis-à-vis wholly-owned affiliates in using intra-company loans for implementing a tax effective strategy to a *positive externality*, a reason different from coordination costs of Desai et al. (2004b). They show that the benefit of tax minimizing strategy is shared with minority owners even though they do not contribute wholly to costs of setting up of tax-efficient financing-structure. Thus, it reduces the profitability of using internal loans in these affiliates. So, minority ownership dampens the incentives to use parent debt in affiliates with minority owners. Hebous & Weichenrieder (2010) also support the view that loans from parent to wholly-owned affiliate is more sensitive to tax rate of host country as compared to partially-owned affiliates. Hebous & Weichenrieder (2010) also finds that wholly owned German affiliates vis-à-vis partially-owned affiliates are able to circumvent financial constraints during periods of sharp currency depreciation in the host country through FDI by parent firms.

**Having a local partner abroad has its own advantages** in that the local partner is well versed with the local environment that the parent firm is unacquainted to, to a great extent. Unpredictability in the host country's environment may make it impossible for parent firm to anticipate all contingencies (Agarwal, 1994). Partnering

with local partners helps in overcoming external financing constraints that are faced by foreign affiliates. The knowledge of local partner with respect to the customs, and local institutions helps in easy accessibility of funds to the affiliates. So, if financial environment of host country is such that funds are easily available to the affiliate, the parent may not share its ownership due to easy accessibility of external funds. On the other hand, the political risk and exchange rate risk posed by external environment can be contained with the help of local partner, increasing the accessibility of funds in external market. This might reduce reliance on parent debt. As found in Tripathi & Thukral (2016), **increased political risk and exchange rate uncertainty attract less parent debt into the foreign affiliates but a credible and a strong partner may however, circumvent such uncertainties by assisting the foreign affiliate to raise funds in the local country.** In such a case, reliance on parent debt may be reduced. Besides, the local partner's reputation enhances the access to local capital markets by these affiliates. The inhibition of local financial institutions to extend funds to affiliates also dwindles, resulting in easy accessibility of external finance.

Despite the advantages offered by joint venture with respect to easy finance availability to affiliates, **joint ventures are not as common as wholly owned subsidiaries in foreign country.** This is because of the divergent interests of the local partner and parent firm. The potential conflict with respect to finance function of the parent and local partner may be suboptimal for the multinational as a whole. Local partner and parent firm may have opposing views about the need for cash dividends. They may have conflict relating to raising finance externally or internally (i.e. from the parent). They fear that funds provided by parent will attract more control by parent resulting in a conflict between the parent and local partner. Control of financing, thus, is one of major area of concern in such a partnership. Moreover, financial disclosure of local partner results might be necessary if the ownership is shared locally that may hinder framing strategies of the parent firm to the advantage of the multinational as a whole. The positioning of funds from the foreign affiliate via repatriation of dividends to parent firm cannot surpass the claims of local partners of the affiliate. The MNE is interested to maximise shareholder's wealth whereas the local partners have their own interests. This leads to clash of interests and may impede the intentions of parent. Political risk and currency risk have an impact on lowering the availability of parent funds, which gets aggravated by the choice of wrong partner. Moreover, fear of political risk, economic and exchange rate risk may increase the remittance of funds to parent and corresponding reduction in issuance of parent debt. But the repatriation may not be done smoothly due to interference of local partners. This results in reduced issuance of parent debt. Thus, parent firm cannot benefit from its strategy of leading or lagging the payments to manage its exposures in host country.

Because the funds provided by parent may be monitored by shared partners, joint ventures are generally not formed by parent firm. The local partners could be viewed as a potential Trojan horse who may complain to the local authorities about motives of Indian parents to position the funds (Eiteman, Stonehill, and Moffett, 2010). **Intentions of reducing potential conflicts with local partners steers parent firms to form wholly owned subsidiaries in the host country.** Wholly-owned affiliate reduces the agency costs arising from asymmetric information in the host country, and the need to monitor local partners, suppliers and financial institutions. If the multinational has low global cost and high availability of capital, then it may not go in for partnering with the local partner. Rather, by internalising the financing decision, the parent may reduce its overall cost. Thus, it is not only external-environment uncertainty but also choice of mode of entry that limits the repositioning of funds by parent and hence its decision to provide parent debt to its affiliate.

Shared ownership in the form of joint ventures acts as an impediment to practice transfer pricing that some multinationals aim at. In transfer pricing, a parent may transfer funds out of a particular country by charging higher prices on goods purchased by affiliate from parent. The conflict of parent with local partners may get aggravated with the shared owners. In such situations, serving the interest of shared partners by maximising local profit may be suboptimal for the multinational as a whole. The problems by partnering with local partners results in *cost of shared ownership*.

Disadvantages due to shared ownership increase the transaction cost of the parent firm that may result in investment by wholly owning the affiliates by forming WOS. **This results in a trade-off between costs of shared ownership and transaction cost.** A particular mode of entry in presence of external uncertainty may impact the financing decision of the parent firm. Partially owning the foreign affiliate, controlled for these external uncertainties may cause the parent firm to issue parent debt to affiliates in order to reduce the interference of partner firm in flow of funds.

The ownership of the foreign affiliates has attracted voluminous literature with respect to costs of shared ownership. Desai, Foley, and Hines Jr., (2004b) analyse the determinants of partial ownership of the foreign affiliates of US multinational firms and in particular the market decline in the use of joint ventures over a 20 year period. Their empirical analysis suggests that there is an increased appetite for control by multinational parents. They attribute the reason to three different coordination costs. They found that increased internal debt in wholly-owned affiliates is due to increased coordination costs in these affiliates.

From transaction cost theory perspective, the external uncertainty affecting the internationalisation process arises as one of the main factors conditioning the entry mode choice. The present study attempts to study the impact of mode of entry on the financing decision of the parent firm in presence of various sources of external uncertainty – political, legal, economic, and financial environment. The impact of industry factors and parent characteristics on parent debt financing is also studied.

### **3. Data and Methodology**

By exploiting a novel database obtained from Reserve Bank of India regarding Outward Direct investment by Indian parent firms into their own affiliates abroad, we study those firms that have incessantly invested into various host countries for the sample period 2008-2014. The database provides the information related to the nature of OFDI in terms of debt and equity, and also the mode of entry of these parent firms. We also make use of World Bank Open Data and the Prowess database.

#### **3.1 Dependent Variable and Independent Variables**

Following Aggarwal and Kyaw (2008), we operationalize dependent variable as relative proportion of debt used in total parent financing, converted into 0 or 1 with 1 indicating firms whose parent debt ratio to total parent financing is at least equal to the median of parent debt to total financing ratio. The independent variables are taken at time t-1, because the past conditions in host country or past performance of parent firm shapes the financing decision of the parent in next time period. The data on the mode of entry in host country by Indian parents undertaking outward foreign direct investment in their foreign affiliates is assigned zero to mode of entry if affiliates are wholly owned by parent firms and one otherwise.

### 3.2 Factors that affect the mode-of entry decision

Following Desai et al. (2004), Aggarwal and Kyaw, 2008, Tripathi and Thukral, 2019b we employ the factors affecting financing of OFDI. The host country factors employed in the study are financial environment (tax Regime, accessibility of private credit in host country, stock market development of host country), economic environment (exchange rate depreciation in host country), political risk, legal environment. We conjecture that other characteristics of parent firm, namely, profitability, size, age, business risk and financial risk also have a bearing on financing decision of parent firm. Industry factors are also employed, namely, capital structure norm, R& D intensity, advertising intensity, international experience, growth of the industry and size of the industry.

### 3.3 The Econometric Specification

Due to dichotomous nature of the dependent variable, a probit model is adopted. Since, the focus is exclusively on short panels in which consistent estimation of fixed effects models is not possible in some nonlinear models (such as binary probit), we estimate random effects probit model (Cameron & Trivedi, 2005). We employ three models, each studying the impact of mode of entry decision on financing of OFDI in presence of host country factors, industry factors and parent firm factors respectively. For the above models, the specification for random effects probit model can be stated as:

$$\Pr(\text{OFDIF}_{it}) = 1 | x_{it}, \alpha_i, \beta x_{it} = \alpha_i + \beta x_{it} + \varepsilon_{it}; i= 1 \text{ to } 88; t= 1 \text{ to } 6$$

where  $\text{OFDIF}_{it}$  represents parent debt to total financing by the parent.

## 4. Empirical Results

The results are presented in Table 1. Though mode of entry is not found to exert statistically significant impact on the financing decision when controlled for external (country and industry factors) and internal environment (parent firm factors) but the results provides with cues about the probable impact of mode of entry decision on the financing strategy of the parent firm to finance its OFDI.

Results indicate that controlling for these environments, the ownership of the affiliates, whether partially or fully owned by the parent firms does not seem to exert significant influence on the parent financing decision. The probability of investing via parent debt (vis-à-vis parent equity financing) increases when the parent partially owns the affiliates.

When controlled for industry and parent firm factors results indicate that the coefficient of mode of entry bears a negative sign. This implies that with the increase in joint ventures, the propensity of the parent firm to provide parent debt reduces vis-à-vis parent equity.

Parent's industry factors and parent firm's factors represent the inherent factors or the internal factors. Controlling for these factors, a negative sign with 'Mode' variable suggests that by sharing ownership with local partners, the parent firm tends to reduce the provision of parent debt in its foreign affiliate (or venture). The reason could be attributed to the easy availability of external loans that reduces the probability of infusing parent debt in its foreign affiliates. Thus, parent firms seem to take the benefit of the knowledge of their local partner to reduce the uncertainty posed by host country environment and ultimately reduce their transaction cost of operating abroad (Williamson, 1989). Also, less provision of parent debt and more parent equity solidify more control of the parent firm, thereby reducing the interference of local partner in financing strategies of the Indian parent firm. Thus, a negative impact of shared ownership on parent debt financing indicates an efficient use of internal capital market of the multinational system, thereby reducing transaction cost economies.

On the contrary, controlling for host factors we find that the propensity to provide parent debt by parent firm increases, divergent to the conjecture. The firm does not rely on loan from external market even though it would have been easily available as a consequence of sharing the ownership of foreign affiliate with local partner. So, the parent firm may not be tapping the benefit of sharing the ownership to influence their financing strategies, resulting in a potential cost of shared ownership.

## 5. Conclusion

With the sparse empirical literature that studies the financing of foreign affiliates by firms from emerging markets, the present study adds to this literature by investigating the impact of shared ownership of parent firm with local partners on the financing strategy of parent firm in financing their outward direct investment in foreign affiliates in presence of external and internal uncertainties. The results of random-effects panel regression reveal that controlled for parent firm's ownership advantages, and the factors of the industry to which it belongs in home country, the propensity of providing parent debt to foreign affiliates reduces. This is attributed to the easy availability of external loans by dispelling the uncertainties posed by external environment with the help of knowledge possessed by local partners. So, sharing the ownership with local partners results in transaction cost economies. On the contrary, when controlled for host country factors, shared ownership increases the provision of parent debt. This indicates that the parent firm may not be reaping the benefit of shared ownership in its financing strategy, resulting in cost of shared ownership.

## References

- Agarwal, S. (1994). Socio-cultural distance and the choice of joint ventures: A contingency perspective. *Journal of International Marketing*, 2(2), 63-80.
- Aggarwal, R., & Kyaw, N. A. (2008). Internal capital networks as a source of MNC competitive advantage: Evidence from foreign subsidiary capital structure decisions. *Research in International Business and Finance*, 22(3), 409-439.
- Buettner, T., Overesch, M., Schreiber, U., & Wamser, G. (2009). Taxation and capital structure choice- Evidence from a panel of German multinationals. *Economics Letters*, 105(3), 309-311.
- Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*. Cambridge, United Kingdom: Cambridge University Press.
- Chowdhry, B., & Coval, J. D. (1998). Internal financing of multinational subsidiaries: debt vs. equity. *Journal of Corporate Finance*, 4, 87-106.
- Chowdhry, B., & Nanda, V. (1994). Financing of multinational subsidiaries: parent debt vs. external debt. *Journal of Corporate Finance*, 1, 259-281.
- Desai, M. A., Foley, C. F., & Hines Jr., J. R. (2004). The costs of shared ownership: Evidence from international joint ventures. *Journal of Financial Economics*, 73(2), 323-374.
- Desai, M. A., Foley, C. F., & Hines Jr., J. R. (2004b). A multinational perspective on capital structure choice and internal capital markets. *The Journal of Finance*, 59(6), 2451-2487.
- Eiteman, D. K., Stonehill, A. I., & Moffett, M. H. (2010). *Multinational Business Finance* (10th ed.). New Delhi, India: Pearson Education
- Errunza, V. R. (1979). Financing MNC subsidiaries in Central America. *Journal of International Business Studies*, 10(2), pp. 88-93.

- Hebous, S., & Weichenrieder, A. J. (2010). Debt financing and sharp currency depreciations: Wholly versus partially-owned multinational affiliates. *Review of World Economics*, 146(2), 281-302.
- Mintz, J., & Weichenrieder, A. J. (2005). *Taxation and the financial structure of German outbound FDI*. CESifo Working Paper No. 1612.
- Robbins, S. M., & Stobaugh, R. B. (1972). Financing foreign affiliate. *Financial Management*, 1(3), 56-65.
- Schindler, D., & Schjelderup, G. (2010). *Multinationals, minority ownership and tax-efficient financing structures*. CESifo Working Paper Series No. 3034.
- Tripathi, V., & Thukral, S. (2016). Financing the internationalisation of Indian MNEs. *Transnational Corporations Review*, 8(3), 215-229.
- Tripathi, V., & Thukral, S. (2017). Financing the outward foreign direct investment. *Ramanujan International Journal of Business & Research*.
- Tripathi, V., & Thukral, S. (2018). Impact of characteristics of emerging market's firm on financing their outward foreign direct investment. *International Journal of Public Sector Performance Management*. (forthcoming)
- Tripathi, V., and Thukral, S. (2019) Role of industry factors in financing the outward foreign direct investment by Indian MNEs. *Global Business Review*, 20(5). (forthcoming)
- Tripathi, V., and Thukral, S. (2019b). Determinants of financing of outward foreign direct investment by Indian MNEs - a three-level analysis. *International Journal of Emerging Markets* (forthcoming)
- Williamson, O. E. (1989). Transaction cost economics: The governance of contractual relations. *The Journal of Law and Economics*, 22(2), 233-261.
- UNCTAD. (2010). *World Investment Report 2010: Investing in a low-carbon economy*. New York and Geneva: United Nations.

## Appendix

**Table 1: Impact of mode of entry on parent's financing decision in presence of parent's industry factors**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ICapStr	4.149 (0.283)	4.346 (0.259)	3.907 (0.296)	4.108 (0.271)	4.030 (0.295)	3.731 (0.314)	4.204 (0.273)
IRndInt	-34.892 (0.547)		-31.416 (0.594)		-37.019 (0.498)	-33.917 (0.546)	
IAdvInt	-62.901 (0.553)	-56.383 (0.601)			-66.900 (0.520)		-61.074 (0.564)
IExpEtoSales	-0.725 (0.808)	-0.945 (0.736)	-0.958 (0.742)	-1.133 (0.681)			
ISalesgr	0.005** (0.037)	0.005** (0.036)	0.005** (0.036)	0.005** (0.035)	0.005** (0.037)	0.005** (0.037)	0.005** (0.036)
ISize	5.604*** (0.000)	5.494*** (0.000)	5.462*** (0.000)	5.376*** (0.000)	5.551*** (0.000)	5.380*** (0.000)	5.416*** (0.000)

Dfmcg	1.657 (0.202)	1.542 (0.240)	0.927* (0.063)	0.891* (0.066)	1.728 (0.168)	0.960** (0.049)	1.626 (0.204)
Dhealth	1.892 (0.148)	1.179 (0.281)	1.762 (0.197)	1.124 (0.307)	1.689 (0.198)	1.475 (0.285)	0.851* (0.086)
Dict	2.896 (0.102)	2.572 (0.170)	2.733 (0.126)	2.453 (0.188)	2.508** (0.019)	2.196** (0.036)	2.031** (0.021)
Denergy	-1.189* (0.083)	-1.125 (0.100)	-1.112* (0.099)	-1.061 (0.113)	-1.142* (0.089)	-1.042 (0.112)	-1.057 (0.108)
Dmat	-1.015 (0.124)	-1.017 (0.122)	-1.043 (0.117)	-1.042 (0.117)	-0.997 (0.129)	-1.021 (0.123)	-0.993 (0.129)
Dmode	-0.208 (0.520)	-0.211 (0.510)	-0.217 (0.500)	-0.218 (0.493)	-0.208 (0.520)	-0.218 (0.499)	-0.211 (0.509)
Constant	-22.861*** (0.000)	-22.530*** (0.000)	-22.346*** (0.000)	-22.097*** (0.000)	-22.686*** (0.000)	-22.072*** (0.000)	-22.274*** (0.000)
Obs.	528	528	528	528	528	528	528
No. of firms	88	88	88	88	88	88	88
Log Lik	-287.3	-287.6	-287.6	-287.8	-287.4	-287.6	-287.6
Wald chi2	42.23	41.95	41.91	41.66	42.26	41.90	41.95
Pval	3.05e-05	1.65e-05	1.68e-05	8.61e-06	1.46e-05	7.81e-06	7.65e-06

Robust pval in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Detailed Results available on request

# **HRD INTERVENTIONS, EMPLOYEE CREATIVITY AND ORGANIZATIONAL INNOVATION: AN EMPIRICAL STUDY**

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## **ABSTRACT (150 words)**

With the advent of Industry 4.0, the automobile industry is witnessing a paramount disruption due to fast and speedy changes in automation, digitalization and the modern-day concept of electric vehicles. Automobile companies are institutionalizing innovation by setting up multinational R&D centers to leverage the ecosystem and sustain this competition through global innovation network. Several studies have been conducted by researchers, focusing on enhancing creative ability of an individual. But significantly less work has been done on human resource development (HRD) interventions as an input for honing individual creative potential and innovation at the industry level. This study aims to explore the impact of HRD interventions namely training, rewards & incentives and organizational learning on employee creativity. It also investigates the effect of individual creativity on enhancing organizational Innovation. A hypothesized model is developed by combining few HRD interventions from the existing literature. The study examined 258 valid responses of middle level, and top-level executives working in four wheeler automobile manufacturing units, and Research and development (R&D) units constituted in southern India. The validity of the hypothesized model is tested through structural equation modeling (SEM).

## **Keywords:**

## **INTRODUCTION**

Over the past decade, globally, business has undergone a remarkable transformation. This transformation is accompanied by global economical changes, technological changes and dynamic market conditions. It has become a challenge for the organizations to sustain and remain competitive. Organizational Innovation through creativity at workplace has become a distinct source of competitive advantage (Zhou & Shalley, 2003). Innovation is described as implementation of new ideas that are novel and useful to the organization to bring new products and services or to bring a change to the way the work is carried out. Researchers have emphasized that employee creativity makes a significant contribution to organizational innovation and determines organization's survival (Amabile, 1996; Ford & Gioia, 2000). Shalley & Gilson (2004) suggests that business transformation mandates present day managers to encourage employees to be more creative on their approach to work. But, it becomes a challenging task for the present day managers in creating the necessary conditions for such creativity to flourish (Mumford, Scott, Gaddis, & Strange, 2002). Thus, in our study we have considered HRD interventions such as creativity training, reward & incentives and organization learning as determinants to creativity. Researchers describe creativity as making innovative approach to solve problems, reproducing novelty to the exiting ideas, and creating new solution (Amabile, 1996; Shalley and Perry-Smith, 2001). Creativity comes from the members of the organization. Thus, Gupta & Singhal (1993) makes a significant assertion

that employees are the most vital resource of any organisation and every organization in order to remain innovative must learn how to manage, motivate and reward them in order to successful. Providing reward and incentives to the employee seems the most feasible way to encourage employee creativity as it stimulates and motivates individuals. Empirical research asserts that on rewarding employee for their creative performance generates more interest within the employee to work and perform more creatively (Eisenberger & Shanock, 2003; Gagné & Deci, 2005)

Over the last decades, several training programs have been found to enhance employee creativity capacities (Scott, Leritz & Mumford, 2004). Domain specific training such as creativity has prominent influence on employee attitudes towards their approach to do jobs. This helps them to bring newer solution to complex problems. Mumford (2000) suggests that creativity can be attained through gradual accumulation of skills and expertise. Training stimulates creative thought process that enables employees' to perform creatively by acquiring knowledge and skills and makes employee specialist to the domain (Lau and Ngo 2004).

Organizational learning is the capability “within an organization to maintain or improve performance based on experience. This activity involves knowledge acquisition (the development or creation of skills, insights, and relationships), knowledge sharing (the dissemination to others of what has been acquired by some), and knowledge utilization (integration of learning so that it is assimilated and broadly available and can be generalized to new situations)” (DiBella, Nevis & Gould, 1996). Organizational learning is the process of changing the organization to fit the changed environment. Researches show that the quantity and the quality of information to which an employee is exposed are crucial element creative performance (Amabile, 1996; Argote & Miron-Spektor, 2011).

Thus, in our study we have focused on understanding the role played by creativity training, Reward and Incentive and Organizational learning in determining employee creativity. We have also extended the literature on creativity by analyzing these three key important determinants of employee creativity.

## **THEORY AND HYPOTHESES**

### **Training and Employee Creativity**

Fitzgerald (1992) defined training as acquisition of knowledge and skill for present task. Key aspect of training is twofold. First, it assists employee to learn and develop skill to perform jobs effectively in the organization. Second, it should bring in a change in the attitude and behaviour of the employee in their approach to do job in the organizations. Over the 100 years training literature has gone through tremendous change (Bell, B.S., Tannenbaum, S.I., Ford, J.K., Noe, R.A. and Kraiger, K., 2017). In generality, training is a planned and systematic activities designed to promote the acquisition of knowledge, skills, and attitudes. In our study we will focus on training that enhances the creative skills of employee.

Torrance (1972) asserts that creativity can be trained. Creativity is a domain specific attribute which can be acquired through training approaches like cognitive training, personality training, motivational training and social interaction (Bull, K.S., Montgomery, D. and Baloch, L., 1995). Creativity training enhances the divergent thinking and problem solving ability of the employees which is essential to produce new ideas (Scott, G., Leritz, L.E. and Mumford, M.D., 2004). Divergent thinking is the capacity of an individual to generate multiple alternative solutions as opposed to the one correct solution. Problem solving training involves (a) problem construction or problem finding, (b) information gathering, (c) concept

search and selection, (d) conceptual combination, (e) idea generation, (f) idea evaluation, (g) implementation planning, and (h) action monitoring. This synthetic model, in fact, appears to provide a reasonably coherent description of creative thought where multiple forms of expertise are brought to bear on complex, ill-defined problems with the new ideas that provide a basis for solution implementation emerging from the combination and reorganization of relevant concepts. Creativity training provides employee the ability to generate and provide new solutions together with finding and implement ideas (Wang and Horng, 2002). This supports the employee creativity definition which is to produce ideas, products, or procedures that are novel and useful (Zhou and George, 2001).

Hypothesis H1 (a): There is significant and positive relationship between training and employee creativity.

### **Reward and Incentive and Employee Creativity**

A reward may be anything tangible or intangible that an organization provides to its employees either intentionally or unintentionally in exchange for the employee's potential or actual work contribution, and to which employees as individuals attach a positive value as a satisfier of certain self defined needs (Shields, J., Brown, M., Kaine, S., Dolle-Samuel, C., North-Samardzic, A., McLean, P., Johns, R., O'Leary, P., Robinson, J. and Plimmer, G., 2015). The key objective of any reward system is to attract, retain and motivate employees to do job at their full capacity (Armstrong, M., 2002). Rewards can be intrinsic or extrinsic. An intrinsic reward includes job challenge and autonomy whereas extrinsic reward includes financial, developmental and social. In our study we focused on extrinsic rewards.

Organizations offer various types of rewards to employees to enhance their performance (Amabile, 1996). Rewards that induce extrinsic motivation among individuals are termed as extrinsic rewards. These rewards include financial incentives such as bonus and incentive pay, and non-financial incentives such as recognition and appreciation, as well as better career prospects such as promotion opportunities in the future. Researchers assert that extrinsic rewards have direct impact on creative performance of employees (Malik, M.A.R., Butt, A.N. and Choi, J.N., 2015; Eisenberger, R. and Rhoades, L., 2001). Extrinsic reward motivates their employees to perform creativity thereby stimulates employee's creativity (Van Dijk and Van den Ende, 2002). Reward and incentive increases employee creativity by enhancing individual intrinsic motivation where the need to feeling autonomous and competent is fulfilled (Byron, K. and Khazanchi, S., 2012). The expectation that creativity will be rewarded causes individuals to define the task as requiring creativity, to become immersed in it, and to search for novel ways of carrying it out. Rewards can also enhance creativity through increased intrinsic task interest. Reward for high performance increases perceived self-determination and perceived competence, both of which increase enjoyment of a task for its own sake (Eisenberger, R. and Shanock, L., 2003)

Hypothesis H1 (b): There is significant and positive relationship between reward and incentive and employee creativity.

### **Organizational Learning and Employee Creativity**

Organizational learning is defined as a change in the organization's knowledge that occurs as a function of experience (Fiol, C.M. and Lyles, M.A., 1985). Organizational learning can be conceived as having three sub-processes: creating, retaining and transferring knowledge (Argote, L., 2011). In this process creative knowledge gathered by organization is transferred to the employees. Creativity is conscious process of information processing for generating variety of options. Thus learning makes available this information and knowledge that

facilitate creativity (Huber, G., 1998). Researches show that the quantity and the quality of information to which an employee is exposed are crucial element of one being creative (Amabile, T.M., 1996). For creativity to be transferred from organization to individuals, the process of learning must take place. Thus knowledge gathered by an organization provides a useful tool for creativity to flourish. As an organization learns to make sense of its markets, it develops rules for processing information about markets that manifest themselves in internal (e.g., organizational norms, policies, training programs) and external (e.g., product, promotion, distribution, and pricing strategies and tactics) organizational actions (Sinkula, J.M., Baker, W.E. and Noordewier, T., 1997). Thus, these learning helps in defining its creativity environment and knowledge transfer to its employees. Organizational learning “supports creativity, inspires new knowledge and ideas and increases the potential to understand and apply them, favours organizational intelligence and (with the culture) forms a background for orientation to organizational innovation” (García-Morales, Ruiz-Moreno & Llorens-Montes, 2007).

Hypothesis H1 (c): There is significant and positive relationship between organizational learning for creativity and employee creativity

### **Employee Creativity and Organizational Innovation**

Creativity is defined as generation of novel and useful ideas concerning products, procedures, and processes at work (Zhang, X. and Bartol, K.M., 2010). As employee creativity is an important source of organizational innovation and competitive advantage (Zhou, 2003; Shalley and Gilson, 2004), organizations are finding difficult to manage employee creativity. Amabile et al. (1996) differentiates between creativity and innovation as follows: “Like other researchers, we define creativity as the production of novel and useful ideas in any domain. We define innovation as the successful implementation of creative ideas within an organization” (Damanpour, F., 1991) “Thus, no innovation is possible without the creative processes that mark the front end of the process: identifying important problems and opportunities, gathering information, generating new ideas, and exploring the validity of those ideas” (Amabile, 2004, p. 1). Shalley, C.E., Zhou, J. and Oldham, G.R., 2004) state that creative employees' new ideas are transferable to other employees in the organization for their own use and development. Consequently, such creativity at the individual level, through idea generation and implementation, is likely to lead to the development of innovative products at the organizational level. Creativity of employees positively influences organizational innovation.

Hypothesis H2: The relationship between employee creativity and organizational innovation is significant and positively correlated.

“Figure I goes about here”

## **DATA AND METHODOLOGY**

### **Research Methods and Data Collection**

In our study, primary data was collected from managers and executives of car manufacturing units in India. In order to capture the responses, a questionnaire format was developed using seven-point Likert scale. The first part of the questionnaire consists of objective questions like age, gender, designation and experience of the respondent. The second part included itemized questions relating to the measurement variables. The participants of the study were from car manufacturing units in India and were explained about the methodology of the study and anonymity of their responses. The questionnaire form was circulated to around 410 employees, out of which 258 responses were found valid, with a response rate of 62.92 per

cent. The demographic data of the respondents are as follows: The study constituted about 60.20 % of male and 39.80 % of female respondents. Respondents of the age 20 – 30 years comprised of 43.20% whereas 31-40 years aged were 31.60 % and successively 41-50 years were 16.80% and 51-60 years constituted 8.40%. Major respondents were R&D managers (42.00%), design engineers(23.20%), production managers (18.00%), and CAD engineers (16.80%). 6 – 10 years' work experience holder constituted 56.80 % shadowed by 0 – 5 years (21.60 %), 11-15 (13.60 %), 16-20 years (5.00%) and above 20 years (3.00%).

### **Measures**

*Training:* For assessing creativity training, we developed eight item scale based on the research by Birdi, Leach & Magadley, (2012). As outlined by Scott et al. (2004), the scale consists of items related creativity processes of problem identification, information gathering, information organization, idea generation, idea evaluation, and implementation planning which are key determinant of training. The scale was validated and found reliable with Cronbach's alpha is 0.89.

*Rewards and Incentives:* In order to assess the significance of reward and incentive on creativity, we used eight item scale developed by Yoon & Choi (2010). Some of the items are “When I perform creatively, I receive financial rewards, such as incentives or bonuses”; “When I perform creative work, it affects my promotion”; “If I suggest new ideas for tasks, this approach influences my performance evaluation”. The Cronbach's alpha is 0.86 and was found reliable and valid.

*Organizational Learning for creativity:* In order to capture how organization values learning, we used six items scale adapted from Garcia-Morales, Llorens-Montes, & Verdú-Jover (2006) and Calantone, Cavusgil & Zhao (2002). The scale was validated and found reliable with Cronbach's alpha is 0.84.

*Employee Creativity:* The scale consisted of ten items to measure employee creativity and was adapted from Jiang, Wang & Zhao (2012). The scale showed significant validity and reliability in our study with Cronbach's alpha is 0.89.

*Organizational Innovation:* A ten item scale to measure organizational innovation was adapted from Tsai (1997) and Škerlavaj, Song & Lee (2010). Cronbach's alpha is 0.87 and was found reliable and valid.

### **Analytic Approach**

Anderson and Gerbing (1988) proposed an approach to test hypothesized model, which was methodical two step approach. In our study, we used AMOS 20.0 analytical software application for Structural Equation Modelling. Firstly, we assessed the construct validity of the measurement model and its goodness of fit. Secondly, the path estimates was structurally represented by constructing a SEM model and was analyzed for validating the relationship.

## **RESULTS AND DISCUSSION**

### **Descriptive Statistics**

Table I provides the descriptive statistics of all five variables. The result finding shows that each of the constructs is significant and is positively correlated.

“Table I goes about here”

### **Construct Validity**

Hair, Black, Babin & Anderson (2010) defines “construct validity is the extent to which a set of measured variables actually represents the theoretical latent construct those are designed to measure”. As an important criterion for establishing construct validity of the structural model, we assessed face validity, convergent validity and discriminant validity (Campbell & Fiske, 1959; Strauss, M.E. and Smith, G.T., 2009). All the measurement scales in our study was developed by thorough research of the existing literature and subsequently adapted which signifies the face validity of the construct. The reliability of the instrument is established by analyzing Cronbach’s alpha, in our study  $\alpha = 0.88$ , which is within the acceptable level. Three important indicators of Confirmatory Factor Analysis are convergent validity, discriminant validity and goodness of fit. Result findings are represented in Table II which establishes convergent validity. The standardized estimates value ranges from 0.575 to 0.909. The average percentage of variation value ranges 0.515 to 0.702. Composite reliability value ranges from 0.838 to 0.921. Statistical value of all the important indicators of convergent validity i.e. standardized estimates, average percentage of variation and Composite reliability are more than 0.50 as recommended by Hair et al. (2010) and establishes their statistical significance. To establish discriminant validity, square root of the AVE values of all the constructs must be greater than the inter-construct correlations. Table II represents the discriminant validity of the construct. The goodness-of-fit statistic values i.e. ( $\chi^2 = 609.619$ ,  $df = 289$ ,  $p = 0.001$ ,  $CMIN/df = 2.109$ ,  $GFI = 0.843$ ,  $TLI = 0.904$ ,  $CFI = 0.915$  and  $RMSEA = 0.066$ ), indicates good fit to the data. Thus, all the statistics indicates that measurement model so constructed has good construct validity and necessary psychometric properties.

“Table II goes about here”

### **Common method bias**

Podsakoff, MacKenzie, Lee, Podsakoff (2003) stated that “common method bias (CMB) is the bias that is attributable to the measurement method rather than to the constructs the measures represents”. Podsakoff et al. (2003) recommended measures to control CMB which was adopted in our study. First, respondent was made aware about the method of the study and anonymity of their responses to avoid CMB due to behaviour. Second, Harman’s one factor test ensures that when all the constructs are analyzed together, it should not yield a single method factor which accounts 50% of the variance. In our study, EFA yielded five factors and no factor accounted more than 16%, thus signifying CMB is not an issue in our study.

### **Test of hypotheses**

Structural model was hypothesized using independent variables i.e. creativity training, rewards and incentives and organizational learning and dependent variable i.e. employee creativity and organizational innovation. The model was tested using SEM tool which offers a seamless testing of the entire model simultaneously (Byrne, 1996). The statistical results of the SEM confirms goodness of fit with the data ( $\chi^2 = 794.231$ ,  $df = 293$ ,  $p = 0.001$ ,  $CMIN/df = 2.711$ ,  $GFI = 0.820$ ,  $TLI = 0.853$ ,  $CFI = 0.868$  and  $RMSEA = 0.082$ ). Beta coefficients of the relationship and adjusted  $R^2$  of employee creativity and organizational innovation are presented in figure 2. The adjusted  $R^2$  establishes that 58 per cent of variance in employee creativity is explained by three HRD interventions elements and similarly, 52 per cent of variance in organizational innovation is explained by employee creativity. Structural model path’s beta coefficients and its corresponding significance level are represented in Table III. The test result affirms that all the hypotheses are accepted and significant.

“Table III goes about here”

## **DISCUSSION**

Primary objective of the study is to understand how HRD interventions elements act as antecedent to employee creativity which determines organizational innovation. The test results confirmed H1 (a). Therefore, our result also validates the research findings of Wang & Horng (2002) where creativity training increased the number ideas reported by employees. It also affirmed that conception of Birdi (2005) and Hunsaker (2005) that creativity training enhances creative performance of the employee. Similarly, the test result established that there a positive relationship between reward and incentive with employee creativity and confirms H1 (b). The test result validated the conceptual findings of Baer, Oldham & Cummings (2003). Also, the test result confirms hypothesis H1 (c). Subsequently, the result affirms the findings of García-Morales, Ruiz-Moreno & Llorens-Montes (2007). Hypothesis H2 posits that there is significant and positive relationship between employee creativity and organizational innovation. This is established by the test results findings and validates the conceptual research of Anderson, Potočnik & Zhou (2014) significant.

## **CONCLUSION**

The main focus of the study was to understand how cohesively the three elements of HRD interventions i.e. creativity training, reward and incentive and organizational learning together in structural way determined the creativity of employee in an organization. The study has significantly extended the existing literature on employee creative and organizational innovation. The study has also given new direction the researchers of creativity to carry forward with new HRD elements. The study findings are also useful to the modern day managers. Managers must ensure that quality and type of creativity training imparted to the employee must be carefully monitored for better performance of the employee. Every employee must participate in creativity training. This ensures that the ideas flow increases in numbers. If Creative contribution are rewarded and recognized, employee find motivated to take more challenging work. Sharing and rewarding the contribution furthers employee creativity.

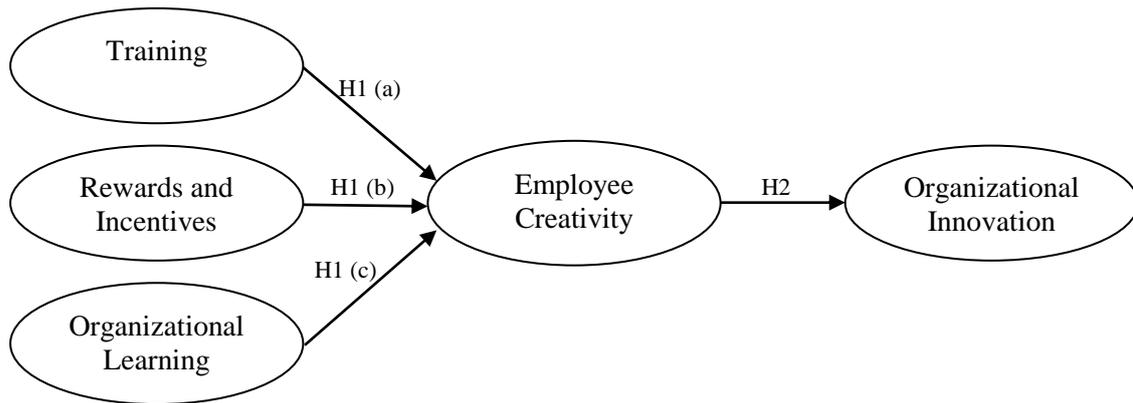
Above all, learning of an organization on creativity encourages a positive environment in an organization which stimulates creativity. This is prevalent in this modern day information rich organization. Information transfer should be seamless which incites the creative thinking of an employee. Knowledge gathered and accumulated over the years by an organization, if remain in closed doors becomes redundant and experience gained is lost. Information and knowledge on creativity should be openly accessible by the employees. Organizations, in order to remain innovative should encourage employee creativity.

## REFERENCES

- Amabile, T.M. 1996. *Creativity in context: Update to the social psychology of creativity*. Hachette UK.
- Amabile, T.M., 2004. Innovation & creativity quotes. Retrieved July, 27, p.2004.
- Anderson, N., Potočnik, K. and Zhou, J., 2014. Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), pp.1297-1333.
- Argote, L. and Miron-Spektor, E. 2011. Organizational learning: From experience to knowledge. *Organization science*, 22(5): 1123-1137.
- Armstrong, M., 2002. *Employee reward*. CIPD Publishing
- Baer, M., Oldham, G.R. and Cummings, A., 2003. Rewarding creativity: when does it really matter?. *The Leadership Quarterly*, 14(4-5), pp.569-586.
- Bell, B.S., Tannenbaum, S.I., Ford, J.K., Noe, R.A. and Kraiger, K., 2017. 100 years of training and development research: What we know and where we should go. *Journal of Applied Psychology*, 102(3), p.305.
- Birdi, K., Leach, D. and Magadley, W., 2012. Evaluating the impact of TRIZ creativity training: an organizational field study. *R&D Management*, 42(4), pp.315-326.
- Birdi, K.S., 2005. No idea? Evaluating the effectiveness of creativity training. *Journal of European industrial training*, 29(2), pp.102-111.
- Bull, K.S., Montgomery, D. and Baloche, L., 1995. Teaching creativity at the college level: A synthesis of curricular components perceived as important by instructors. *Creativity Research Journal*, 8(1), pp.83-89.
- Calantone, R.J., Cavusgil, S.T. and Zhao, Y., 2002. Learning orientation, firm innovation capability, and firm performance. *Industrial marketing management*, 31(6), pp.515-524.
- Campbell, D.T. and Fiske, D.W., 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin*, 56(2), p.81.
- Damanpour, F., 1991. Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of management journal*, 34(3), pp.555-590.
- DiBella, A.J., Nevis, E.C. and Gould, J.M., 1996. Understanding organizational learning capability. *Journal of management studies*, 33(3), pp.361-379.
- Edwards, J.R. and Greenberg, I.J., 2003. Construct validation in organizational behavior research. *Organizational behavior: A management challenge*, 311.
- Eisenberger, R. and Rhoades, L., 2001. Incremental effects of reward on creativity. *Journal of personality and social psychology*, 81(4), p.728.
- Eisenberger, R. and Shanock, L. 2003. Rewards, intrinsic motivation, and creativity: A case study of conceptual and methodological isolation. *Creativity Research Journal*, 15(2-3): 121-130.

- Fiol, C.M. and Lyles, M.A., 1985. Organizational learning. *Academy of management review*, 10(4), pp.803-813.
- Fitzgerald, W., 1992. Training versus development. *Training and Development*, 46(5), pp.81-84.
- Ford, C.M. and Gioia, D.A. 2000. Factors influencing creativity in the domain of managerial decision making. *Journal of Management*, 26(4): 705-732.
- Gagné, M. and Deci, E.L. 2005. Self-determination theory and work motivation. *Journal of Organizational behavior*, 26(4): 331-362.
- Garcia-Morales, V.J., Llorens-Montes, F.J. and Verdú-Jover, A.J., 2006. Antecedents and consequences of organizational innovation and organizational learning in entrepreneurship. *Industrial Management & Data Systems*, 106(1), pp.21-42.
- García-Morales, V.J., Ruiz-Moreno, A. and Llorens-Montes, F.J., 2007. Effects of technology absorptive capacity and technology proactivity on organizational learning, innovation and performance: An empirical examination. *Technology Analysis & Strategic Management*, 19(4), pp.527-558.
- Gupta, A.K. and Singhal, A. 1993. Managing human resources for innovation and creativity. *Research-Technology Management*, 36(3): 41-48.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. 2010, *Multivariate Data Analysis: A Global Perspective*, Pearson Education, Delhi
- Hunsaker, S.L., 2005. Outcomes of creativity training programs. *Gifted Child Quarterly*, 49(4), pp.292-299.
- Jiang, J., Wang, S. and Zhao, S. 2012. Does HRM facilitate employee creativity and organizational innovation? A study of Chinese firms. *The International Journal of Human Resource Management*, 23(19): 4025-4047.
- Jiang, J., Wang, S. and Zhao, S., 2012. Does HRM facilitate employee creativity and organizational innovation? A study of Chinese firms. *The International Journal of Human Resource Management*, 23(19), pp.4025-4047.
- Lau, C.M. and Ngo, H.Y. 2004. The HR system, organizational culture, and product innovation. *International business review*, 13(6): 685-703.
- Malik, M.A.R., Butt, A.N. and Choi, J.N., 2015. Rewards and employee creative performance: Moderating effects of creative self-efficacy, reward importance, and locus of control. *Journal of Organizational Behavior*, 36(1), pp.59-74.
- Mumford, M.D. 2000. Managing creative people: Strategies and tactics for innovation. *Human resource management review*, 10(3): 313-351.
- Mumford, M.D., Scott, G.M., Gaddis, B. and Strange, J.M. 2002. Leading creative people: Orchestrating expertise and relationships. *The leadership quarterly*, 13(6): 705-750.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P., 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), p.879.

- Salas, E., Tannenbaum, S.I., Kraiger, K. and Smith-Jentsch, K.A., 2012. The science of training and development in organizations: What matters in practice. *Psychological science in the public interest*, 13(2), pp.74-101.
- Scott, G., Leritz, L.E. and Mumford, M.D. 2004. The effectiveness of creativity training: A quantitative review. *Creativity Research Journal*, 16(4): 361-388.
- Shalley, C.E. and Gilson, L.L. 2004. What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The leadership quarterly*, 15(1): 33-53.
- Shalley, C.E. and Perry-Smith, J.E. 2001. Effects of social-psychological factors on creative performance: The role of informational and controlling expected evaluation and modeling experience. *Organizational behavior and human decision processes*, 84(1): 1-22.
- Shalley, C.E., Zhou, J. and Oldham, G.R., 2004. The effects of personal and contextual characteristics on creativity: Where should we go from here?. *Journal of management*, 30(6), pp.933-958.
- Shields, J., Brown, M., Kaine, S., Dolle-Samuel, C., North-Samardzic, A., McLean, P., Johns, R., O'Leary, P., Robinson, J. and Plimmer, G., 2015. *Managing Employee Performance & Reward: Concepts, Practices, Strategies*. Cambridge University Press
- Škerlavaj, M., Song, J.H. and Lee, Y. 2010. Organizational learning culture, innovative culture and innovations in South Korean firms. *Expert systems with applications*, 37(9): 6390-6403.
- Tsai, C.T. 1997. Organizational factors, creativity of organizational members and organizational innovation. *Nation Taiwan University Department of Business Administration Doctoral Dissertation*.
- Van Dijk, C. and Van Den Ende, J., 2002. Suggestion systems: transferring employee creativity into practicable ideas. *R&D Management*, 32(5), pp.387-395.
- Wang, C.W. and Horng, R.Y., 2002. The effects of creative problem solving training on creativity, cognitive type and R&D performance. *R&D Management*, 32(1), pp.35-45.
- Yoon, H.J. and Choi, J.N., 2010. Extrinsic and intrinsic rewards and creativity in the workplace: Reward importance as a moderator. In *Academy of Management Annual Meeting*.
- Zhang, X. and Bartol, K.M., 2010. Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of management journal*, 53(1), pp.107-128.
- Zhou, J. and Shalley, C.E. 2003. Research on employee creativity: A critical review and directions for future research. In *Research in personnel and human resources management*. Emerald Group Publishing Limited.



**Figure 1:** Hypothesized research model

**Table I.** Descriptive and Correlation Coefficients

Variables	Items	Mean	SD	$\alpha$	TR	RI	OL	EC	OI
<b>Employee Training (TR)</b>	8	3.75	0.69	0.89	1.000				
<b>Rewards and Incentives (RI)</b>	8	3.67	0.71	0.86	0.378**	1.000			
<b>Organizational Learning (OL)</b>	6	3.51	0.75	0.84	0.321**	0.607**	1.000		
<b>Employee Creativity (EC)</b>	10	3.57	0.71	0.89	0.502**	0.584**	0.476**	1.000	
<b>Organizational Innovation (OI)</b>	10	3.58	0.67	0.87	0.583**	0.430**	0.394**	0.577**	1.000

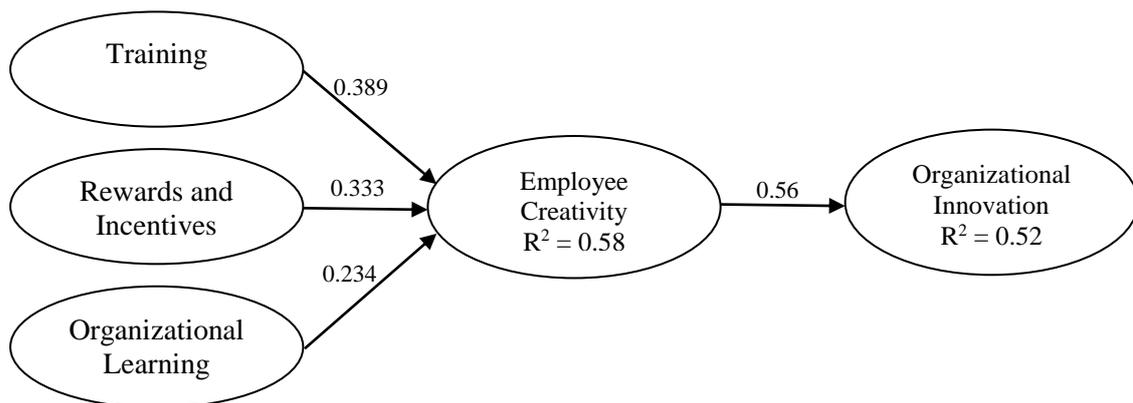
Note: \*\*  $p < 0.01$

**Table II.** Measurement model results

Construct	Items	Standardized Estimates	AVE	CR	p value
TR	TR1	0.873	0.702	0.921	.000
	TR2	0.749			.000
	TR3	0.749			.000
	TR4	0.895			.000
	TR7	0.909			.000
RI	RI1	0.768	0.580	0.872	.000
	RI2	0.823			.000
	RI5	0.629			.000
	RI7	0.850			.000
	RI8	0.716			.000
OL	OL2	0.605	0.515	0.838	.000
	OL3	0.587			.000
	OL4	0.874			.000
	OL5	0.770			.000
	OL6	0.712			.000
EC	EC3	0.778	0.516	0.840	.000
	EC4	0.798			.000
	EC5	0.760			.000
	EC8	0.575			.000
	EC1	0.656			.000
OI	OI1	0.790	0.550	0.880	.000
	OI2	0.714			.000
	OI3	0.760			.000
	OI4	0.741			.000
	OI5	0.722			.000
	OI6	0.718			.000

**Table III.** Discriminant validity

	TR	RI	OL	EC	OI
TR	(0.838)				
RI	0.537	(0.761)			
OL	0.263	0.514	(0.718)		
EC	0.539	0.585	0.486	(0.718)	
OI	0.577	0.327	0.283	0.499	(0.741)



**Figure 2:** Structural equation modelling result

**Table IV.** Inferences drawn on hypotheses

Hypotheses	Relationship	Beta coefficient	<i>p</i> value	Result
H1(a)	TR→ EC	0.389	***	Accepted
H1(b)	RI→EC	0.333	***	Accepted
H1(c)	OL→EC	0.234	***	Accepted
H2	EC→OI	0.561	***	Accepted

Note: \*\*\* Significance level ( $p < 0.001$ )

## "An Overview of Online Education in India"

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**Keywords:** Education, educational development, online learning, online training,

### INTRODUCTION

Education is an important part of people's lives. It is a tool by which one can achieve his desired goals. Online education which is also known as E-learning can be defined as the mode of transferring skills and knowledge electronically.

Education is the key of nation building. The overall progress and economic growth can be attained by providing right knowledge and skills to youth. The Indian education system inculcates different values besides knowledge so that the students have a holistic knowledge of things. India is expected to have a surplus of 47 million people in the working age group by 2020, hence a huge demand for up gradation of education. Therefore, a rapid growth is witnessed in both formal as well as informal education sector.

Online learning is one of the upcoming trends in the education sector not only in India but all over the world. It is the most affordable system of learning especially for those whom time and money comes at premium. Besides, it will allow students to learn subjects whom they think are relevant to their lives. The ability to communicate and interact with students and teachers all over the country, it provides unique advantage to the students. Documents, live discussions and training modules are all recorded so that they can be retrieved through mail or the website for reading.

With nearly half the population of India under the age of 25 and the increasing penetration of Internet & mobile devices in this demographic, the growth of online education market in India has a great potential market too. Infrastructure and regulating the e-learning process in a hassle freeway is the issue, which might be slowing down the otherwise accelerating education space in India; online education, especially in the unregulated markets is dignified for a massive growth.

With the development of technology, India has witnessed an enhanced acceptance of online education over a period of few years. Many students and working professionals have joined different e-learning platforms in the past few years in order to enhance their skills. And, looking at trends, the number of people adopting online education platforms is expected to increase significantly in the near future.

New techniques of evaluating and learning are required within the world regarding interaction. Educating ourselves as well as exploring and experimenting is need of the hour.

The online education industry in India is poised to hit \$1.96 billion by 2021. There has been a two-fold increase, online education has increased manifold.

India holds a vital position in the global education industry. The country has more than 1.5 million schools with over 260 million students enrolled and about 751 universities and 35,539 colleges. India possesses the largest higher education systems in the world. During 2016-17 around 35.7 million students enrolled for higher education in India. But, there is still a lot of scope for further development in the education system. However, the focus of the government to augment its current gross enrolment ratio to 30 per cent by 2020 will also boost the growth of the distance education in India.

## **STUDENT'S ATTITUDE TOWARDS E-LEARNING IN INDIA**

It's an age of e-learning and to improve the performance of students it is necessary to make them realize the importance and effectiveness of it. Students should be able to use the resources comfortably. The present study will assist in realizing the attitude of students towards e-learning.

Throughout the world the most impending trend in the education sectors is online learning. Here, learning is done through the internet. With modern and upgraded technologies, this mode of learning has become easier and there are no classrooms. The convenience and comfort of e-learning can never be undermined. Learning materials can be acquired online. They could be audio, video and images which creates interest in learning. Higher learning institutions too prefer this method.

Today, e-learning plays a remarkable role in numerous educational institutions. To develop the teaching and learning approach internet, computer, mobile phone, teleconferencing, learning management system are in use. It enhances practical knowledge. Today's youth has a positive approach towards it. It's more of a practical knowledge than theoretical.

Electronic learning is emerging in a prominent way. In countries like India, where population is huge and the educational resources are limited to cope up with the increasing needs of providing education, E-learning can play a critical role to overcome this problem, especially for the youth.

The main objective of introducing e-learning in higher education is to increase accessibility of education and also help to reduce the cost and time as well as improving student's academic achievement. E-learning refers to electronic assets in teaching learning process which includes web-based learning, computer based learning, virtual classroom and digital collaboration which will be beneficial for the students. The other important factor which online education plays is the learning power and also it will save time of the students.

E-learning follows three main areas: (i) easy access to education and training; (ii) improves the quality of teaching as well as learning; (iii) the need for higher education institutions to maintain competitive advantage, so as to cope up with the competitive market place for students.

The students will face both advantages and disadvantages in online education.

## **ADVANTAGES AND DISADVANTAGES OF ONLINE EDUCATION**

Online education reduces the travel time to school as one can easily study from a computer or smartphone only the availability of internet is required. Another advantage is that, compared to traditional education, in e-learning a student can access study materials from any point.

Online education also improves a student's skills in internet use. The students are also able to acquire updated information through such mode. Online education is comfortable for students as they can study from anywhere in the world they wish to. It is also possible for communication among students and between student and faculty.

Online education has various disadvantages too. Students cannot meet their tutors or teachers like those who study in classrooms. If they have to clear their doubt in person, that becomes difficult for them. Time management is also a disadvantage. Online education requires proper time management. The brand new courses on digital marketing are mostly online and hence the students and working professionals sometimes find it a bit difficult to manage with the time.

## **ONLINE EDUCATION: MARKET SIZE**

The education sector in India is assured to observe major growth in the years to come as India will have world's largest population. Currently the education market in India is valued at US\$ 100 billion and by 2020 is estimated to be nearly double to US\$ 180 billion.

The school segments contribute 52% to the education market in India which is valued at US\$ 52 billion and the higher education contributes 15 per cent of the market size. Text-book, e-learning and allied services contribute 28 per cent. In India higher education system has undergone rapid expansion. It is the largest in the world registering over 70 million students in less than 2 decades.

India has managed to create additional capacity for over 40 million students. It witnesses spending of over Rs 46,200 crore (US\$ 6.93 billion). By the year 2021, the online education in India will grow to a CAGR of 20.02%.

Online education is the process of conveying information and instruction through the internet to students who have devices such as computers, laptops, or mobile phones. It is delivered in varying ways, including online courses, massive open online courses (MOOCs), and hybrid or blended courses. This system of education eradicates the need for students to be present physically for each module or session, which is a part of the conventional mode of teaching. The traditional way of teaching can become monotonous and requires the planning of lesson schedules, which can be avoided with the online mode of education.

During the estimated period, the online education market in India is expected to experience substantial growth. This is due to the introduction of new learning methodologies such as combined learning and reversed learning. The professors and lecturers are providing recorded lectures to improve classroom based learning and interactions which can be retrieved from anywhere and at any time, thereby enabling flexible learning options to students. The Indian Institute of Technology (IIT) delivers IT courses through the MOOCs platform.

## **KEY DRIVERS OF GROWTH OF ONLINE EDUCATION**

Online education in India is progressing at a swift pace owing to the following factors:

### **1. Increase in Internet and smartphone patrons**

The number of Internet users is likely to reach 730 million by 2020. India may replace China to have the second-largest number of users after the US.

India is also the world's third-largest smartphone market with the number of users estimated to reach 369 million by 2018.

The young demographic uses the Internet more as compared to the other section, hence the accessibility to enrol for distance courses, is more for them. Students are the most active consumers of smartphones and the Internet. They eagerly look for online learning modules to fulfil their educational requirements.

### **2. Low cost of online education**

The cost of professional and technical education has increased to an extent over the period of time. Institutes providing online education has the economic advantage of running the show on a shoe string budget as the overhead and miscellaneous cost are almost bear minimal. Hence, the cost savings are passed to the users, which plays a major role in reducing the amount of education cost for the students.

### **3. Model needs upgradation**

The aim of the government is to raise gross enrolment ratio to 30% by 2020. No wonder there is a very strong correlation between education and skills and the uptake and use of digital technologies in various spheres of life. The role of education and skills in promoting innovation is critical. However, the existing educational infrastructure is not equipped to meet the additional requirements. E-learning can increase the predictable model, and bridge the gap to a certain extent.

### **4. User friendly digitalisation**

The government has launched several programmes such as 'Digital India' and 'Skill India' to spread digital literacy, creating a knowledge-based society in India is more essential, and implement three principles 'access, equity and quality' of the education policy.

## **MAJOR CHALLENGES OF ONLINE EDUCATION PROVIDERS IN INDIA**

### **1. Inadequate digital infrastructure**

Rural areas still have very poor connectivity as the figures show while only about 50-100 Indian cities have broadband link. This is further vindicated by world economic forum's figures which puts it at 15 out of 100 households having internet access.

### **2. Introduction of interactive learning**

E-learning has a long way to go, as compared to traditional form of learning, where one-to-one interaction is almost negligible. Also in a formal system of education learners can always interact with peers and teachers to clear their doubts. Whereas, E-learning is yet to design any similar platform of interaction this has to be in a large scale.

### **3. Absence of uniform syllabus and standards**

The lack of standardisation of online programmes and their formal acceptability still remain a concern. E-learning players offer multiple courses with different levels of certifications, methodology and assessment parameters. Lack of standardised contents and absence of uniform syllabus/ module seems to have hit the credibility barometer hard. The other lacunae being, in most of these institutes, there is no gradation or recognition like that of informal education.

### **4. Medium of instruction**

India is a multi-linguistic country, and a majority of the population come from rural background. Besides, having had their education in vernacular language makes it difficult for them to follow the English contents. There is no translator for the same, which becomes difficult for the students who are from urban areas. Hence, non-English speaking students struggle with the content.

### **5. Low completion rates**

E-learning is basically a self-taught system and that too without any teacher and taught interaction. Hence, in absence of any motivational factor, the completion rates of such course are very discouraging.

## **OVERVIEW OF WEBSITES PROVIDING ONLINE EDUCATION IN INDIA**

### **Byju's classes (<https://byjus.com>)**

BYJU's classes address the learning gaps to make learning fun and engaging by making it contextual, visual and not just theoretical. According to Byju's nowadays learning is driven by the fear, and not the love for learning. They inspire the students a lifelong love for learning in many innovative ways. Byju Raveendran's vision to change the way the world learns and make anyone fall in love with learning. The motive behind Tablet Learning Program is to make things more logical and understandable and in a way that stays in your memory for a longer time. Another important feature that Byjus follow is that teachers remain same throughout the course that helps in self-evaluation.

### **What is Byju's App providing?**

1. Learn anytime at your convenience using a tablet.
2. Using state of the art technology for visualization.
3. Get personalized mentoring from India's leading teachers at your convenience
4. Get your doubts solved by personal mentors.
5. Improve with Adaptive Learning modules.
6. Take regular tests and get in-depth analysis

Byju's Tablet focuses on the logical rather than only the conceptual part which is helping the students in getting a better edge in online education. Their lectures are delivered with same enthusiasm and it can be carried anywhere. The lessons can be watched at any time and revise as many times. Also, visual lessons have more impactful than verbal ones. They have a personal mentor also, who clears doubt from time to time. The app ensures that the student understands concepts by using adaptive learning which makes learning personalised and high definition visualisation techniques which helps in remembering. They have also done an amazing job by creating an app, known as BYJU'S Parent Connect app. It monitors the student's progress. Basically, this app helps parents stay up-to-date with their child's progress and performance from BYJU'S Learning App. It is designed to provide the real-time update to the parents that help them be more involved with child's progress.

They offer various programs for students in classes and competitive exams like JEE, NEET, CAT, IAS, GRE, GMAT and Bank PO. The learning app makes use of original content, rich animations, interactive simulations and engaging video lessons from India's best teachers. It's doing a commendable job in the online education sector.

### **Udemy (<https://www.udemy.com/>)**

Udemy is an online learning and teaching marketplace with over 65000 courses and 15 million students. It is targeted for professional adults. Udemy uses content from online content creators to sell for profit, unlike academic MOOC programs which are operated by traditional collegiate course work. It furnishes tools which authorise users to design a course, nurture it and earn money from student's tuition charges.

Students take courses predominately as a means of upgrading job-related skills. No Udemy courses are presently authenticated for college credit.

Udemy has made a remarkable endeavour to allure corporate trainers pursuing to generate coursework for employees of their company.

Courses are provided across a range of categories, inclusive of business and entrepreneurship, academics, the arts, health and fitness and others. Most of the classes are in practical subjects.

### **Benefits of Udemy**

- 1) There are courses from multiple authors so you can choose the best one.
- 2) All the courses are prepared by the experts in their respective fields and they themselves provide the support.
- 3) Numerous courses are rendered free of cost. Many courses are offered free of cost.
- 4) Reasonably priced.
- 5) Udemy provides lifetime access.
- 6) Videos can be downloaded using mobile app.

### **EDX (<https://www.edx.org>)**

EdX was established and continued to be administered by colleges and universities. It is a massive open online course (MOOC) provider and online learning platform. It hosts online university level courses in a wide range of disciplines to a worldwide audience, some of them are free of cost.

It also conducts research into learning based on how people use its platform. It was basically created for students and institutes that seek to transform them from innovative pedagogy and rigorous courses.

EdX courses consist of weekly learning sequences. Each learning sequence is composed of short videos interspersed with interactive learning exercises, which helps students to practice the concepts from the videos. The courses often include tutorial videos that are similar to discussion groups, an online textbook, and an online discussion forum where students can post and review questions and comments to each other and teaching assistants.

## **CONCLUDING THOUGHTS**

There is no doubt about the advantages of E-learning. Besides being economical and effective it is available at the door step of all and sundry. However, the e-learning method requires overcoming a lot of glitches before it becomes more popular and more effective. Moreover with the number of internet users increasing by leaps and bounds the E-learning is growing more by default than by design. To overcome the challenges and make the most out of the advantages, online instructors should be visible in the classroom and let students know that they are aware of what the students are doing. Students that are not participating should be contacted by the instructor to help re-establish a sense of personal connection. It has definitely brought a revolution in the system of learning for both working professional and students by imparting quality learning as per the requirement.

## REFERENCES

- [1] Media Reports, Press Releases, Press Information Bureau, RNCOS Report, Department of Industrial Policy and Promotion (DIPP), Union Budget 2017-18
- [2] Online Education Market in India 2017-2021 ID: 4436133 Report December 2017 Region: India 97 pages TechNavio
- [3] “How India’s ed-tech sector can grow and the challenges it must overcome” Author: Sanjay Bansal published on vccircle.com on 13th July 2017
- [4] International Journal of Information Science and Education. ISSN 2231-1262 Volume 4, Number 1 (2017) pp. 1-9 Research India Publications
- [5] International Journal of Advance Engineering and Research Development Volume 4, Issue 11, November - 2017 @IJAERD-2017
- [6] 209 Scientific Journal of Impact Factor (SJIF): 4.72 e-ISSN (O): 2348-4470 p-ISSN (P): 2348-6406 Students’ Attitude towards E-learning
- [7] Online Education in India: Trends & Future Prospects By Shikha Anand Published on Shikha.com
- [8] [https://www.ripublication.com/ijise\\_info/ijisev4n1\\_01.pdf](https://www.ripublication.com/ijise_info/ijisev4n1_01.pdf)
- [9] <https://www.quora.com/Who-are-the-best-competitors-of-Byjus-presently>
- [10] <https://en.wikipedia.org/wiki/Udemy>
- [11] <https://en.wikipedia.org/wiki/EdX>
- [12] H. Perraton, “Rethinking the research agenda”, International review of Research in Open and Distance Learning, 1(1), 2000.
- [13] Jaiswal, V. (2013). Current Status of e-learning in Indian higher education: A case study of U.P. Retrieved from the Social Science Research Network (SSRN) website: <http://ssrn.com/abstract=2231910>
- [14] J. Pulichino, “Future directions in e-Learning research Report 2006”, The Learning Guild Research 2006.
- [15] O. Z Richter, “Research Areas in Distance Education: A Delphi Study”, International Review of Research in Open and Distance Learning, Vol. 10, No. 3, 2009.

## **Antecedents of Customer Satisfaction, Loyalty, Trust and Retention: An Understanding of Physical Retailing**

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### **Abstract**

Retailing is one of the highest contributors to the global economy, as it generates high annual revenue and provides employment that covers a wide range of career opportunities. With the emergence of online retailing, physical retailers are required to seek competitive advantage through differentiation. In view of bridging the gap in previous literatures, the objective of this study is to examine the influence of physical aspects, reliability, personal interaction, problem solving and company policy on customer satisfaction, loyalty, trust and satisfaction. Convenience and snowball sampling method were adopted to examine the hypothesized relationships proposed in the study. The study shows that reliability, company policy, physical aspects and personal interactions have considerable impacts on customer satisfaction, customer loyalty, and customer retention. As for customer trust, company policy, physical aspects and personal interactions are the antecedents. Retailers have to strategize on consistency in excellent delivery of respective aspects of service quality to gain an edge over their competitors. Implications, limitations and future suggestions are also discussed.

### **1. INTRODUCTION**

Retailing contributes tremendously to the global economy, as it involves high annual sales and employment that covers a wide range of career opportunities. To create a strong impression out of the growing competition, differentiation is essential. A holistic approach is required to ensure the customer's entire retailing experience leads to satisfaction and trust; and more importantly to boost long-term business growth through customer loyalty.

According to Moth (2011), consumers ranked customer service of higher importance compared to product quality and low prices. Chu, Lee and Chao (2012) argued that the antecedents of customer satisfaction, loyalty, trust, and retention will be affected by service quality. Previous researches have also offered important insights into the service quality models (Ladhari, 2009; Fullerton, 2013; Wang et. al., 2016).

However, detailed evaluation on the impacts of the respective service quality dimension in regards to customer's possible behaviors, perceptions, and attitudes were lacking. Hence, this study investigates the impact of the service quality dimensions on customer satisfaction, trust, and loyalty on separate settings. The findings of this study contribute to the services marketing literature by proposing theoretical evidence for future research and development of research models within certain research areas. Moreover, the findings provide additional information on how the respective aspects of service quality could boost the confidence of retailers in gaining competitive advantage and higher profitability.

### **2. LITERATURE REVIEW**

#### **2.1 Service Quality**

Service quality relates to the degree a company is able to deliver services that meet the expectations and needs of its customers. It is one of the most important determinants in service delivery evaluation by customers, and can be described as a standard in measuring services to maximize customers' needs (Mwatsika and Khomba, 2013; Dabholkar, Thorpe and Rentz, 1996). Not surprisingly, retailers that provide better service quality enjoy higher profitability

(Bhat, 2005). As such, it is important to ensure that services do not contrast too much between expectations and perceptions of actual services offered.

## **2.2 Customer Satisfaction**

Customer satisfaction can be defined as the degree of exceeding or meeting customers' needs and wants or expectations in using or receiving either a product or service (Taylor and Baker, 1994). Service quality also has stronger association towards customer satisfaction compared to purchasing intention (Chu et. al., 2012). Service quality has been found to be positively correlated to customer satisfaction in past researches, which include the banking services in Malta (Caruana, 2002) and Greece's insurance services (Tsoukatos and Rand, 2006). In all these studies, service quality has been found to be positively correlated to customer satisfaction. Therefore, it is vital for service providers to acknowledge the importance of service quality to ensure customer satisfaction and repeat patronage which leads to sustainable business performance. Based on preceding reports in the literature, few dimensions of service quality that contribute to customer satisfaction were hypothesized:

*H1a: Physical aspects positively influence customer satisfaction.*

*H1b: Reliability positively affects customer satisfaction.*

*H1c: Personal interaction positively impacts customer satisfaction.*

*H1d: Problem-solving positively influences customer satisfaction.*

*H1e: Company policy positively affects customer trust.*

## **2.3 Customer Loyalty**

Customer loyalty can well be explained as a customer's intention to continue using a company's services or products (Zeithaml, Parasuraman, & Berry, 1990). Loyal customers tend to purchase more services from their favorite brands (Kuo et al., 2013). Pamies (2012) discussed that voluntary word of mouth recommendation by the loyal customers reduce promotion cost for the company. A significant positive association between service quality and customer loyalty may encourage customers to pay more for services they are happy with (Zeithaml et al., 1990; Tsoukatos and Rand, 2006). This implies that retailers should provide outstanding service quality to generate loyal customers. Based on preceding reports in the literature, few dimensions of service quality that contribute to customer loyalty were hypothesized:

*H2a: Physical aspects positively influence customer loyalty.*

*H2b: Reliability positively affects customer loyalty.*

*H2c: Personal interaction positively impacts customer loyalty.*

*H2d: Problem-solving positively influences customer loyalty.*

*H2e: Company policy positively affects customer loyalty.*

## **2.4 Customer Trust**

According to Morgan and Hunt (1994), customer trust is his or her belief in a firm's promise or word, that the firm is dependable and will satisfy his or her obligations in an exchange association. Customer trust is effective in minimizing or justifying any ambiguity regarding a firm (Chu et. al., 2012). Kassim and Abdullah (2010) discussed that there is positive correlation between service quality and customer trust in the service industry. The relationship between service quality and customer trust is stronger than that between service quality and perceived value of a product or service (Rasheed and Abadi, 2014; Lee and Lin, 2005). Good service quality delivered by the retailers do gain customer trust in the long run. Based on preceding reports in the literature, few dimensions of service quality that contribute to customer trust were hypothesized:

- H3a: Physical aspects positively influence customer trust.*  
*H3b: Reliability positively affects customer trust.*  
*H3c: Personal interaction positively impacts customer trust.*  
*H3d: Problem-solving positively influences customer trust.*  
*H3e: Company policy positively affects customer trust.*

## **2.5 Customer Retention**

Customer retention refers to the established business relationship between suppliers and customers that should be maintained to ensure sustainability and profitability of business (Syed and Jain, 2017). According to Venetis and Ghauri (2004), customer retention is a progression of shared commitment, a process of creating a long-term buyer-seller relationship. Other studies have noted the positive impact of service quality on customer retention or behavioral intentions (Venetis and Ghauri, 2004; Liu and Wu, 2007; Syed and Jain, 2017). Therefore, it is important to take cognizance of the fact that service quality plays a crucial role in influencing customer retention in the retailing industry. Based on preceding reports in the literature, few dimensions of service quality that contribute to customer retention were hypothesized:

- H4a: Physical aspects positively influence customer retention.*  
*H4b: Reliability positively affects customer retention.*  
*H4c: Personal interaction positively impacts customer retention.*  
*H4d: Problem-solving positively influences customer retention.*  
*H4e: Company policy positively affects customer retention.*

## **3. METHODOLOGY**

All items used in this research had been validated by several scholars specializing in research in the services sector. There were 28 questionnaire items categorized under 5 dimensions, adapted from Dabholkar et al. (1996), Taylor and Baker (1994), Caruana (2002), Lee and Lin (2005), Kassim and Abdullah (2010), Liu and Wu (2007). The aim of the study was to investigate the interrelationship of service quality, customer satisfaction, loyalty, trust and retention so that retailers could gain better understanding of these factors to ensure higher profitability and success on a long-term basis.

With a combination of convenience sampling and snowball sampling, a total of 253 participants responded to the questionnaire. SPSS version 21.0 was used for the numerical interpretation of the data collected. A descriptive analysis was conducted to study the demographics aspects of respondents; unsuitable respondents whose feedback might affect the accuracy of this study's final results were excluded (Sekaran and Bougie, 2010). The items were then tested for their reliability and validity. A bivariate correlation analysis followed by multiple linear regression analysis were carried out to measure the correlation and assess the impacts between items and variables.

## **4. ANALYSIS AND FINDINGS**

Based on the 253 questionnaires which were returned, 45.5% respondents were male and 54.5% female; the majority were Malaysians of Chinese origin (56.9%) aged between 18 to 25 years (40.7%); 36.8% of the respondents were students. The incomes of respondents were mostly below RM3,000 (46.6%). Among the respondents, 41.9% had experienced service in physical retailing in the previous two months prior to the survey.

The reliability of each variable in the 9 dimensions was assessed, yielding the following Cronbach's alpha values: physical aspects (0.899), reliability (0.897), personal interaction

(0.936), problem-solving (0.877), company policy (0.828), customer satisfaction (0.920), customer loyalty (0.933), customer trust (0.893), and customer retention (0.936).

Bivariate correlations were performed to determine how the various dimensions of service quality were related to customer satisfaction, customer loyalty, customer trust and customer retention. Regarding customer satisfaction, there was strong positive correlation with physical aspects (0.822), reliability (0.876), personal interaction (0.861), problem-solving (0.787) and company policy (0.818). Similarly, customer loyalty was positively correlated with physical aspects (0.780), reliability (0.831), personal interaction (0.831), problem-solving (0.752), and company policy (0.770). Customer trust also showed strong positive correlation with physical aspects (0.731), reliability (0.720), personal interaction (0.735), and company policy (0.770). However, problem-solving at 0.646 indicated only a moderate positive correlation to customer trust. Customer retention was also found to have strong positive correlation with physical aspects (0.794), reliability (0.826), personal interaction (0.822), problem-solving (0.726), and company policy (0.771).

Next, a multiple regression analysis was conducted to test the factors and their influence on customer satisfaction, loyalty, trust, and customer retention. The model would identify the dimensions that contribute significantly to the variation in the selected dependent variable (customer satisfaction, loyalty, trust, or customer retention).

#### **4.1 Multiple Linear Regression between the dimensions of Service Quality and Customer Satisfaction, Customer Loyalty, Customer Trust and Customer Retention**

Results of the multiple regression between the dimensions of Service Quality and customer satisfaction showed that four variables (reliability, policy, physical aspects and personal interaction) had positive. However, problem-solving had no significant impact on customer satisfaction in physical retailing. A study by Munusamy, Chelliah and Hor (2010) found that problem-solving influenced the perception of service quality but had no significant effect on customer satisfaction. Problem-solving by service employee could also be affected by their emotions, which indirectly leads to low productivity in service quality. The four variables showing considerable impact on customer satisfaction (CS) from this research achieved an R-squared value of 0.841 or 84.1%.

Results of the multiple regressions between the dimensions of Service Quality and customer loyalty showed again that four variables (reliability, policy, personal interaction and physical aspects) except problem-solving had positive correlations with customer satisfaction in physical retailing. Based on the studies of Kim and Jin (2001), Siu and Cheung (2001) and Nguyen, Nguyen, Phan and Yoshiki (2015), problem-solving could lead to a new dimension instead, namely trustworthiness with personal interaction. Four variables together showed considerable impact on customer loyalty (CL) from this research, with an R-squared value of 0.761 or 76.1%.

Company policy, physical aspects and personal interaction require more emphasis by retailers as they are positively correlated to customer trust. The three variables having substantial impacts on customer trust (CT) amassed an R-squared value of 0.643 or 64.3%. The insignificance of reliability and problem-solving might be due to the Asian cultural characteristics and their perception of service quality (Nguyen, 2017). This is because employees in Malaysian physical retailing tend to offer customers the most expensive services, but these might not suit the needs of customers (Hofstede Insights, 2017). Problem-solving may seem somewhat irrelevant in impacting customer trust as customers tend to keep their disappointment to themselves (Beneke et al., 2012).

Similar to results on Customer Satisfaction, results of the multiple regression between the dimensions of Service Quality and customer retention showed that four variables (reliability, policy, physical aspects and personal interaction) had positive correlations while problem-solving was not statistically significant. A study by Das, Kumar, and Saha (2010) found that that problem-solving had limited influence on returning customers. This might be due to customers enjoy having membership to loyalty programs for discounts and deals irregardless of the service experience (Kriss, 2014). The four variables, namely reliability, policy, physical aspects and personal interaction in combination demonstrated considerable influence on customer retention (CR), with an R-squared value of 0.759 or 75.9%. Therefore, higher emphasis on the four variables is needed to encourage returning customers.

## 5. CONCLUSION

Based on the results of this study, there are several critical managerial implications to take heed of. It is shown that service quality which has significant impact towards customer satisfaction is influenced by its various elements, namely physical aspects, reliability, personal interaction, and company policy. Besides reliability, physical retailers should pay attention to various perspectives of service quality when strategizing. To strengthen customer loyalty, local physical retailers should provide proper training for their employees to maintain the service quality. Physical retailers should also craft and update the company policies to enhance the trust in customers. Finally, physical retailers need to stay committed in upholding their promises to customers to establish the customer retention.

A major setback in this study was the language barrier. There might be some misinterpretation of the questions among willing respondents whose command of the English language was questionable. Furthermore, there was limitation of resources as well as time constraints. It was a challenge getting 253 respondents from different states in Malaysia within the time frame of three months. Future research may also look to include more models of service quality towards customer satisfaction, loyalty, trust, and customer retention in Malaysia's different service sectors.

Retailers should have long-term strategies based on better understanding of the various factors that impact service quality, viz. customer satisfaction, loyalty, trust and customer retention. Among the different dimensions of service quality, reliability stands out, being the most important factor in customer satisfaction, loyalty and customer retention. Physical retailers must also pay attention to the other elements of service quality such as policy, physical aspects and personal interaction. To ensure long-term sustained profitability, physical retailers need to focus on improving the overall service quality.

## References

- Beneke, J., Hayworth, C., Hobson, R. and Mia, Z. (2012). Examining the effect of retail service quality dimensions on customer satisfaction and loyalty: The case of the supermarket shopper. *Acta Commercii*, [online] 12(1), 27-43. Available at: <<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.473.1332&rep=rep1&type=pdf>> [Accessed 4 November 2017].
- Bhat, M. (2005). Correlates of Service Quality in Banks: An Empirical Investigation. *Journal of Services Research*, 5(1), 77-99.
- Caruana, A. (2002). Service Loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7/8), 811-828.

- Chu, P.Y., Lee, G.Y. and Chao, Y. (2012). Service quality, customer satisfaction, customer trust, and loyalty in an E-banking context. *Social Behavior and Personality: an international journal*, [online] 40(8), 1271-1283. Available at: <<http://web.b.ebscohost.com.ezproxy.lancs.ac.uk/ehost/pdfviewer/pdfviewer?sid=406bd752-22af-49db-8a0d-30230f40f036%40sessionmgr102&vid=1&hid=125>> [Accessed 11 June 2017].
- Dabholkar, P. A., Thorpe, D. I. and Rentz, J. O. (1996). A measure of service quality for retail stores: Scale development and validation. *Journal of the Academy of Marketing Science*, 24(1), 3-16.
- Das, A., Kumar, V., Saha, G.C. (2010). Retail service quality in context of CIS countries. *International Journal of Quality & Reliability Management*, [online] 37(6), 658-683. Available at: <<https://doi.org/10.1108/02656711011054542>> [Accessed 4 November 2017].
- Fullerton, G. (2014). The moderating effect of normative commitment on the service quality-customer retention relationship. *European Journal of Marketing*, 48(3/4), 657-673.
- Hofstede Insights. (2017). *Country Comparison - Malaysia*. [online] Available at: <<https://www.hofstede-insights.com/country-comparison/malaysia/>> [Accessed 4 Nov. 2017].
- Kassim, N. and Abdullah, N.A. (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings: A cross cultural analysis. *Asia Pacific Journal of Marketing and Logistic*, [online] 22(3), 351-371. Available at: <<http://dx.doi.org/10.1108/13555851011062269>> [Accessed 14 June 2017].
- Kim, S. and Jin, B. (2001). An evaluation of the retail service quality scale for U.S. and Korean customers of discount stores. *Advances of Consumer Research*, [online] 28(1), 169-176. Available at: <<http://web.a.ebscohost.com.ezproxy.lancs.ac.uk/ehost/pdfviewer/pdfviewer?sid=536055ca-95ac-4b2d-8564-dc65e1bea885%40sessionmgr4010&vid=1&hid=4201>> [Accessed 5 June 2017].
- Kriss, P. (2014). *The Value of Customer Experience, Quantified*. [online] Harvard Business Review. Available at: <<https://hbr.org/2014/08/the-value-of-customer-experience-quantifiedL>> [Accessed 4 November 2017].
- Kuo, N.T., Chang, K.C., Cheng, Y.S. and Lai, C.H. (2013). Investigating the Effect of Service Quality on Customer Loyalty in the Hotel Industry: The Mediating Role of Customer Satisfaction and the Moderating Roles of Service Recovery and Perceived Value. *Journal of China Tourism Research*, [online] 9(3), 257-276. Available at: <<http://dx.doi.org.ezproxy.lancs.ac.uk/10.1080/19388160.2013.812896>> [Accessed 10 June 2017].
- Ladhari, R. (2009). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences*, 1(2), 172-198.
- Lee, G.G. and Lin, H.F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail and Distribution Management*, 33(2), 161-176.
- Liu, T.C. and Wu, L.W. (2007). Customer retention and cross-buying in the banking industry: An integration of service attributes, satisfaction and trust. *Journal of Financial Service Marketing*, 12(2), 132-145.
- Morgan, R.M. and Hunt, S.D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, [online] 58(3), 20-38. Available at: <<http://dx.doi.org/10.2307/1252308>> [Accessed 13 June 2017].

- Moth, D. (2011, November 28). Customer service is all important for retailers: survey. Retrieved from <https://econsultancy.com/blog/8372-customer-service-is-all-important-for-retailers-survey/>
- Munusamy, J., Chelliah, S. and Hor, W.M. (2010). Service Quality Delivery and Its Impact on Customer Satisfaction in the Banking Sector in Malaysia. *International Journal of Innovation, Management and Technology*, [online] 1(4), 398-404. Available at: <<http://ijimt.org/papers/71-M461.pdf>> [Accessed 2 November 2017].
- Mwatsika, C. and Khomba, J. (2013). Understanding MBA service quality in postgraduates' own terms: An exploratory analysis of top-of-the mind definition. *African Journal of Business Management*, [online] 7(44), 4407-4419. Available at: <<http://www.academicjournals.org/AJBM>> [Accessed 28 May 2017].
- Nguyen, T.H., Nguyen, H.M., Phan, C.A. and Yoshiki, M. (2015). Retailer Service Quality and Customer Loyalty: Empirical Evidence in Vietnam. *Asian Social Science*, [online] 11(4), 90-101. Available at: <[file:///C:/Users/User/Downloads/mafiadoc.com\\_retailer-service-quality-and-customer-loyalty-empi\\_59adafb51723ddbac5e513f9.pdf](file:///C:/Users/User/Downloads/mafiadoc.com_retailer-service-quality-and-customer-loyalty-empi_59adafb51723ddbac5e513f9.pdf)> [Accessed 2 November 2017].
- Nguyen, T.M.P. (2017). *Service quality in Finnish retailing: An exploratory study from an Asian consumers' perspective*. Available at: <<https://tampub.uta.fi/bitstream/handle/10024/101209/gradu07364.pdf?sequence=1>> [Accessed 4 November 2017].
- Pamies, D.S. (2012). Customer loyalty to service providers: examining the role of service quality, customer satisfaction and trust. *Total Quality Management and Business Excellence*, [online] 23(11-12), 1257-1271. Available at: <<http://dx.doi.org.ezproxy.lancs.ac.uk/10.1080/14783363.2012.669551>> [Accessed 10 June 2017].
- Rasheed, F.A. and Abadi, M.F. (2014). Impact of service quality, trust and perceived value on customer loyalty in Malaysia service industries. *Procedia-Social and Behavioral Science*, [online] 164(1), 298-304. Available at: <<https://doi.org/10.1016/j.sbspro.2014.11.080>> [Accessed 14 June 2017].
- Sekaran, U. and Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach*. 5<sup>th</sup> ed. Sussex: Wiley and Sons.
- Siu, N.Y. and Cheung, T.H.J. (2001). A measure of retail service quality. *Marketing Intelligence and Planning*, 19(2), 88-96.
- Syed, T. and Jain, R. (2017). A Study on Determinants of Customer Retention In Banking Sector. *International Education and Research Journal*, [online] 3(6), 290-292. Available at: <<http://ierj.in/journal/index.php/ierj/article/view/1216/1169>> [Accessed 2 September 2017].
- Taylor, S.A. and Baker, T.L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70(2), 163-178.
- Tsoukatos, E. and Rand, G.K. (2006). Path Analysis of Perceived Service Quality, Satisfaction and Loyalty in Greek Insurance. *Managing Service Quality*, [online] 16(5), 501-519. Available at: <<https://doi-org.ezproxy.lancs.ac.uk/10.1108/09604520610686746>> [Accessed 12 June 2017].
- Venetis, K.A. and Ghauri, P.N. (2004). Service quality and customer retention: Building long-term relationships. *European Journal of Marketing*, [online] 38(11/12), 1577-1598. Available at: <[https://www.researchgate.net/profile/Pervez\\_Ghauri/publication/235266692\\_Service\\_Quality\\_and\\_Customer\\_Retention\\_Building\\_Long-](https://www.researchgate.net/profile/Pervez_Ghauri/publication/235266692_Service_Quality_and_Customer_Retention_Building_Long-)

[Term\\_Relationships/links/53f086b60cf2711e0c430ced.pdf](#)> [Accessed 27 August 2017].

- Wang, H., Kim, K. H., Ko, E. & Liu, H. (2016). Relationship between service quality and customer equity in traditional markets. *Journal of Business Research*, 69(9), 3827-3834.
- Zeithaml, V.A., Parasuraman, A. and Berry, L.L. (1990). *Delivering Service Quality*, Free Press, New York, NY.

# **A Case Study on Barbeque Nation: A Breakthrough in Indian Dining Experience**

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## **I. INTRODUCTION**

Case study on one of the largest restaurant chains in hospitality sector of India has been presented that revamped the entire restaurant segment in India. This business case study on Barbeque Nation analyzes the innovation done by restaurants nowadays and discusses the strategy of surviving in the market of dynamic food industry. The case also discusses the strengths, weaknesses and competitive advantage of restaurant chains in India keeping in mind the technology aspect as future necessity. Research on this case study has been done using official websites, news articles, informative websites like Wikipedia and taking other business case studies available publicly. This case study is truly a secondary-search based case study, i.e., research involves summary of primary research. Barbeque Nation is an Indian Casual Dining format restaurant with PAN-India and UAE presence led by Barbeque Nation Hospitality Ltd. Barbeque Nation's headquarters are in Bangalore, India and they are running successfully in 22 states, 55 cities and 95 plus outlets under the current MD. Kayum Dhanani and CEO, Sameer Bhasin. This restaurant serves both vegetarian and non-vegetarian food in various cuisines such as Asian, Oriental, Indian, American and Mediterranean. The buffet includes vegetarian and non-vegetarian food offering a plethora of salads, soups and desserts along with the famous DIY grilled starters in unlimited servings.

## **II. JOURNEY OF BARBEQUE NATION**

### **2.1 The Start**

The idea sparked when Prosenjit Roy Choudhury, management trainee at Sayaji Hotel's banquet division was getting complaints that kebabs served were too cold, and essentially the true essence of grilled items is when they are served piping hot.

One day, Prosenjit saw a TV show where nomads were facing the same issue. They quickly resolved the problem by grilling the meat on erected grill made out of stacked armor. Mr. Prosenjit's brain got lit with an idea that he thought would be wonderful when applied to his own division of work.

He presented this idea to his then managing director of Sayaji hotels and Banquets Sajid Dhanani, to venture into food retail and got the green flag. This idea became a huge hit and completely reincarnated the whole dining experience in India. [REFER EXHIBIT 1]

## **2.2 First Launch in Mumbai**

The first restaurant launched by Barbeque Nation was in Pali Hill, a plush area of Mumbai on 20<sup>th</sup> January, 2006. It proved to be a grill thrill for Mumbaikars. Therefore, next year, they started their chain of restaurants with two more in major cities of India, one in Indiranagar, Bangalore on 20<sup>th</sup> January, 2007 and other one in Banjara Hills, Hyderabad on 16 July, 2007. As all these were hits then there was no looking back, in 2007 again, after Hyderabad, they opened one more outlet in Koramangalam, Bangalore and in 2008 covered more cities. [REFER EXHIBIT 9]

## **2.3 Benchmark Outlets and Achievements**

Bangalore set a benchmark in 2012 which was the 25<sup>th</sup> outlet of Barbeque Nation within a span of seven years only. With the thought of expanding more on the lands and in hearts of customers, in 2013, they kept going with opening new restaurants at different places in India. The second benchmark was set in the year 2015 when the 50<sup>th</sup> outlet opened in Vijaywada, India.

The third benchmark was an important milestone for Barbeque Nation as in 2016 for the first time, Barbeque Nation launched first international outlet in Dubai. They gained 37<sup>th</sup> rank in 'Great place to work' and a rank in one of the top ten retailers in India as per Economic Times with Retailers Association of India.

At that moment, each store was earning INR 9 crore brining profit margins to 19 percent which is stunning. [REFER EXHIBIT 4] Barbeque Nation set a blitzkrieg in the restaurant segment in India and the proof being sales incurred via each outlet. [REFER EXHIBIT 9]

# **III. INNOVATION AND TRANSFORMATION**

## **3.1 Hakuna Matata**

In 2009, Barbeque Nation hosted their first food festival "Hakuna Matata - An African Food Safari". In Swahili language of Africa, it means "No Worries". The purpose of organizing such themed festival was to bring the relished Barbeques of Africa on the platters of the restaurant. In this festival, they served various non-vegetarian and vegetarian sauces like Harissa, Berbere, Ras El Hannout. Also, African food like Muamba Nsusu, African Peanut Soup, Peri Peri Drumstick etc. were there. To give it a full themed look, the staff painted their faces, greeted guests with 'Jumbo' meaning, Welcome. Jugglers, fire eaters and African tribal dance performance gave the required kick to the party loving guests. Thus, everyone felt they stepped in the land of Africa, and not just Barbeque Nation.

## **3.2 Positive Perspective**

In 2013, after Kayum Dhanani's death, his brother, Sajid Dhanani, took over the business. It was not easy for Sajid to understand and follow in the beginning. Sajid secured an amount of

Rs.110 crores from an Indian private equity firm CX Partners to expand further. With the backup from CX Partners, Barbeque Nation has raised an IPO, Initial Public Offering, in 2018 and became a public limited organization.

### **3.3 Kulfi Nation**

In 2014, they initiated a new concept “Kulfi Nation” in the restaurant for dessert lovers. The purpose of introducing this independent counter was to enhance the experience of the guests. It gave the famous old kulfi a revamped look and flavor. They have eight basic flavors of kulfi like fig, paan, kesar-pista, strawberry, mango etc. with the options of 800 toppings and combination of different syrups, crushes and sauces. It gave additional value to the food lovers without paying any extra money. This later on was copied by many other food chains as well.

### **3.4 Atmosfire**

In October 2015, Barbeque Nation introduced a completely unique model of personalized catering called Atmosfire. This first of its kind set up and is operational in Bangalore. It was welcomed with arms wide open by people of Bangalore. Now Pune is also enjoying the hassle-free party organized by Atmosfire. They cover and provide a holistic solution for all kinds of parties such as wedding, cocktail, corporate, themed party and birthdays etc. They are targeting all the major metropolitan cities for future expansion of this concept.

### **3.5 Kyun Nahi Barbeque**

Apart from the festivals and other activities, Barbeque Nation launched a television commercial in 2017, around the theme ‘Kyun Nahi Barbeque’. It was aired on television and other sites like Times of India, Instagram, Facebook and Hotstar. It became talk of the town via social platform and received new customer engagement.

### **3.6 Festival League**

In 2018, keeping the IPL fever in mind in Delhi, they organized a festival called “Festival League”. In this festival, guests enjoyed a special menu as per the theme. Food like Reverse Swing Tangri, Knuckle Ball Fish, Leggy Mushrooms, LBW fish steak, Leg Cutter Shashlik etc. were main attractions which were chosen from the hit recipes of different festivals held in Barbeque Nation.

All these marketing and innovation tactics definitely helped Barbeque Nation carve out its niche in every segment. The pricing was also kept in mind while organizing these activities and children under the age of six years are served free food.

On a broader perspective, there are areas on which things can be worked that will provide Barbeque Nation an extra edge.

Technology is syncing with time and perhaps there is no arena left untouched that is not digitized. Gastronomy and Robotic Kitchens are such new emerging trends which this restaurant chain can adapt and infuse in their system very quickly and effectively as compared to the new entrants and competitors. Gastronomy would help them bringing the different countries’ cuisines and experiences on their platter. Robotic kitchens can provide the trainer

chefs of developed countries that technical support which is otherwise missing right now everywhere in the Indian food industry.

By incorporating robotic kitchen in their systems, Barbeque Nation will not only become the first restaurant chain in India to adapt the technology, but also it will give the customers a lifetime unforgettable experience.

#### **IV. COMPETITION AND COMPETITIVE ADVANTAGE**

##### **4.1 The Great Kebab Factory**

The Great Kebab Factory is an Indian specialty restaurant and was founded in 1998, Radisson Hotel of Delhi, India.

Although being a little high on the pocket, The Great Kebab Factory, offers a stiff competition to Barbeque Nation.

It offers its innovations in terms of the events it organizes, the promotional offers, a large bank of kebab recipes, unlimited servings and a new menu every day. The Great Kebab Factory replicated the innovation of Barbeque Nation of the food fest and events concept over the time and kept strengthening it, but Barbeque Nation left that part of innovation thereby gave their competition a chance to grow on their own customer segments.

The Great Kebab Factory has also won numerous awards like Best North Indian Restaurant and Best kebab restaurant winner keeping the thought of initiating with customers more and thus gaining customer satisfaction by organizing events regularly. Keeping this ideology in mind, they are currently in 17 cities and in 4 countries.

Looking at the timeline of Barbeque Nation in comparison to The Great Kebab Factory, Barbeque Nation is focused more on expansion model. Hospitality division of Barbeque Nation must also focus on more customer initiation in terms of organizing events and calling out more offers for the consumers to leverage. This can give them an approach to target a great amount of customer segment who are willing to express their interest and always motivate about experiencing fests and events.

##### **4.2 Pirates of Grill and Prankster**

Emerging in late 2009, Pirates of Grill, a unique restaurant that can accommodate gathering of both families and corporate people, is an Indian restaurant brand that also gives Barbeque Nation rigid competition.

Although, Pirates of Grill is taking its baby steps towards capturing the large market, its CEO's another innovation like Prankster can be challenging to Barbeque Nation. Prankster is also a unique concept restaurant that targets a whole other dynamic customer segment, youngsters. [REFER EXHIBIT 5,6,7]

Both the brands offer innovation in a unique way - keep on understanding the needs of customers. Pirates of Grill came with the idea to serve customers unlimited food for pre-fixed price of meal while Prankster takes its customers towards nostalgic school/ college days by introducing chemistry lab, library, amphitheater, classroom and canteen. Both the brands leverage technology in a great way as they analyze, manage and make data-driven decisions based on social media interactions they have with their customers.

Having done research and adapting to the results of changing behavior of customers is the strategy that made Pirates of Grill and Prankster rise to 7 restaurants in India. Both the restaurant chains are looking for international expansion as well.

Pirates of Grill and Prankster pose a direct threat to Barbeque Nation and Barbeque Nation should not underestimate both by looking at size of restaurants or revenue it makes but it should admire their USP and incorporate these data-driven decision-making process a habit for more insights into what customers exactly want.

### **4.3 Indian Grill Company**

Swagath Group, a group that comes under SagarRatna restaurant groups, introduced Indian Grill Company in 2015 in Connaught Place, Delhi, India. SagarRatna restaurants have in total 5 groups in hospitality sector and more than 2000 employees.

Although SagarRatna is known for serving South Indian Dishes, it is the first time in 25 years they have launched with concept of grill food. Adhering to the current market needs and requirements, Indian Grill Company got INR 2 Crores investment from SagarRatna. Founder of SagarRatna has also planned to invest as of INR 50 Crores to open more restaurants nationally and internationally.

Coming from the umbrella of SagarRatna, which is in the market for more than 25 years, Barbeque Nation must realize that experience is a big factor in any business venture.

Indian Grill Company does not impose a threat to Barbeque Nation as of now but, it might be threatening in the future. As both the hospitality segments are now competing in the same food industry, it will be significant to see one with deep pockets and ton of experience competing with one that is overwhelmed with current innovation it already has.

### **4.4 A Grill Company**

The direct competition to Barbeque Nation is A Grill Company, an Indian restaurant placed at Noida, India. They have categorized themselves higher in terms of pricing than Barbeque Nation. Their food quality is good and has all elements of current food trends with the latest and attractive innovations. The specialty of the restaurant which gives it an edge is that a customer can visualize and customize any starter with all the visuals of using fancy food accessories like injections, dry ice, carbonated gases etc.

In less than two months of their launch, they achieved better footfalls than Barbeque Nation for the reason that they run best of the food campaigns targeting food influencers.

### **4.5 Benihana**

Benihana is a trademark and has outlets across the world. The concept is of Japanese Teppanyaki tables where they serve and cook food in front of the customer's eyes as per their liking and preference. The chef crafts the recipe as desired by customer. This concept is very captivating and people love to visit Benihana solely for the experience they are providing. In fact, this has been so appealing that people often wish to debut their Japanese culinary experience with Benihana to have customization as they like. The Pro aspect to this is the chances of error are less.

On the other hand, one con to Benihana is that the seating arrangement for Vegans and Non-Vegans is completely separate, hence a group with diverse food preferences cannot be seated

together. Whereas at Barbeque Nation where this kind of experience is only with their Kulfi Nation that too not on seat, the seating arrangement for non-vegans and vegans is in proximity without any mixing of food.

But the magical cooking act is completely captivating as the chef not only cooks in front of the consumer's eyes, but also the live entertainment with the culinary arts, wits and techniques keep the consumer engaged. If restaurants start practicing this trend, it could actually be a trendsetter, on the contrary if Barbeque Nation just incorporates it, it would be a complete game changer and surpass all downfalls and upcoming hurdles forecasted.

## **V. CHALLENGES**

### **5.1 Barbeque Nation pays 17k INR fine to customer**

On 20<sup>th</sup> August 2015, there were news reports making rounds about Barbeque Nation. However, these new pieces were not about any achievement but in fact about Barbeque Nation asked to pay 17196 INR on the orders of District Consumer Redressal Forum for levying service charge in Chandigarh. The complaint made by Vikas Kuthiala, was taken to the Excise and Taxation Department. Vikas was appalled to see the additional service charge amount which was 4% of the bill amount. In spite of raising the concern to the restaurant staff, the complainant had no other alternative left than to write a plea to the Chandigarh Administration.

On the day of hearing, the committee state that the restaurant was intentionally fleecing its customers by charging extra service charges. After hearing all the parties, the forum stated that the restaurant had been fleecing customers by charging money at four per cent on the bill as service charges. "By levying the service charges illegally, the restaurants are putting an additional burden on consumers, who already have to pay around 25% taxes," the forum stated. Thus, the forum directed Barbeque Nation to refund Rs193.60 charged from the complainant as service charge, in addition to paying up Rs10,000 as compensation to the customer on account of deficiency in service, besides causing mental and physical harassment, and an additional Rs 7,000 as cost of litigation, to be paid within 30 days.

### **5.2 Band Baja Barbeque**

Indian weddings are incomplete without having the old Indian wedding style cuisine setup. Around the Indian Wedding Season last year, Barbeque Nation showcased a wedding themed food festival from October 26<sup>th</sup> 2017 to November 12<sup>th</sup> 2017. The décor, the menu, activities were all aimed to give the feeling of the wedding season. Surprisingly apart from the setup there was not much change in menu. Embellished stalls were setup for each food menu category, for example a stall for Starters, a stall for non-vegetarian food etc. Another twist was that instead of just Kulfi Nation live counter, the Band Baja Barbeque had several Live counters for other food items as well, where people could customize and get it cooked live in front of their eyes, a concept that Benihana, a Japanese Restaurant follows.

While people did get attracted to the concept and did visit Barbeque Nation to witness the same, but unfortunately, it received a mixed reaction and wasn't as successful as its predecessor themed festivals.

Although Barbeque Nation did try to revive the innovations it had started, but this wasn't such a huge hit as others.

### **5.3 Open Letters from Food Influencers asking to change menu**

In an open letter by a Food Influencer portal called Eat Treat, dated 25<sup>th</sup> October 2017, Barbeque Nation was asked to revamp their existing menu. They claimed that just a mere 4+ rating does not make them sit and relax, in fact it takes consistent efforts to keep things interesting. Eat Treat wrote in the letter that the menu was not even changed a bit since ages.

Even though a lot of loyal customers might continue to return but majority seeks changes. The menu has made people used and even pointed out that some menu items like soups, people have completely stopped even walking nearby to the counter.

Food should not only be tantalizing to the taste buds but also appealing to the eyes and an exciting experience to look forward to. The letter was concluded with the fact that Barbeque Nation is playing too safe and experimenting with variety is perhaps their huge fear.

## **VI. CONCLUSION**

Every business has some revenue and profit or turnover or can be a rank of the best restaurant chains, basically a number that gives them an edge over another competitor in terms of recognition and sustainability in the market. Barbeque Nation also has an edge over other competitors but it is now in the head and hand of its CEO, Sajid Dhanani, whether to be equivalent in the strategy of expansion of its restaurant chain or to incorporate a system of structured strategies evolving as per customer needs to gain an advantage, an undefined miraculous experience in carving out technology in Indian food industry.

## **VII. RECOMMENDATIONS AND SUGGESTIONS**

Barbeque Nation should show a prominent presence on social media by making talks with food influencers and bloggers, which is quite active activity on the competitor side but not well organized at Barbeque Nation. Although there is a feedback mechanism that goes for all the restaurant chains for employees of Barbeque Nation to adapt and adhere to but not very much on social media platforms.

Technology in form of following digital strategy is one part, Barbeque Nation must also look for western concepts like Artificial Intelligence based robotic kitchen incorporated in their own system. In this era of technology, when every other organization uses results based on analysis and forecasting, one must not rely only on current structure of things. One must explore more in the worlds of other dimensions and horizons, the technology one, and try to experiment and embed it with current working layout of their organization.

Barbeque Nation was the first restaurant to embed in their systems the concept of DIY – Do it yourself in 2006. It should also be the first in Indian market to adapt a technology that is very new but exciting in the market of United Kingdom, the idea of Moley Kitchen – robotic kitchen which can cook by mimicking chef.

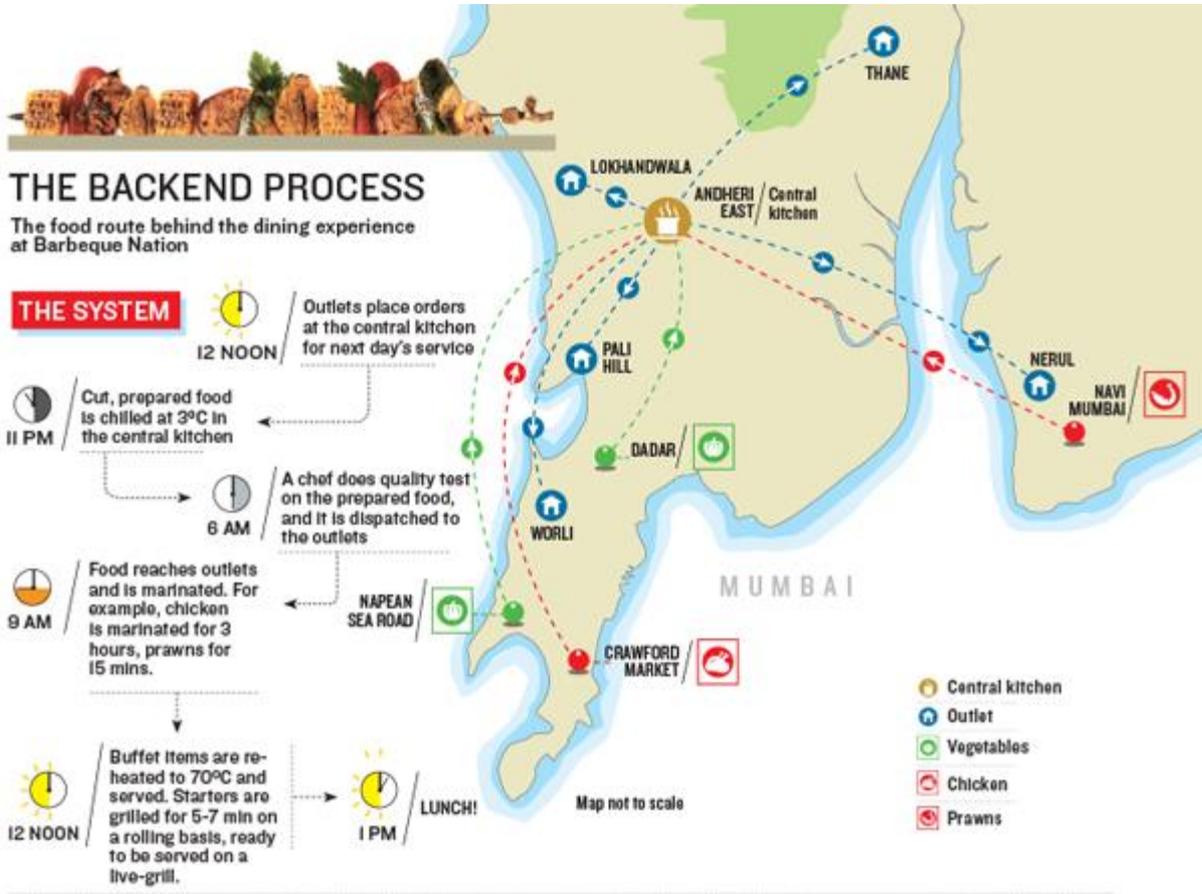
By reducing the amount spent on expansion of Barbeque Nation restaurants, they can embed these artificial intelligence based robot hand making food that mimics chef in some restaurants first for display for the customers.

Indian consumers like things that are value for money and also love to experiment and explore in the field that are obscure, just for sake of enjoyment and satisfaction.

Food industry in India is a billion-dollar industry. A little portion of investment on right things can make wonders. On the contrary, waiting for the opportunity and doing nothing will gain nothing but more competitors in the market with same concept in the future.

**VIII. EXHIBITS**

**1. Backend Process**



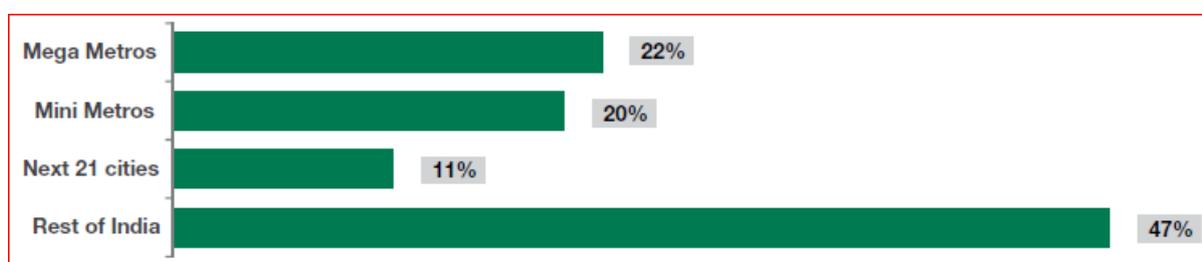
## 2. Market Share and Growth

	Market Share (2013)	Market Share (2017)	Market Share (2022 P)	CAGR (2013 – 2017)	CAGR (2017 – 2022)
Unorganized Market	70%	66%	57%	6%	7%
Organized Market	30%	34%	43%	11%	16%

## 3. Organized- Chained Format’s Market Share and CAGR

Format	Market Share (%)			CAGR	
	FY 2013	FY 2017	FY 2022P	FY 2013-17	FY 2017-22
Casual Dining Restaurants	60%	61%	66%	11%	16%
Quick Service Restaurants	12%	13%	13%	15%	14%
PBCL	15%	14%	12%	8%	11%
Cafés	8%	7%	6%	7%	9%
Fine Dining Restaurants	3%	2%	1.5%	4%	7%
Frozen Dessert/ Ice Cream	2%	2%	1.5%	8%	9%

## 4. City wise Market Share FY 2017 (INR ‘00 CRORE)



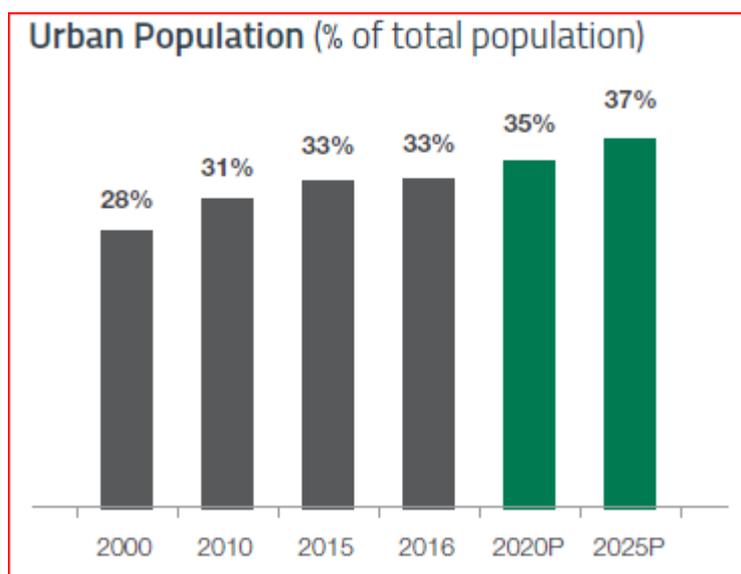
Mega metro cities: Delhi-NCR and Mumbai.

Mini Metro Cities: Ahmedabad, Pune, Chennai, Kolkata, Bangalore, Hyderabad.

21 Cities: Jaipur, Lucknow, Surat, Nagpur, Kanpur, Indore, Patna, Chandigarh, Kochi, Coimbatore, Vadodra, Ludhiana, Nashik, Varanasi, Madurai,

Visakhapatnam, Bhopal, Amritsar, Rajkot, Trivandrum, Goa.

## 5. Increasing Urbanization



## 6. Household Annual Earnings Details

Year	Total House Holds (in Mn.)	HHs with Annual earning USD 5,000 - 10,000 (Mn.)	% of total HHs	HHs with Annual earning USD 10,000 - 50,000 (Mn.)	% share of total HHs
2009	221	34	15.20%	10	4.70%
2012	230	55	23.80%	20	8.70%
2014	236	65	26.50%	24	10.20%
2015	239	74	30.90%	32	13.20%
2018P	249	103	41.20%	73	29.30%

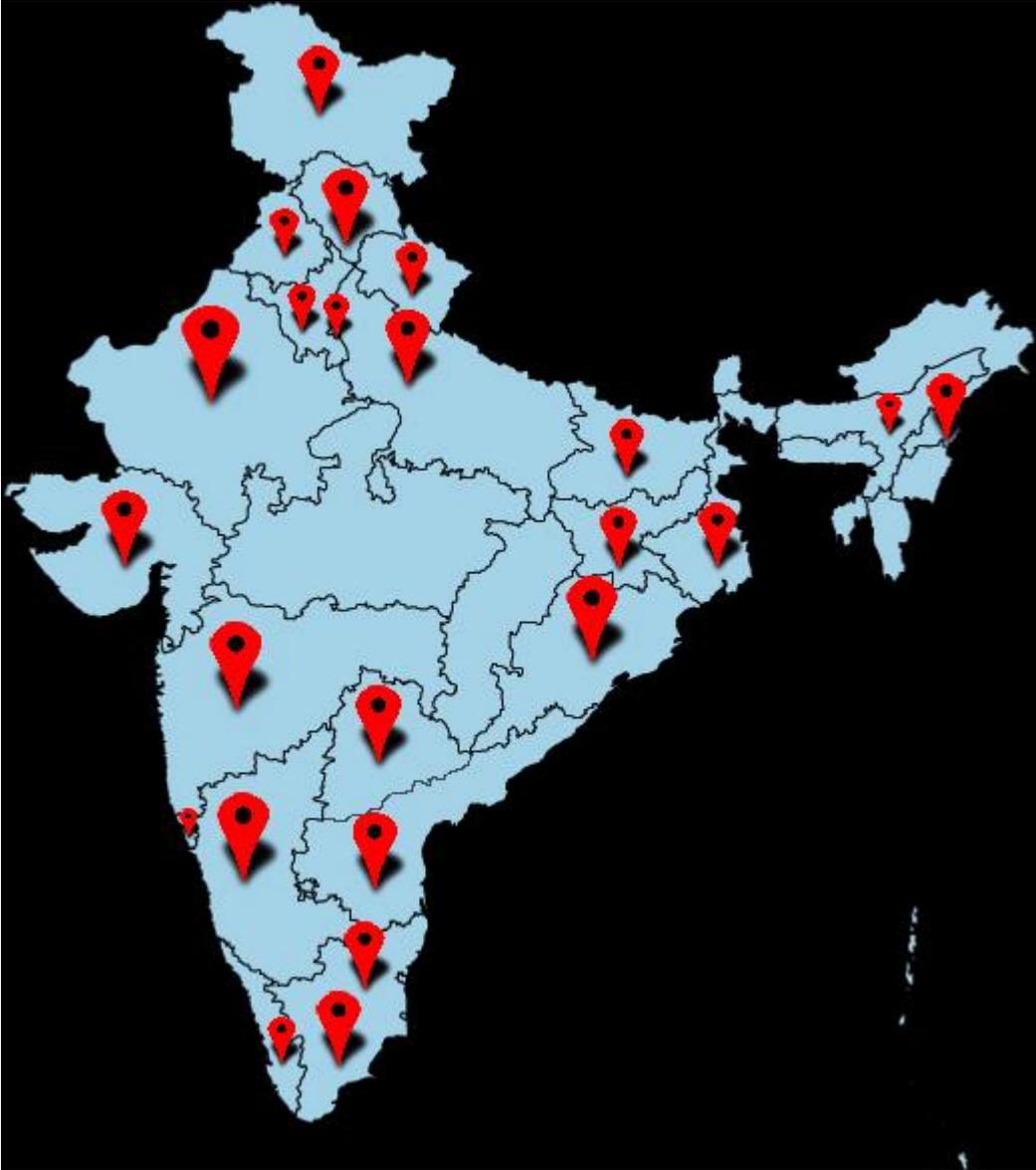
## 7. Indian Household Growth and Trend

Year	Total No. of HHs (millions)	Avg. HH Size	Avg. Urban HH size	Decadal growth rate of HHs	Decadal growth rate population
1981	119	5.5	5.4	19.23%	24.65%
1991	148	5.5	5.3	24.68%	23.79%
2001	187	5.3	5.1	26.28%	21.52%
2011	247	5.1	4.9	32.09%	17.64%

**8. Spending Patterns and Format Preferences among Consumers**

City Type	Avg HH Size	Preferred Formats	Avg Spend per HH per month (INR)	Eating Out Frequency per month per HH
Metros	4.09	QSR (37%) CDR (25%)	6,500 – 6,750	7 – 8
Mini Metros	4.12	QSR (48%) CDR (21%)	4,500 – 4,750	5 – 6
Tier I & II	4.8	CDR (40%) QSR (31%)	2,750 – 3,000	4 - 5

**9. Cities at which Barbeque Nation is in**



## IX. REFERENCES:

1. [Barbeque nation - official website](#)
2. [about barbeque nation - official site](#)
3. [Cities barbeque nation is in](#)
4. [Airtel case study on barbeque nation](#)
5. [Forbes- barbeque nation expansion](#)
6. [Robotic kitchen by Moley Kitchen](#)
7. <https://www.youtube.com/watch?v=k5N9e0KNMt4>
8. <http://www.ritzmagazine.in/band-baja-barbeque/>
9. <http://www.sheknowsgrub.com/barbeque-nation/>
10. <https://vidyascooking.blogspot.com/2017/11/band-baaja-barbeque-barbeque-nation.html>
11. <http://nishitak.com/2017/10/27/band-baaja-barbeque/>
12. <https://timesofindia.indiatimes.com/city/chandigarh/Barbeque-Nation-told-to-pay-Rs17K-to-customer/articleshow/48550638.cms>
13. <https://www.barbequenation.com/storage/app/media/apea-2017-kayum-dhanani-food-hospitality-tourism.pdf>
14. <https://eattreat.in/barbeque-nation-buffets>
15. <https://www.dineout.co.in/delhi/the-great-kabab-factory-saket-south-delhi-189/menu>
16. <http://thegreatkababfactory.com/events>
17. <http://thegreatkababfactory.com/company-profile>
18. <http://thegreatkababfactory.com/concept>
19. <https://timesofindia.indiatimes.com/Restaurant-Review-The-Great-Kabab-Factory/articleshow/45136750.cms>
20. <http://thegreatkababfactory.com/awards>
21. <http://thegreatkababfactory.com/locate-us>
22. <https://www.indiaretailing.com/2016/10/25/food/food-service/inderjeet-banga-to-cook-up-a-storm-in-the-international-market-with-prankster-progressive-nostalgia-cuisine/>
23. <https://www.franchiseindia.com/restaurant/Making-good-food-is-one-challenge-but-consistency-in-food-is-more-important.8509>
24. <https://www.piratesofgrill.com/>
25. <http://indiangrillcompany.com/about.html>
26. <https://www.apnnews.com/swagath-group-entered-into-new-venture-indian-grill-company/>
27. <https://news.franchiseindia.com/restaurant/Swagath-Group-launches-Indian-Grill-Company-in-CP.n8812>
28. <http://www.theweekendleader.com/Success/2622/runaway-success.html>

# **Blue Ocean Strategy in Advertising: Reflection on the Indian Perspective**

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## **Abstract**

This paper aims to address the impact of blue ocean strategy in connection to the Indian advertising scenario. Blue ocean strategy is used to find new areas or horizons in a specific arena where there is minimal competition and hence it carves out a new area for placing a particular idea.

As India is considered as a rising economy and a favorable market for the economically sound consumers, advertising has always remained as an indicator of the preference of a prospective customer. Indian advertising industry has known to churn out some of the finest commercials for the various mediums like televisions, newspapers, billboards and social media. In the recent times, blue ocean strategy has made possible for the customers to view a certain product/service/innovation in a totally new light which in turn could be turned into its USP assigning it a dedicated number of patrons.

In this paper, the focus is to analyze marketing through blue ocean canvas. The references are drawn from industries where companies operate on functionality benefits and try to fight on horse race on who is the best out of them. My paper is on the innovation in advertising, which subdues the tangible benefits of a product/service like technology and cost and operates purely on intangible factors like the emotional experience of the customer, which helps in building of a strong brand.

## **Introduction**

Indian is a versatile country with 179 languages and multiple language wise communication mediums. It is comprising of 29 states and 7 union territories, which is further divided and subdivided into Metros, smart cities, districts, towns and villages. Considering area covering an area of 32,87,590 square kilometers India is world's Seventh Largest Nation and by population

(1,203,710,000 Census Data March 2011 -17% of the world's population) it is world's second largest nation in the world. Indian is an Agriculture based economy and approx seventy percent of Indian population is banking on Agriculture sector. Considering the Economy and purchasing power parity, India stood at twelfth and fourth largest in the world. We can categorize Indian Economic growth on the basis of Four key assets contributing mainly Human Resources (skilled and unskilled labour, well educated, highly disciplined and self motivated) Natural Resources (landbank, minerals, fuels, excellent environmental) Infrastructure (Mechanical production capabilities, Air-water-road Transport) and Technology (science and IT companies, Technical and Managerial institutes)

Key Languages in India are Bengali, Telugu, Marathi, Tamil, Urdu, Gujarati, Kannada, Malayalam, Oriya, Punjabi, Assamese, Maithili etc... These languages are having their own communication medium i.e.

- a) Print : Daily Newspapers, Weekly Newspapers, Fortnightly Newspapers, Magazines with weekly, fortnightly and monthly frequency catering to the needs and wants of Political and General interest, Women centric requirements, Youth centric requirements, Fashion and lifestyle, Education base, Travel and tourism, Entertainment etc. According to the Registrar of Newspapers for India, there are 1,10,851 registered publications in India as of 31st March 2016. This was the key finding of the IRS 2017 report released on 18 January 2018. According to the Report, 39% of Indians (12+ years) read newspapers, and 20% of all newspaper readers in 50 lakh plus population towns read newspapers online.
- b) Radio : In India there were 243 operational FM Radio channels as on 10.03.2016. The ministry of broadcasting in India is setting up more (86) FM Radio to all parts of India by March 2017. All languages are having their own dedicated multiple radio channels
- c) Cinema : India is producing movies in all key languages and these are the key source of entertainment and to raise social issues.
- d) TV (C&S and Terrestrial) : There are currently 857 permitted private satellite television stations in India. As of 2 December 2015, there are also more than 190 government channels. All key languages are having multiple channels in all Genres like General Entertainment Channels, News Channels, Cinema Channels, Music Channels, Sports Channels, Lifestyle, Cookery etc...
- e) Digital Medium : Digital medium is growing by leaps and bounds and after Jio launch in India, this medium is growing in every part of India – Urban as well as Rural

In the current scenario with significant population and economic growth, it is very difficult to reach out target audience through any single media vehicle. Company's are launching products and services and to gain as well as retain market share requires competent media plans to communicate their message or offerings to their primary as well as secondary target audience.

### **Literature Review: What is Blue Ocean?**

The market universe is made out of two sorts of oceans: Red Oceans and Blue Oceans. Red

oceans a known market space which speak to every one of the businesses in presence today, whereas; Blue Oceans mean obscure market space the space where no businesses is presence today. In the red oceans, organizations endeavor is to beat their opponents to get a more revenues from of existing market share. As the market space of red oceans becomes highly competitive for benefits and development opportunities will be less. Blue oceans, conversely, are characterized by undiscovered market space, request creation, and the open door for exceptionally beneficial development. Albeit some blue oceans are made well past existing industry limits, most are made from inside red oceans by extending existing industry limits. In blue oceans, rivalry is unimportant as it is a relationship to portray the more extensive capability of market space that is enormous. Red oceans will constantly matter and will dependably be a reality of business life. To seize new benefit and development openings, they likewise need to make blue oceans.

There are a few main impetuses behind a rising basic to make blue oceans. The pattern toward globalization augments the circumstance. While supply is on the scaling as worldwide rivalry strengthens, there is no reasonable proof of an expansion sought after around the world. In what capacity can organizations efficiently boost the openings while at the same time limiting the dangers of making blue oceans? Obviously, there is no such thing as a riskless system. Methodology will dependably include both happenstance and hazard, be it a red ocean or a blue ocean activity.

The formation of blue oceans is tied in with driving expenses down while at the same time driving an incentive up for purchasers. This is the manner by which a jump in an incentive for both the organization and its purchasers is accomplished. Since purchaser esteem originates from the utility and value that the organization offers to purchasers and on the grounds that the incentive to the organization is created from cost and its cost structure, blue ocean methodology is accomplished just when the entire arrangement of the organization's utility, cost, and cost exercises is legitimately adjusted. It is this entire framework approach that makes the production of blue oceans a feasible procedure. Blue ocean methodology incorporates the scope of an association's utilitarian and operational exercises. In this sense, blue ocean technique is more than advancement. It is about methodology that grasps the whole arrangement of an organization's exercises.

## **Advertising scenario In India?**

### **Pitch Madison Report 2018: An Analysis**

Advertising Industry can be a barometer of a country's progress and it has direct relationship with country's growth. Indian advertising industry is growing year on year and during last ten years it has become an independent industry (table 1.0). Indian advertising industry is estimated as second fastest developing advertising market in Asia afterwards China. It is anticipated that by 2018, Indian advertising industry contribution in India's GDP will be approximately 0.45%.

According to Pitch Media Madison Survey 2017, Indian advertising industry is of INR 53,138 Cr (table 1.0). The report forecasted a growth of 12.03% approx. during 2018. Electronic Media is the leading with 37% market share followed by Print with 35% market share and Digital holds third position with 17.5% market share. Advertising Industry is shifting focus towards this new

medium “Digital” that is why this medium growth rate is maximum. During 2017 Digital advertising increased by 27% with adding INR 2000 Cr. approx. to Advertising expenditures with a total size of INR 9,303 Cr.

The Indian Media and Advertising industry endured the delayed consequences of demonetization and presentation of the Goods and Services Tax (GST), extremely hindering the development of Adex in 2017. Irritating our anticipated development rate of 13.5% for 2017, the industry really developed by just 7.4%, with customary media demonstrating only 4% development. 2018 guarantees to be a superior year, with the economy anticipated that would recuperate and market to grow 12.03%, adding Rs 6,392 crore to Adex to achieve an aggregate size of Rs 59,530 crore

### IBEF Report: Media and Entertainment Industry: An Analysis

The Indian Media and Entertainment (M&E) industry is a dawn division for the economy and is making high development strides. The business has been to a great extent driven by expanding digitisation and higher web use throughout the most recent decade. Web has nearly turned into a predominant press for diversion for a large portion of the general population. The Indian advertising industry is anticipated to be the second quickest developing advertising market in Asia after China. At show, advertising income represents around 0.38 of India's total national output.

# Indian media and stimulation (M&E) industry developed at a CAGR of 18.55 from 2011-2017; and is required to develop at a CAGR of 13.9 to reach US\$ 37.55 billion by 2021 from US\$ 22.75 billion out of 2017.

# The following 5 years will see advance increment and their impact over the business prompting an ocean change in customer conduct over all sections

# Media outlets is anticipated to be more than US\$ 62.2 billion by FY25

# The business gives work to 3.5-4 million individuals, including both immediate and backhanded work starting at 2017.

Over FY 2016-21, radio will probably develop at a CAGR of 16.1, while digital advertising will develop at 30.8 percent. The biggest portion, India's broadcast business, is relied upon to develop at a CAGR of 14.7 percent, while print media is required to develop at a CAGR of 7.3 for percent.

The quantity of daily paper perusers in India has expanded by 38 percent between FY 2014 and FY 2017 to achieve 407 million.

India is one of the most highly spending and fast developing advertising market all inclusive. The nation's use on advertising is relied upon to develop at 12.1 percent to Rs 68,334 crore (US\$ 10.59 billion) before the finish of 2018. Versatile promotion spending in India is evaluated to develop to Rs 10,000 crore (US\$ 1.55 billion) before the finish of 2018. The Foreign Direct Investment (FDI) inflows in the Information and Broadcasting (I&B) part (counting Print Media) in the period April 2000 – September 2017 remained at US\$ 6.86 billion, according to information discharged by Department of Industrial Policy and Promotion (DIPP).

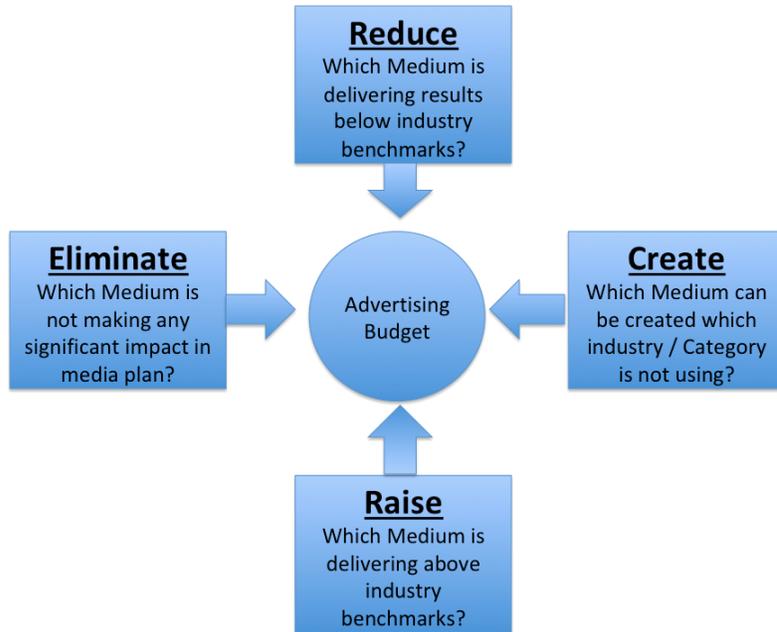
### **Clients preferential Advertising Medium?**

TV keeps on being the biggest supporter of Adex with 37% offer, however it developed by only 4.3%, nearly took after by Print at 35% offer, yet with even lower development of only 2.7%. Digital, that developed by 27.2%, now contributes an incredible 17.5% to Indian Adex. Digital medium picked up 3% from Television and Print mediums, which lost 1% and 2%, share focuses separately. Whereas, Radio, Cinema and Outdoor have all developed at a significantly speedier pace than Television and Print, and kept up their offer in 2017.

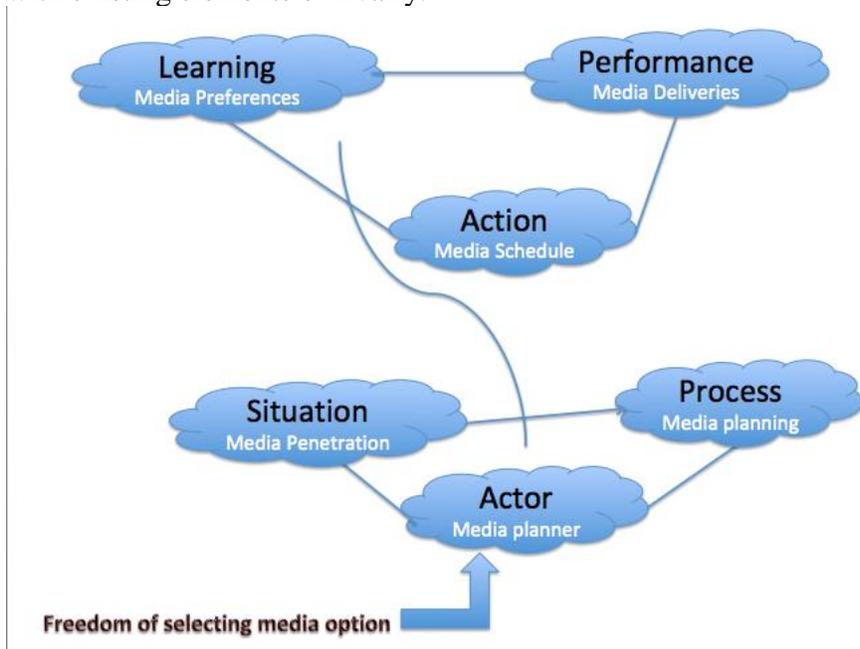
FMCG keeps on being the biggest spender with a 32%, followed by Auto at 10%, Telecom at 8%, Online business at 4%, Real Estate and Home Improvement has enrolled a negative growth of - 3%.

### **Integration of Blue Ocean Concept in Indian Adverting Industry**

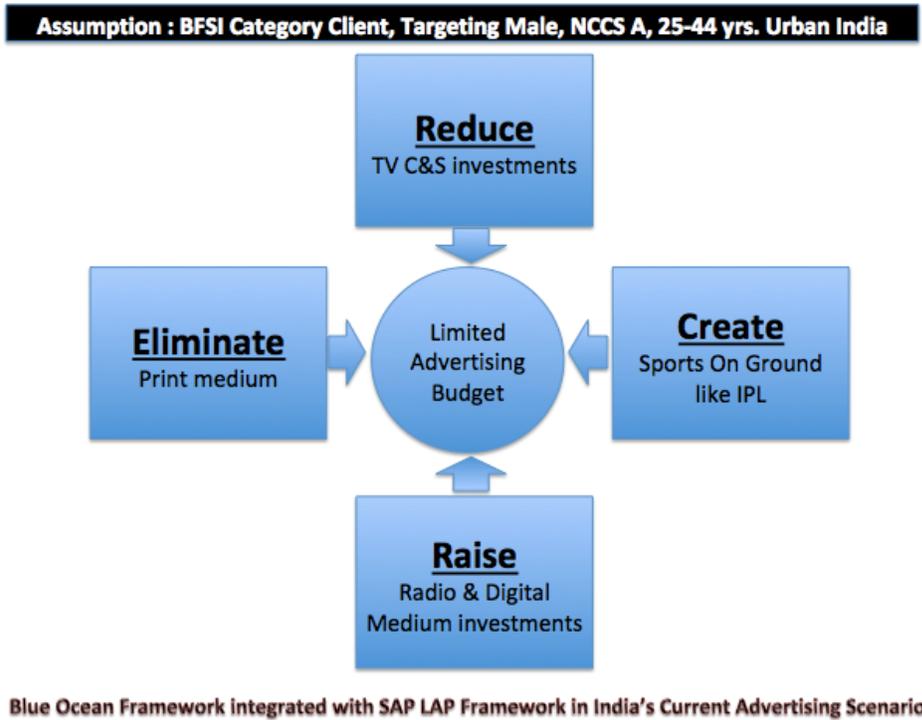
The principal question influences an organization to study taking out variables that organizations in an industry have since quite a while ago resisted on. Frequently those variables are underestimated despite the fact that they never again have value or may even bring down value. We have noticed that there is a significant change in what purchaser's value, yet organizations that are centered on benchmarking each other don't follow up on, or even see, the change. The second investigation influences an organization to decide if objects has been over-composed in the competition to match and beat the opposition. Here, organizations over-serve clients, expanding their cost structure for no pick up. The third inquiry pushes an organization to reveal and dispense with the bargains industry powers clients to make. The fourth inquiry encourages an organization to find totally new wellsprings of significant worth for purchasers and to make new request and move the key valuing of the business.



It is by seeking after the initial two examinations that an organization picks up knowledge into how to drop its cost structure opposite contenders. Seldom do supervisors efficiently set out to kill and lessen their interests in factors that an industry contends on. The outcome is mounting made structures and complex plans of action. The second two components by differentiate, give an organization understanding into how to lift purchaser value and make new request. All in all, they enable an organization to deliberately investigate how it can recreate purchaser esteem components crosswise over elective businesses to offer purchasers a completely new affair, while all the while keeping its cost structure low. Of specific significance are the activities of disposing of and making, which push organizations to go past esteem amplification practices with existing elements of rivalry.



On the basis of Blue Ocean Theory and SAP-LAP Framework, we have worked out media mix for BFSI category. This category is operating with very limited budget and targeting: Male audience with higher Socio Economy Classification with age group of 25 years to 44 years and living in urban India. Keeping the clients segment, budget limitations and current Indian Advertising scenario in consideration we are recommending the following media mix:



## Conclusion

The frameworks and tools used keeping the current Indian advertising scenario in consideration introduced here are structured analytics with significant flexibility. With the help of this theory, companies can create disruption from the current competitive situation and open up Blue Oceans of new market space. The market universe has never been steady; rather, blue oceans have constantly been made after some time. To center on the red ocean is in this manner to acknowledge the key constraining variables of rivalry—restricted market space and the need to beat the foe with a specific end goal to succeed and to negate the distinguishing strength of the business world. This linkage helps the clients to optimize their advertising budget while keeping a tab on Market Situation, developing Actors and process for better market learning which prompt to accurate actions and finally leads to optimize performance.

## **References**

# <http://www.printweek.in/news/registered-publications-grew-358-2016-2017-rni-report-27547>

# <http://www.printweek.in/news/registered-publications-grew-358-2016-2017-rni-report-27547>

# [https://en.wikipedia.org/wiki/List\\_of\\_newspapers\\_in\\_India\\_by\\_readership](https://en.wikipedia.org/wiki/List_of_newspapers_in_India_by_readership)

# [http://rni.nic.in/\(S\(cf1nbntgaohig0wpfwl0bkng\)\)/default.aspx](http://rni.nic.in/(S(cf1nbntgaohig0wpfwl0bkng))/default.aspx)

# <https://www.ibef.org/industry/media-entertainment-india.aspx>

# <https://home.kpmg.com/in/en/home/events/2017/03/kpmg-india-ficci-media-entertainment-report-2017.html>

# [https://en.wikipedia.org/wiki/FM\\_broadcasting\\_in\\_India](https://en.wikipedia.org/wiki/FM_broadcasting_in_India)

# [https://en.wikipedia.org/wiki/Lists\\_of\\_television\\_stations\\_in\\_India](https://en.wikipedia.org/wiki/Lists_of_television_stations_in_India)

# Blue Ocean Strategy: From Theory to Practice Author: W. Chan Kim and Renée Mauborgne, Springer 2005, Vol 47, No 3, © 2005 by The Regents of the University of California

# Investigating the Patterns of Value-Oriented Innovations in Blue Ocean Strategy™ Authors: Yuri Borgianni<sup>1</sup>, Gaetano Cascini<sup>2</sup>, Federico Rotini<sup>1</sup>, <sup>1</sup>Università di Firenze, Dipartimento di Meccanica e Tecnologie Industriali, Florence, Italy, <sup>2</sup>Politecnico di Milano, Dipartimento di Meccanica, Via Lambruschini, Milan, Italy, [yuri.borgianni@unifi.it](mailto:yuri.borgianni@unifi.it), [gaetano.cascini@polimi.it](mailto:gaetano.cascini@polimi.it), [federico.rotini@unifi.it](mailto:federico.rotini@unifi.it)

# The Strategic Model of Innovation Clusters: Implementation of Blue, Ocean Strategy in a typical Greek Region, Authors: Dimitrios Bourletidis, National and Kapodistrian, University of Athens, Financial Directorate, 6 Chr. Lada Street, 10561 Athens

# Journal of Business Strategy, Value innovation: a leap into the blue ocean, Authors: W. Chan Kim, Renée Mauborgne,

# SAP-LAP Linkages – A Generic Interpretive, Framework for Analyzing Managerial Contexts, Sushil, Department of Management Studies, Indian Institute of Technology Delhi, [sushil@dms.iitd.ac.in](mailto:sushil@dms.iitd.ac.in)

# SAP-LAP Framework, Sushil, Department of Management Studies, Indian Institute of Technology Delhi, Global Journal of Flexible Systems Management; Jan-Mar 2001; 2, 1; ABI/INFORM Global

# Pitch Madison Advertising Report 2018

## Tables (Pitch Madison Advertising Report 2018)

### 1.0 Indian Advertising Market: All Mediums

INDIAN ADVERTISING MARKET OVER LAST 8 YEARS								
Year	2010	2011	2012	2013	2014	2015	2016	2017
Spends (in Cr)	25026	27433	28854	32106	37405	43991	49480	53138
Growth%		9.60%	5.20%	11.30%	16.50%	17.60%	12.50%	7.40%

# The advertising Industry lost Rs.1650 Cr in Nov & Dec 2016 on the back of demonetization

### 1.1. Indian Advertising Market: Medium wise Details

INDIAN ADVERTISING MARKET OVER LAST 2 YEARS					
Medium	2016		2017		Growth
	Spend	Share %	Spend	Share %	
TV	18831	38	19650	37	4.30%
Print	18151	37	18640	35	2.70%
Radio	1749	4	1875	4	7.20%
Cinema	523	1	586	1	12%
Digital	7315	15	9303	18	27%
Outdoor	2910	6	3085	6	6.00%
<b>TOTAL</b>	<b>49479</b>		<b>53139</b>		<b>7.40%</b>

### 1.2. Indian Advertising Market: TV Medium Details

TV ADEX - 5 YEARS TREND					
Year	2013	2014	2015	2016	2017
Spends (in Cr)	12419	14158	17261	18831	19650
Adex Share	38.7%	37.9%	39.2%	38.1%	37.0%
Growth%		14%	22%	9%	4%

### 1.3. Indian Advertising Market: Print Medium Details

PRINT ADEX - 5 YEARS TREND					
Year	2013	2014	2015	2016	2017
Spends (in Cr)	13167	15274	16935	18151	18640
Adex Share	41.0%	40.8%	38.5%	36.7%	35.1%
Growth%		16%	11%	7%	3%

### 1.4. Indian Advertising Market: Digital Medium Details

DIGITAL ADEX - 5 YEARS TREND					
Year	2013	2014	2015	2016	2017
Spends (in Cr)	3050	3970	5120	7315	9303
Adex Share	9.5%	10.6%	11.6%	14.8%	17.5%
Growth%		30%	29%	43%	27%

# In 2017, Digital Adex grew by 27%.

# Third Highest contributor after Print & TV.

# Digital Medium spends 205% in last 5 Years Rs. 3050 Crs to Rs. 9303 Crs

# Case Study

## JW MARRIOTT

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There has been a drastic change in the way the new millennial are spending their money – more than materialistic things, they are investing in holidays, vacations and travel with friends, family or alone! This is changing the dynamics of the tourism industry and impacting the hotel and lodging. While Marriott is leading the industry post the merger with Starwood and acquiring hundreds of properties across the globe, a huge threat looms with the growth of AirBnB. AirBnB is offering a range of services from top end luxury to economical options – from sea side villas to a cosy apartment right in the heart of the city –becoming the most sought after option for travellers across various nations. Marriott would need to deal with this challenge apart from tackling with the threats of a slow- down in economy and continuously working on various innovations to be the leader and the game changer in the industry.

Marriott International, Inc. is a leading global lodging company with more than 6,000 properties in 122 countries and territories and generating revenues of more than \$17 billion in fiscal year 2016. It was founded by J. Willard and Alice Marriott and has been guided by family leadership for almost 90 years with their headquarters in Bethesda, Maryland, outside Washington, D.C. The company currently has over 10,000 employees across the globe. It was the hot summer in 1927 when founder J Willard Marriott and his wife Alice started off a tiny business of serving root beer and gradually adding hot food to the menu, with top focus on service, great food and excellent service. Ten years later, they ventured into in-flight airline catering and delivered lunchboxes to passengers at Hoover Airport (Washington, DC). In 1957. Thirty years from when they started serving beer, Marriott finally moved into the hotel business and the first JW Marriott hotel opens in Washington DC in the year 1984.

They ventured into the Indian market in the year 2013, by opening their first hotel in Bengaluru. This was followed by properties across Chandigarh, Mumbai, Pune, New Delhi, Kolkata, Jaipur, Hyderabad and Mussoorie. Post the merger with SPG in India, Marriott has 84 properties spread across 15 brands within the country which are: The Ritz Carlton, W Hotels, Renaissance Hotel, Le Meridian, St. Regis, JW Marriott, Marriott Hotels and Westin. The company plans to increase the brand across the top metros along with focussing on the Tier 2 and Tier 3 cities. As per Tina Edmundson, global brand officer, Marriott International, India remains an important market and the company plans to open more than 80 more hotels in the coming year.

With the guests being more global, better travelled and connected than what it was many years ago – the requirement is very high to focus on LUXURY – making it less formal & more personal. There has been a massive growth of International tourism in India (2017 it was reported to be 11% higher) which leads to the demand of having such hotels and focussing on improving their luxury brand quality.

### **Marriott in India**

In the past few years, a clear change in the mind-set of the Indian population has been noticed with regards to luxury and craftsmanship. Today, a good percentage of the people appreciate these aspects, be it within the vicinity of a hotel or otherwise. While Marriott has about 100 operating hotels in India, they plan on expanding the same in the years to come, as they recognise India as an essential component of their growth and development strategy. From 15 varied brands ranging from economy, to luxury and premium, Marriott has aimed well at tier 2 and tier 3 cities. It goes without saying that the hospitality industry successfully survived the disorder and disruption caused by demonetisation and the GST policy. This is clearly reflected by the numerical facts and figures about Marriott and other such hotels, during this period. Their future pipeline is equally strong and well planned, as they plan to open many more hotels as part of their luxury collection in the coming 5 years.

### **Marriott and its Competitors**

#### **Marriott vs. Hyatt**

Marriott is a leading world class brand among the hotel business but when compared to its one of the biggest competitors Hyatt, it lags behind in few aspects as surveyed among the employees of both the

chains. Departments at Marriott like **Admin** and **Executive** rate their CEO 76/100 which is 4% lower than Hyatt hotels. Employees at Marriott rate their overall culture 69/100 with **Executive** and **Admin** departments rated highest while at Hyatt Hotels corporations rate their culture 76/100 with **customer support department** rating their experience the highest. Gender score at Marriott is 72/100 as rated by employees which are 1% less than Hyatt Hotels Corporation. Diversity score at Marriott is 71/100 with **Sales** and **Admin** departments rated themselves highest which is 17% less than Hyatt's ratings. Although, Marriott lags behind Hyatt by few % in terms of leadership culture ratings, compensation culture ratings and team culture ratings but they surely are a winner when compared to Hyatt Hotels Corporation in terms of Environment Culture ratings. Such ratings come from questions like 'What needs to be done to improve company culture?' And 'on an average how many hours do you work every day?' Marriott again proves to be winner by 1% in terms of sentiments culture ratings which is achieved by asking questions like 'Are you typically excited about going to work every day?' and 'How confident are you about the growth of the company in future?'

### **Marriott vs. Hilton**

On comparison to Hilton hotels, Marriott proves to be a winner in all aspects as reported by employee survey. Marriott's CEO is rated 76/100 by their employees which is 3% higher than the employee rating of Hilton hotels. Overall culture at Marriott is rated 69/100 with **Executive** and **Admin** departments rating themselves highest which is again 2% higher than the ratings of Hilton where **Marketing** and **Engineering** rate their experience the highest. Similarly, Marriott leads in areas like Gender score, Diversity score, culture rating, compensation culture rating and team culture ratings as compared to Hilton Hotels. Also, Marriott is a winner in areas like Environment culture ratings which comes from questions like 'What's positive about work culture in your company' and 'What needs to change to make the company culture better?' and sentiment culture ratings which is achieved from questions like 'How confident are you about future growth of the company' and 'what makes you most happy at work?'

Marriott can improve its existing operations and profits or say earnings by \$200 million by sell off units for next two years. Sustainable Operations, Improved loyalty program and selling underperforming units is the way ahead to gain competitive advantage among the top leaders. Marriott will increase its net income from \$1.3 billion plus \$4.6 billion one time cash inflow from selling underperforming hotels. Marriott closely competes with Hilton for business travellers but does little to differentiate. Loyalty membership programs are easy to replicate & largely affect what hotel brand the travellers patronize. 76% men and 79% women value express check-in/check-out services which must be implemented by Marriott to cater to business travellers' demand for efficient and fast services. Now a days in such a fast paced life, customers' demands for check-ins via smartphones, receive room number instantly, hotels desk programs room to match your permanent card and skip the desk and directly go to your room. Implementation of refer a friend program is likely to drive demand for Marriott hotels. The kind of Hotel industry giant Marriott hotels are, they are likely to surpass the lagging areas with risk mitigation strategy and operational efficiency.

### **Marriott vs. Taj Hotels Resorts & Palace**

Marriott dethroned Taj, the homegrown hotel brand post its global acquisition of starwood. Since Marriott's entry in Indian market in 1990, they have 18000 rooms in its portfolio as against Taj's 14000. The starwood purchase has just doubled their footprint. It leads in market in terms of rooms but lags behind in terms of no of hotels (Taj). Taj has 108 hotels in country in comparison to Marriott's 79

post acquisition. Out of 85 million combined membership base of Marriott & starwood rewards members, 1.5 million are based in India. Taj Hotels & resorts have old architecture & fall in the category of heritage hotels whereas JW Marriott has modern architecture. Also, the core competition ground between the two is the loyalty program that each of them offers.

Hotel	Revenue
Marriott	\$22.9b
Hyatt	\$4.69b
Hilton	\$9.14b
Taj	\$730million

### Marriott Social Media Influence

Marriott has a huge fan base and following, if we talk about comparison among top hotels on Facebook. Going by the social media report, Marriott has the largest fan base with Marriott's page having over 1 million likes. Also, Marriott international has its own private social media community 'Marriott Reward Insider'. Here Marriott enthusiasts and helpful people can answer each other's travel related questions, add hotel reviews and post travel pictures. Online community boasts about over 40,000 members engaging over 10,000 groups, discussions and hotel reviews.

### Gaining advantage through innovation!

Last year Marriott was titled as one of the most Innovative companies of the world alongside big names like Amazon and Netflix. It is true that Marriott faces immense competition and has to constantly keep up with the changing trends in order to sustain its place at the very top of the list and it has done exactly that. Innovative ideas and creative ideologies are among the key pillars of Marriott's existence.

To begin with, the Marriott launched its **mobile application** in order to provide the customers with a diverse range of online services, from mobile check-ins and mobile keys to meeting management and planning. Marriott engages with the audience through its **digital platforms** by posting engaging and creative-content.

After the Starwood acquisition, the hotel propagated a **reward scheme** that enabled the participants of the loyalty programmes across both Marriott and Starwood hotels to link their accounts and redeem their respective points to book accommodations. This is a perfect example of how flexibility and efficiency is incorporated in an organisation. It goes without saying that Marriott has been on top of the game on the technology front by adapting the above ideas and bringing them into operation.

Marriott's **Inspiration Collective** is one of their most recent innovations. It is an interactive display that showcases a range of cutting edge products and services so that the customers get to experience them both digitally and physically. These aesthetically pleasing displaces promote creativity and originality. It is in association with Fast Company, which decided as to which products, place and experiences should go on the Inspiration Collection so that the maximum number of customers gets inspired by it.

Marriott also launched **innovation labs** that create interactive models to help the industry professionals, the hotel customers and the general public to touch, taste and hear experience the unique aspects that Marriott will be bringing into action, in the times to come. This includes exclusive and innovative room designs, personalised food-beverage programmes and other technologically driven aspects like automatic portable bars.

Marriott has always made attempts to ensure that it is well connected with its customers and stays close to their hearts. **Shaadi by Marriott** is another such attempt, and surely a creative one. Marriott has started extending matrimonial arrangement services by organising dream like weddings for its customers. The weddings that are crafted are truly unforgettable and luxurious. From high-end designers to unique venues and endless cuisines, the wedding events arranged by Marriott are truly glamorous.

Marriott has been extremely successful in bringing about innovation in its operations, be it on the technical side or on the creative front. It has contributed significantly in changing and modifying the face of the premium hotel industry. *“Innovation checks in at Marriott”... every now and then!*

### **Manchise Model in Marriott**

Manchise is a business model which is now catching up in the hospitality industry – it is essentially an alternative for management and a hybrid between a franchise and the management. This leads to a model where the owners have a much higher involvement post an operator runs a hotel for the initial few years. This was a model that was experimented and was successful in China and now being adopted by Marriott in India.

When the brands do not perform as per the expectations of the owners, the owners take the lead and have a say in the day to day operations. It’s a middle ground where the brand and the owner both have control over the operations. Marriott is adopting the approach for the budget and economy brands such as Four Points / Fairfield as it’s a very lucrative model with the owners having a say and control (not fully) in the day to day operations.

In the franchise model, the brand charges a franchise fee to the owners and are not responsible for the operations of the hotel. This is different from the management model where the owners have little or no say in the way the hotel runs and the brand manages all operations for a management fee. The manchise model wins above both these and is extremely beneficial for both parties.

### **Current and forthcoming Challenges**

Though Marriott seems a leader in hospitality industry but sense of luxury and comfort is continuously evolving in the mind of holidaymaker and they always look for fresh and exciting stay. To meet out with such kind of customer expectations is one of the biggest challenges the big hospitality brands are facing.

The current and fast growing apparent threat for not only Marriott but overall hospitality industry is, of course the fast moving growth of Airbnb and other home-sharing formulas that permits holidaymaker to book local properties. Founded in 2008, Airbnb start-up with disruptive in nature has expanded vastly and recorded over 160 million accommodations and they have listings of more than 3 million properties worldwide and reached to 65,000 cities. Recently Airbnb was valued with \$31 billion

market value by their investors which stand \$7 billion more than Hilton. Interestingly in hospitality industry, only the Marriott's market value of \$40 billion is bigger than Airbnb. Airbnb seems a direct mortal threat and couldn't be overlooked.

There is another warning sign coming for Marriott through Online Travel Agents pressurising the industry than ever before. Online Travel portal like Expedia provides more than 390000 properties with instant comparison. Now Online Travel Agents gulping much more bookings share on a bigger scale.

### **Marriott Plan – Winning over Airbnb**

To deal with increasing threat of Airbnb and OTA's, Marriott desired to be the next Airbnb itself by launching of new apps and other related services to enhance the guest experience. They seem ready to make big changes to defy the danger of disruptive Airbnb. Marriott has channelled with Silicon Valley start-ups to develop new apps and services to create more personalized and seamless experiences for the guests. Now the guests can make a hotel reservation through Facebook Messenger also. Personalized services were introduced and Concierge Robots are ready to deliver fresh towels to the guest. For the convenience of the customers, the mobile app facility was made available to help them avail all the benefits and activities that the hotel has to offer. Subsequently Marriott launched reward extension for popular messaging apps like Facebook messenger, Slack and WeChat. Keeping in mind the selective nature of the guest, portfolio of distinctive properties has been created. To give the customers a divine, heavenly and serene experience, lifestyle hotel have been exclusively designed.

One of the hotels owned by Marriott - "Aloft" added Robots called "Botlr" to its concierge staff to provide towel, toothbrush, coffee or any other room services to the hotel guest. "Botlr" were equipped with 3D cameras and sensors to increase efficiency. In this way Botlr helps the other hotel employees to focus on more important tasks. Marriott's next move was the launching of PlacePass "a tour and travel experience search engine" proved to be one of the major strategic investments to keep their guests intact.

To beat the disruptive Airbnb, Marriott announced partnership with Alibaba, a Chinese e-commerce portal. This new venture manages Marriott's "Storefront" on Fliggy, an Alibaba travel service section. On the other hand, the hotel operator also has opportunity to access 500 million Alibaba's active user's profile. Services of Alipay, a Chinese digital payment platform, engage the customer and provide easy payment option with loyalty programs. Together in the Chinese market, they are making some solid gains.

### **The Way ahead**

Airbnb and other room sharing- portals established themselves as a big competitors to the giant hospitality industry including Marriott, Hyatt & Hilton. Arne Sorenson, the CEO of Marriott, wanted Marriott to be the next Airbnb and this may prove to be a key strategy in the industry. As an alternative to Airbnb, Hyatt Hotels announced big investment in an international room sharing service an "Oasis". All of Marriott's moves, from their reward scheme to loyalty programs, personalized services and introduction of Robots seem to be a spectacular ideas. Further they needed to analyse more and adopt strategies to tackle with the disruptive upcoming threats. Insights of Airbnb and other room sharing

service portals are widely open hence joint ventures with similar kind of portals should be a part of the expansion plan of Marriott.

Although Marriott itself has been on top of the game, “If you can’t win over them, joint hands with them” – this kind of a strategic move might help the rest of the hotel industry in totality, given the current scenario. Collaboration with Airbnb and other room sharing services can be a welcoming move to grow together. Alliances and Partnership business models, without crossing over, can also be a profitable strategic affair for the players to penetrate the market further so they can join hands together and test the waters.

## Exhibits:

### Exhibit 1 – Growth Profitability and Financial Ratios

<b>MARRIOTT</b>	<b>2011-12</b>	<b>2012-12</b>	<b>2013-12</b>	<b>2014-12</b>	<b>2015-12</b>	<b>2016-12</b>	<b>TTM</b>
<b>Revenue USD Mil</b>	12,317	11,814	12,784	13,796	14,486	17,072	22,475
<b>Gross Margin %</b>	10.4	13.7	13.8	14.3	14.7	15.4	16.1
<b>Operating Income USD Mil</b>	526	940	988	1,159	1,350	1,368	2,230
<b>Operating Margin %</b>	4.3	8	7.7	8.4	9.3	8	9.9
<b>Net Income USD Mil</b>	198	571	626	753	859	780	1,415
<b>Earnings Per Share USD</b>	0.55	1.72	2	2.54	3.15	2.64	3.66
<b>Dividends USD</b>	0.39	0.49	0.64	0.77	0.95	1.15	1.26
<b>Payout Ratio % *</b>	62.5	28.4	28.9	31.5	29.4	39.1	34.4
<b>Shares Mil</b>	362	332	313	297	273	295	386
<b>Book Value Per Share * USD</b>	1.28	-4.13	-4.73	-6.5	-14	14.96	12.38
<b>Operating Cash Flow USD Mil</b>	1,089	989	1,140	1,224	1,430	1,582	2,292
<b>Cap Spending USD Mil</b>	-257	-690	-465	-476	-426	-279	-376
<b>Free Cash Flow USD Mil</b>	832	299	675	748	1,004	1,303	1,916
<b>Free Cash Flow Per Share * USD</b>	2.04	0.93	1.31	2.58	3.17	4.48	
<b>Working Capital USD Mil</b>	-1,234	-1,298	-772	-1,139	-1,849	-1,776	

### Exhibit 2 – Outlook Reports

## 2.1 Marriott's Outlook Report – FY2018

### 2018 Full Year Outlook Both Including and Excluding the Impact of the New Revenue Standard

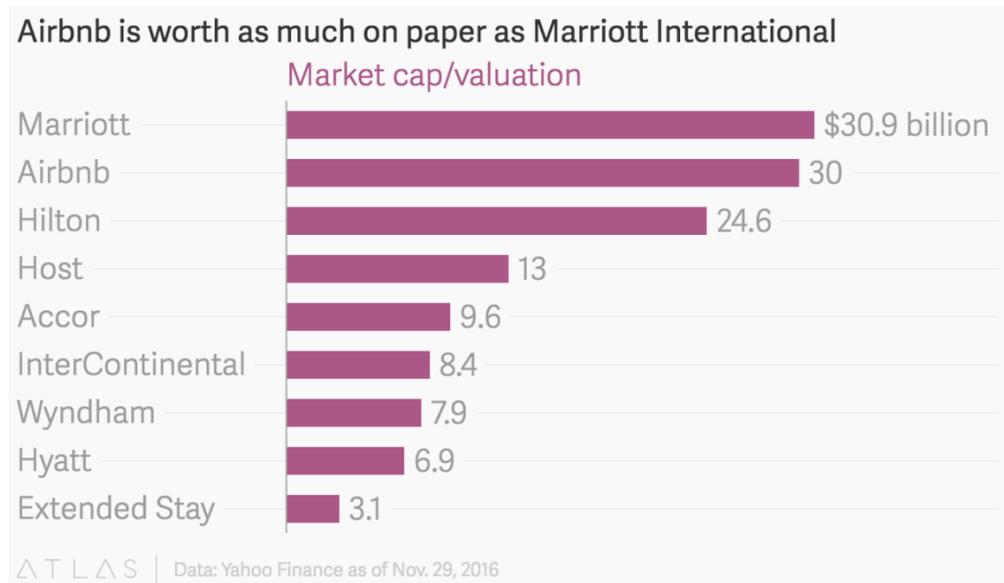
	<u>Full Year 2018 Outlook<sup>1</sup></u>	<u>Full Year 2018 Excluding the Impact of the New Revenue Standard<sup>1</sup></u>
Fee revenues	\$3,535 million to \$3,620 million	\$3,560 million to \$3,645 million
Contract Investment Amortization	Approx. \$55 million	Approx. \$0
Owned, leased, and other revenue, net of direct expenses	\$285 million to \$295 million	\$310 million to \$320 million
Depreciation, amortization, and other expenses	Approx. \$230 million	Approx. \$295 million
General, administrative, and other expenses	\$935 million to \$945 million	\$925 million to \$935 million
Operating income	\$2,590 million to \$2,695 million	\$2,640 million to \$2,745 million
Gains and other income	Approx. \$45 million	Approx. \$45 million
Net interest expense <sup>2</sup>	Approx. \$305 million	Approx. \$305 million
Equity in earnings (losses)	Approx. \$40 million	Approx. \$40 million
Earnings per share <sup>3</sup>	\$5.11 to \$5.34	\$5.22 to \$5.45
Tax rate <sup>4</sup>	22 percent	

## 2.1 Marriott's Outlook Report – Q4 2017 and FY2017

<u>Fourth Quarter 2017</u>	<u>Full Year 2017</u>	
Total fee revenue <sup>1</sup>	\$825 million to \$835 million	\$3,287 million to \$3,297 million
Owned, leased, and other revenue, net of direct expenses <sup>1</sup>	Approx. \$90 million	Approx. \$367 million
Depreciation, amortization, and other expenses	Approx. \$70 million	Approx. \$288 million
General, administrative, and other expenses	\$240 million to \$245 million	\$877 million to \$882 million
Operating income	\$600 million to \$615 million	\$2,485 million to \$2,500 million
Gains and other income	Approx. \$0 million	Approx. \$31 million
Net interest expense <sup>2</sup>	Approx. \$65 million	Approx. \$257 million
Equity in earnings (losses)	Approx. \$5 million	Approx. \$34 million
Earnings per share <sup>3</sup>	\$0.98 to \$1.00	\$4.22 to \$4.24
Tax rate <sup>4</sup>	33.2 percent	30.2 percent

### Exhibit 3 - Marriott v/s Airbnb (and other competitors)

### 3.1 Market Valuation



### 3.2 Largest Lodging company



#### References and Sources:

<https://seekingalpha.com/article/4048675-marriott-ready-face-2017-challenges>

<https://economictimes.indiatimes.com/industry/services/hotels/-/restaurants/marriott-international-puts-in-place-new-leadership-structure-in-india/articleshow/55949575.cms>

<https://www.hindustantimes.com/brunch/what-indian-hoteliere-are-made-of/story-fDtSce8tdZDMKIjcCFaNP.html>

<http://fortune.com/2017/06/14/marriott-arne-sorenson-starwood-acquisition-airbnb/>

<https://www.businessinsider.in/The-worlds-biggest-hotel-chain-is-making-big-changes-to-defy-the-threat-of-Airbnb/articleshow/60858558.cms>

<https://thepointsguy.com/2017/11/airbnb-letter-to-marriott-ceo/>

<https://finance.yahoo.com/news/marriott-plans-beat-airbnb-winning-chinese-travelers-195925764.html>

<https://www.curbed.com/2017/10/12/16466882/hotel-airbnb-hyatt-oasis-collection-hospitality>

<http://businessworld.in/article/-India-Is-An-Extremely-Important-Market-In-Our-Global-Growth-Strategy-/18-10-2017-128959/>

<https://www.orbitalshift.com/blog/top-5-challenges-hospitality-industry-2018>

# A Case Study on Sleepy Owl Coffee: An Innovative Make-In-India Cold Brew Coffee Start-up

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## ABSTRACT

2016 the concept of Coffee Brewing saw a revolution, when three lawyer friends passionate about their coffee, invented the ideal coffee brand “Sleepy Owl”, which was easy to get , store and drink anytime, anywhere, blended to absolute perfection. They quit their jobs and put in all consistent efforts over a year and made a delicious concoction that would stay fresh for a long time.

Their signature nutty flavour, which was directly sourced from farmers from Chikamagalur, using single-origin Arabica beans have been the best beans in India. Delivering the passionately made coffee into environment friendly brown cardboard boxes at doorsteps that can be stored safely from heat and light, made everyone count on their credibility and getting tremendous customer reach.

Today, their umpteen distinct and innovative coffee recipes, have made people engage into several coffee experiments. They have made way into the hearts of the common man to the celebrities. The USP being made on demand in small batches with no added preservatives, just pure coffee.

In spite of the huge demands, the timely delivery and intact quality, is becoming popular and exponentially growing in demand overseas. But there is a long way to go with existing Coffee Brands, pitching up new technology and trying to sweep the coffee lovers giving a cutting edge competition to Sleepy Owl.

**Keywords:** Indian start-ups, coffee, cold brew, hot brew, beverage, flavours, coffee beans, Arabica, Make in India

## HISTORY

From “A lot can happen over coffee” to waking up to your favourite cup of coffee is something everyone relishes in the modern world. People have attributed coffee to be a brain charger that toggles the mind cells and keeps them alive. Some even say that a great cup of coffee can actually act as the Rock of Gibraltar to tackle any kind of a day. Be it students burning the midnight oil or working professionals rattling the grey matter of their brains, coffee has been

proven to be everyone's productivity partner. Indeed Good Coffee is like Good Wine and the taste develops with persistent addiction.

India is the fifth largest province to grow coffee in the world and that too with such supreme quality that the Arabica Beans from Karnataka are in high demand across the globe, yet the Indian market never had great coffee served to the consumer. [Refer Figure 4]

Enough competitors have been seen in the Indian Coffee Market, right from the instant coffee that everyone savoured by Nescafe that perhaps was the only International coffee taste available almost a decade ago. Some even relished the South Indian Filter coffee which still continues to be the one of its kind in its league.

When people wanted to taste a premium foamy and frothy version of cappuccino or typical espresso, they used to approach restaurants until in the 1990's when Barista and other chains started their business in India and gave the "fancy coffee" a birth.

From using Lavazza Coffee Machines that seemed a pricy affair, made most Indian middle class families be content with their at home coffee.

Keeping in mind the very love for coffee, a group of bankers and lawyers who had long days at work and sometimes arduously tiresome nights and drained weekends spent on their jobs, the only elixir that kept them going was coffee. Ajai Thandi an investment banker at JP Morgan, New Delhi, met friend Ashwajeet who proposed him the idea of starting up a company that brews cold coffee in India. Just like cold pressed juices are made hygienically and keeping the nutrient value intact, the same idea was used with Cold Brew coffee that otherwise was hot brewed in India. The idea seemed to light a bulb in Ajai and Ashwajeet's mind who roped in another friend Arman Sood and thus, the trio led to the inception of SLEEPY OWL.

Sleepy Owl is actually an oxymoron to staying up in the night which can be associated to both coffee and owls. But to remain awake and infuse insomnia, coffee comes to the rescue. It has been a favourite phrase amongst the consumers who have tried their heavenly creation. Actually it lives up to its name as the coffee lovers adore the beverage as they sip in. Even non-caffeine addicts look for a second serving which completely proves the brand's delectableness. The taste of course cannot be captured but the engagement of people and their testimonials expressing the love for the coffee.

The idea of Sleepy Owl has been an in house coffee experience that people can consume at the comfort of their home sipping in the best quality coffee that will be delivered at their doorsteps.

Syncing in the Make in India concept and creativity, Sleepy Owl has been brewing since 2016 from Ashwajeet's kitchen in Dwarka, Delhi and later upon scaling of the business they shifted to a small co-working space in Shahpur Jat, Delhi. The space now has a brewing counter and open space for caffeinating on demand.

## **COMPETITIVE ADVANTAGE**

Indian Market lacks in terms of variety of brews. The only coffee, offered in Indian Market is the hot brew or instant coffee. Sleepy Owl indeed has proved to be nirvana for all coffee worshippers who innovatively cold brew coffee and in a short span of time, there have been

orders from across the country and now the word of mouth has reached overseas and people have been curious to try Sleepy Owl.

Initially while starting out Sleepy Owl, wished to just serve the B2B market, where a customer can order from the restaurant menu, but that failed as it was challenging for a brand to showcase itself if only B2B is catered. Thus, they took a wise decision and started to look for B2C, scrapping off the catalyst restaurants and having a direct communication channel with the consumers.

The effective use of social media by Team Sleepy Owl was the biggest boon to them. With sharing their own experiences on Instagram to people sharing their coffee cups, Instagram is the best place to discover the worthy cup of coffee.

The hashtag #latteart is where Sleepy Owl and other competitors like Blue Tokai etc. try to target. Yet Sleepy Owl made a swift and robust digital presence by having crisp videos and pictures that made people stop and ponder.

One very interesting fact is the World Wide Web is becoming a hub of information and when fresh feed on coffee extraction and making process is brewed on the internet feed, it picks up fast and becomes trending. Coffee and Art have been sister concerns with the advent of designer art in coffee. People look forward for inspiration, which is quite the same case when it comes to coffee.

Hence, after creating a visual online presence and tempting people to try their product , Sleepy Owl now started working on the offline presence because just a mere website cannot indulge people in the coffee experience. They started to showcase their product in physical locations where people could taste the coffee, interact with the brew masters and witness the distinct roasting happening in front of their eyes.

Sleepy Owl managed to raise \$500,000(3.6 crore INR) in seed funding which was led by DSG Consumer Partners, a venture by Deepak Shahdarpuri. This investment by DSG is the second round of bet placed by the company in the packaged beverage segment. Headquartered in Singapore, DSG was one of the investors in Mumbai based RAW Pressery, an organic cold pressed juices brand, which is the child brand of Rakyan Beverages. Deepak, was blown away by the taste of the cold brew coffee and claimed to have tasted the best cold brew coffee with a quality far superior to that served in San Francisco, Singapore and London.

The proceeds from investments, are being used by Sleepy Owl to expand their production based, and have a presence in the retail space, invest some part in marketing and streamline all the operations. The founders are even emphasizing on enhancing their SKUs. DSG also expressed their desire for long term partnership and to work closely with the Sleepy Owl team and collaboratively bring the best quality of Indian coffee to the Indian consumers very conveniently. Deepak was very impressed by the obsession and passion the team at Sleepy Owl has right from the provenance to the roasting of beans to flavouring profile to brewing to get the perfect blend into the coffee cups.

The DSG investment came at a time when the investors both in the capital and strategic domain are actively looking for opportunities to expand the Indian ventures especially in the packaged beverages space. Post this funding, Sleepy Owl came up with the Cold Brew Packs.

Sleepy Owl focusses on the employee training, right from the very basic introduction to coffee and the products to stressing a healthy customer interaction, collating and pondering upon the customer feedback and dealing with any grievances at the earliest and best possible way.

## **INNOVATIONS**

In the debut year of having launched and reaching customers door to door, the biggest challenge for Sleepy Owl was to make an entry in the retail stores. One way they used was leveraging the complete power of the social media, World Wide Web and E-Commerce which helped their brand grow online.

Taking feedback from the customers and working on giving them a satiable experience has been the motto of the team. For this they constantly stay in touch with their consumers, introspect and retrospect their learning and incorporate it to improvise the overall experience, by keeping the customers first with patience.

Slowly and steadily with the popularity, the demand automatically grew for in stores, which eventually helped Sleepy Owl to list their own product.

They understood that the cumbersome process from sourcing beans to picking them to roasting to perfection to grinding to sieving and brewing to get the best cup of coffee is a long process and with the increasing demand it requires an innovation that would help the consumers consume high quality coffee hassle free every day.

The team got together and consistently kept brewing, tasting, refining and again brewing coffee on a daily basis. This process vicious circle kept on occurring until the perfect cold brew concoction came into existence. Innovating an environment friendly easy to carry bag-in-a-carton-box packaging, which kick started their first ever box being shipped on June 16, 2016.

The container has a self-dispenser which ensures that no air, heat, dust, particles, foreign agents or light enters and keeps the coffee fresh that can last almost a month when refrigerated. Retailing at 550 INR for a box (600ml) that serves up to 8-10 glasses of freshly brewed coffee, left people slurp and asking for more servings. They also sell a 3 box subscription at 1500 INR (1.5 litre) that is the most high in demand product as its very economical and conceptualized keeping in mind the Indian money conscious minds.

These boxes had illustrations on them and suggestive recipes that propelled people to have a must drink whenever they see the box.

Sourcing from 100% Grade-A plantations located at 3500 ft. in Chikamagalur, Karnataka which is the home of India's best sourced single origin Arabica coffee beans, they were roasted until the beans turned golden brown. They are then slowly brewed in cold water and the chocolaty, nuttiness, after steeping for 20 hours, this cold brewed beverage is extracted and the bitterness is left out. This produces cold brew coffee in small batches and takes 18-24 hours afresh, after receiving the order. The Sleepy Owl coffee is naturally sweet and has no added flavours or preservatives which makes it silky smooth and non-acidic, thereby reaping the best coffee benefits.

One of the Founders, Ashwajeet is the master brewer and the mastermind behind the concept. He created several innovative recipes engaging the customers online who in turn tried different

variations of coffee, posted the images and showered their love. From Vietnamese Cold Coffee which essentially is a mix of condensed milk and Black Coffee to Vietnamese Coffee Martini which could have vodka along with coffee, kept everyone looking forward to new recipes.

Thus, it proved that it is not behind the technology jargon, via infographics and recipe videos that made the cold brew experience even more fascinating and opened a communication bridge between the consumers and Sleepy Owl. Their most popular variants are Black Martini, Smooth Black, Iced with Milk and Vietnamese Iced.

In 2017, they pitched in local bakers and collaborated with passionate bakers and sold their limited edition brew boxes with a set of homemade cookies. This led to a win-win situation for both upcoming bakers and Sleepy Owl to showcase their products and gain popularity. In spite of being limited period offers, this combo was a huge hit and people looked forward for more such offers to come up. Later that year, they also sent out combos of Nestle Milkmaid and Brew Boxes so that people can instantly try their famous Vietnamese Cold Brew at home.

In 2018, they came up with yet another amazing invention of cold brew coffee bags called Brew-It-Yourself Cold Brew Coffee [Refer Figure 3]. These coffee bags can be easily carried in your bag and can be used for making coffee anytime anywhere. The coffee bags come in an airtight sealable packet, each packet has 3 medium sized coffee bags, which need to be kept in a jar full of normal water for 24 hours after which the pure black cold brewed coffee is ready and can be consumed for a long time. The brew packs come in 5 brew packs retailing at 500 INR and can make up to 15 cups of coffee.

Over the past 1 year they also have collaborated with influencers and gave out discount coupons that help people waive off delivery charges or be friendlier to their wallets, making the experience very smooth.

## **COMPETITORS: (COMPARE & CONTRAST)**

When Lavazza Machines started brewing coffee in India, buying the Lavazza machines and the Lavazza capsules manufactured by Nespresso was a tedious and costly job. When Nestle allowed other companies to manufacture Nespresso machines, it drew a lot of competition but did not last for long. [Refer Figure 5]

There was a new dawn in coffee when Karan Tiberwalla started Fresh Brew Coffee. They started to manufacture Nespresso compatible capsules in India and made them available online. This led to the revolution of coffee varieties in India from Ristretto to Decaf. They offer three basic roasts: Italian roast that is quite dark, bitter and less acidic. French Roast that is lighter and has more bean flavour, less bitterness and high acidity. Medium Roast that is extremely light roast and has higher acidity.

International Players like Starbucks which collaborated with Tata in India, have fresh brew coffee capsules compatible with Nespresso machines. They offer Robusta grown on the superior Arabica which is subtle in flavour to international coffees like Ethiopian, Columbian, Sumatra and there are varieties around them like Vanilla, Mocha etc.

Café Coffee Day, Barista and Coffee Day even sell French Press at their outlets and mugs as take away merchandise. While Starbucks still remains a premium and elite class in Coffee, the new emerging cafes too offer vast competition in the Indian Coffee Market.

Companies like SEVEN BEANS COFFEE COMPANY, a coffee enterprise situated in Bangalore and bridges the gap between Indian Coffee farmers and Italian Roasters.

Blue Tokai which is a direct competitor to Sleepy Owl started in 2011, also claims internet to be their saviour. Their name has been derived from the fact Tokai the peacock tail, which is very significant in the Malabar region where the British had set the coffee estates initially in India. They claim to gain penetration via people ordering online. They studied the market in the capital city of India, Delhi and found there to be limited number of options that were even terrible to drink. They introduced 100% Arabica beans roasted coffee. They also featured in the famous Bhane love series. Started by the Delhi based couple, Matt Chitranjan and Namrata Asthana , they proved to be coffee connoisseurs and opened up the market to coffee. Blue Tokai roasts twice a week and ships coffee immediately after the roast is complete. It estimated that on an average a person might have 70 grams coffee every year, while in Scandinavia 7 kilos could be consumed every year. These contrasting figures clearly indicate that India may not come in proximity to the 7 kilos figure but indeed the Indian Coffee lovers can be increased by educating them about how gem is the Indian Coffee Plantation. Tokai also has started to offer people a selection from a variety of brewing devices like French Press, Aeropress and Japanese Filters.

Blue Tokai also could manage to raise seed funding on an amount which it did not disclose. This funding was led by Snow Leopard Ventures in 2016 just the same time when Sleepy Owl took birth and was taking baby steps in the coffee market. Blue Tokai used these funds judiciously in opening cafes in Delhi and continue to do across the metropolitan cities across India. The company is expected to raise over 2 crores incurred from its sales, almost doubling every year, which is a clear competition not only to Sleepy Owl but also dominant players like Starbucks.

While other coffee roasters offer coffee after considerable amount of waiting at their cafes, Blue Tokai is famous for their ten second takeaway that too fresh. Along with variety of coffee [Refer Figure 1] their food menu is very interesting and offers a wide platter that goes well along with coffee from Ragi Pancakes to Open Faced sandwiches. [Refer Figure 1]

Other notable start-ups working in the same space are RAW Pressery and DropKaffe. But the good news is that Singapore based DSG consumer Partners who earlier invested in RAW Pressery now has invested in Sleepy Owl.

Although amongst all competitors , Sleepy Owl stands out because of their signature cold brew coffee that no one else is currently manufactures , but the fact that other competitors are supplying merchandise , coffee beans and also have restaurants could be an alarming factor that Sleepy Owl should look into.

## **FUTURE VISION & CHALLENGES:**

It's expected that the coffee industry in India shall exponentially increase and cold brew would even be in much more demand. With the fast paced lifestyle, where people look forward to RTD or Ready-to-Drink beverages, this in itself is a huge challenging space where brands can easily acquire, due to the absence of existing competition.

Almost every street in India has a coffee café that people love to visit for the experiencing gourmet coffee which is another fast growing sector and it is believed to grow by a rate of 20 percent annually. People have also started looking for easy on-the-go alternatives to the traditional coffee recipes.

Competitors like Starbucks and Blue Tokai who offer their instant fresh coffee takeaways and a sumptuous nibbles alongside coffee, makes them stand out and draw crowds to their brands. Even their takeaway coffee bean packet sales is going high and a topic that people talk a lot over the internet.

Having catered to over 20000 consumers in less than 2 years of its existence, Sleepy Owl has targeted consumers both online and offline via websites and over 300 stores across the country like Le Marche, Foodhall, and Modern Bazar etc.

While people have been loving the refreshingly fresh coffee brew they get to drink, the current focus of Sleepy Owl is on enhancing the product and speeding up the manufacturing efficiency so that the portfolio can be expanded and a national share can rapidly be acquired in the Indian Coffee Retail Industry, which is expected to surpass the \$5 billion figure by 2020. Thus, streamlining of the manufacturing unit and production capabilities will ensure that the product is delivered on time with the trust seal never broken.

It is also estimated that the increasing awareness on coffee varieties could increase coffee lovers in India by up to 5 percent each year, coming to a figure even more huge than tea.

The recent innovation of DIY Cold Brew Coffee Packs [Refer Figure 3] is a segment that in itself offers immense scope and the fact that Sleepy Owl has made a debut, is very promising. This would prove to be a long innings partnership with the Indian consumers, but at the same time the fact cannot be denied that it can be picked up and reincarnated by upcoming and existing competitors.

Technology is ever advancing and the coffee industry can't remain untouched. From trends like nitro brewed , bulletproof coffee, coffee art, coffee on tap to cold brew , the trends are picking up fast in the Indian demography as the consumers are becoming well aware and looking forward to every trend.

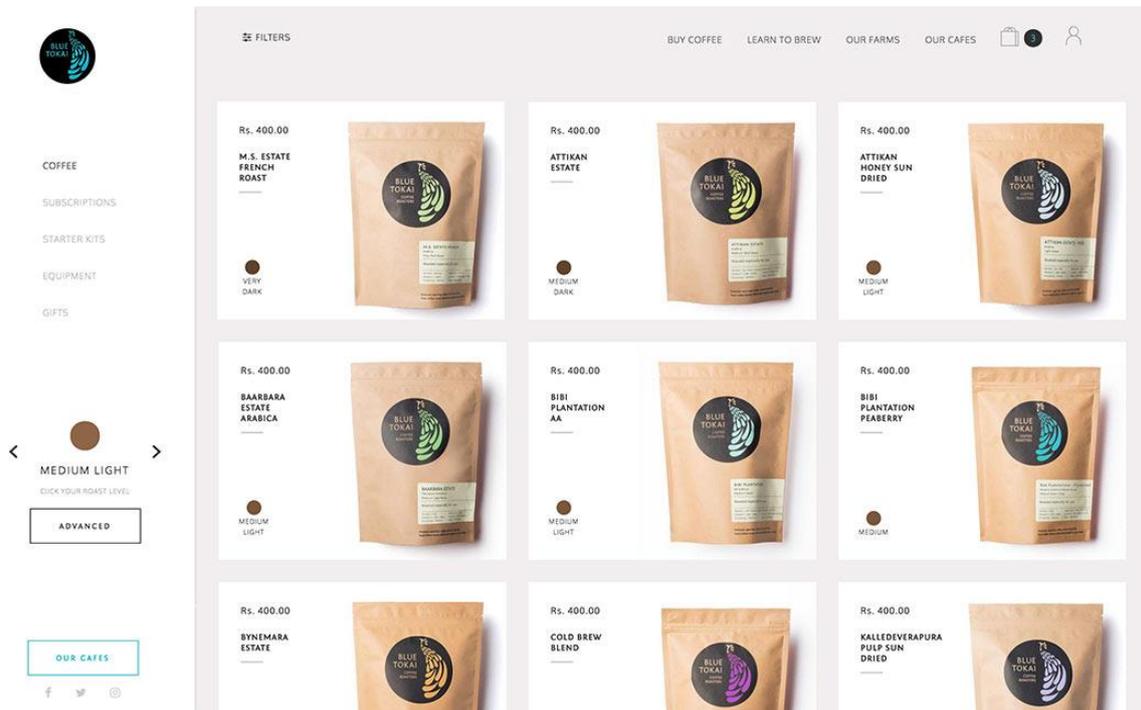
Indeed they are completely chirp worthy but there is a long road to go, as so many brands are pollinating and existing ones are revamping and trying to give hard competition to Sleepy Owl. Although a lot of coffee has been brewed and kept people's spirits alive but still a lot more coffee is in the making in the long run.

## EXHIBITS:

Figure 1: Blue Tokai Menu



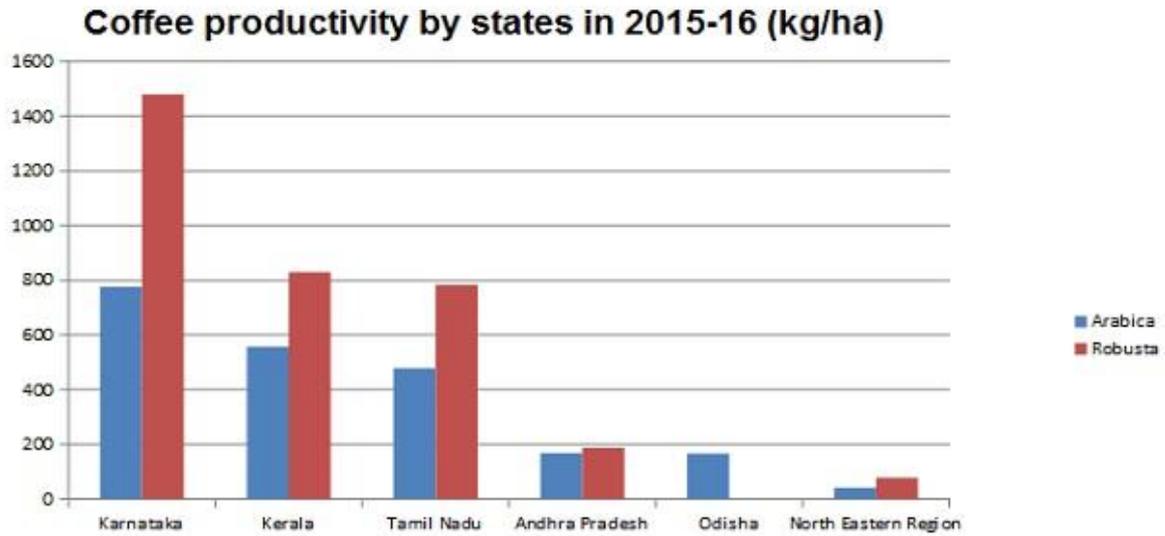
**Figure 2: Blue Tokai Coffee Varieties**



**Figure 3: Sleepy Owl DIY Cold Brew Packs**

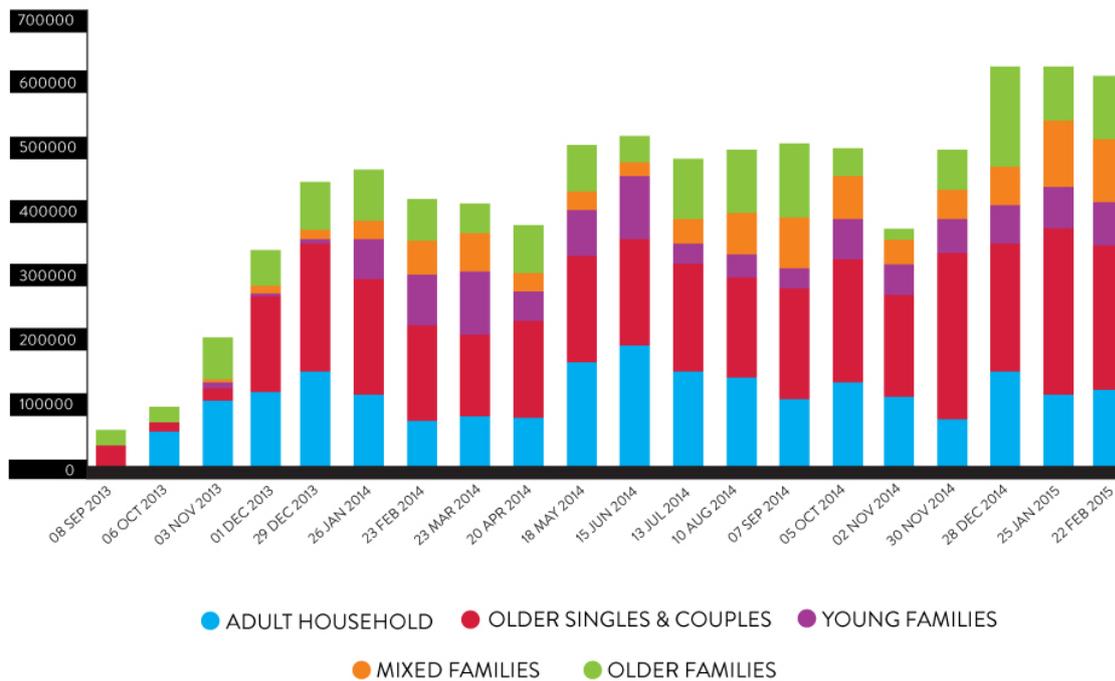


**Figure 4: Coffee Productivity States in India**



**Figure 5: Coffee Capsule sales**

COFFEE CAPSULE SALES BY SOCIO-DEMO PROFILE



Source: Nielsen ScanTrack Consumer, Period ending 22 February 2015

## REFERENCES:

- <https://www.nicobar.com/blog/sleepy-owls-cold-brew-martini/>
- <https://www.nicobar.com/blog/cold-brew-crusaders/>
- <https://sleepyowl.co/pages/about-us>
- <https://sleepyowl.co/>
- <https://www.linkedin.com/in/armansood/>
- <https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/sleepy-owl-coffee-raises-500000-in-seed-funding-round-from-dsg-consumer-partners/articleshow/63777567.cms>
- <https://yourstory.com/2018/04/sleepy-owl-helps-charge-mornings-fresh-cup-cold-brewed-coffee/>
- <https://www.theyellowsparrow.com/sleepy-owl-cold-brews/>
- <https://gadgets.ndtv.com/culture/features/blue-tokai-sleepy-owl-coffee-startups-india-1692100>
- <http://brownpaperbag.in/delhi/food-and-drink/bpb-review-the-sleepy-owls-new-cold-brew-coffee-shop-shahpur-jat/>
- <https://www.vccircle.com/dsg-consumer-partners-invests-in-cold-brew-coffee-retailer-sleepy-owl/>
- <https://www.hindustantimes.com/brunch/a-coffee-revolution-is-brewing/story-JG0AdMks4i2Ayp3bPnmDM.html>
- <http://www.dfordelhi.in/sleepy-owl-coffee/>
- <https://entrackr.com/2018/04/cold-coffee-sleepy-owl-500k-seed-fund/>
- <https://www.bloomberg.com/profiles/companies/1584690D:IN-sleepy-owl-coffee-pvt-ltd>
- <https://www.dineout.co.in/delhi/blue-tokai-coffee-roasters-saket-south-delhi-29143/menu#&gid=2&pid=3>
- <https://bluetokaicoffee.com/>
- <https://bluetokaicoffee.com/pages/about-us>
- <https://www.forbes.com/sites/eshachhabra/2015/03/30/indias-new-coffee-preneur-blue-tokai-connects-farmers-and-customers/#181afc622829>
- <https://yourstory.com/2016/02/blue-tokai-funding/>
- <https://lbb.in/delhi/blue-tokai-coffee-cafe-roastery-coffee-shop/>
- <http://bwdisrupt.businessworld.in/article/Cold-Brew-Coffee-Company-Sleepy-Owl-Raises-500K-In-Seed-Funding/18-04-2018-146781/>
- <https://tech.economictimes.indiatimes.com/news/startups/sleepy-owl-coffee-raises-500k-seed-funding-from-dsg-consumer-partners/63777557>
- <https://www.cssdesignawards.com/sites/blue-tokai-coffee/30773/>
- <http://www.nielsen.com/nz/en/insights/news/2015/caffeine-fix-new-coffee-buyers-grow-category-by-9m.html>

# ASEAN Towards Digital Economy: The Development of Equity Crowdfunding in Malaysia, Singapore, and Thailand

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## ***Abstract***

The purpose of this study is to assess the current status of Equity Crowdfunding (ECF) development of the claimed three key actors of ECF facilitation in the ASEAN region namely, Malaysia, Singapore, and Thailand. The study selected one equity crowdfunding platform in each country and it was evaluated through the through the successfully funded projects as well as the funding growth from its inception to present. The study also tackled the policy and regulation governing the platform thus, giving recommendation to Association of Southeast Asian Nation (ASEAN).

**Keywords:** ASEAN, Equity Crowdfunding, Small and Medium Enterprises, Platforms

## **INTRODUCTION**

Micro, Small and Medium Enterprises (MSMEs) are tagged as the building block of ASEAN Member States' economy. They play a vital role in the pursuit of ASEAN's economic growth (ASEAN, 2015 For .( SMEs generate employment that leads to a more equitable income distribution)UN, 2015 .(These significant impact of MSMEs to economy is also undeniably seen in ASEAN .

However, access to finance is commonly faced by SMEs, it is considered as the prime hurdle of this industry. Which is most likely happened in semi-peripheral and peripheral countries as they are more restricted financially due to weak and unregulated market (IFC, 2013). Especially, during and after the series of financial crisis happened in 1997 and 2008. Both crisis prevented SMEs to gain funds due to restraining bank's requirements (OECD, 2009; Vermoesen et. al., 2013). Nevertheless, Pasadilla (2010)

argued that banks in both normal and crisis period, SMEs are usually less important compared to large firms for SMEs have less credit worthiness.

Therefore, overcoming these problems of SME's became on the priority list of each states in order to stimulate economic revolution. And in the case of ASEAN, ASEAN member states are exerting efforts in integrating Financial Technology (Fintech) specifically facilitating Equity Crowdfunding (ECF) in order to achieve the fully digital driven economy by 2025 as well as to provide funding opportunities to SMEs .

Equity Crowdfunding helps an entrepreneur to acquire funds to its project or enterprise from the so-called crowd through a certain online platform and equity shares are given as a reward to the crowd (ASEAN, 2017). However, facilitating ECF is quite complicated unlike the other types crowdfunding, this kind of model has the attributes of higher risks. This only proves the urge to be governed and regulated by the government in order to know who will be accounted and how they will take responsibilities towards these risks.

Therefore, this study will serve as a track to ECF development in Malaysia, Singapore, and, Thailand Thus, providing solutions or strategies towards sustainable progression. The study will also serve as a basis in adopting best practices in formulating ECF framework as ASEAN take initiative to promote Equity Crowdfunding to its member states which are less cognizant. In addition, there's currently lack of empirical-based researches to estimate the status of a certain country focused on equity crowdfunding. Aside from this, there are few reliable researches on tracking crowdfunding development in Asia. Hence, this study will contribute to fill the information gap regarding the crowdfunding industry. And correspondingly, the result of this study will support future researchers, policy-makers, shareholders and the public to monitor and assess the equity crowdfunding activity in ASEAN.

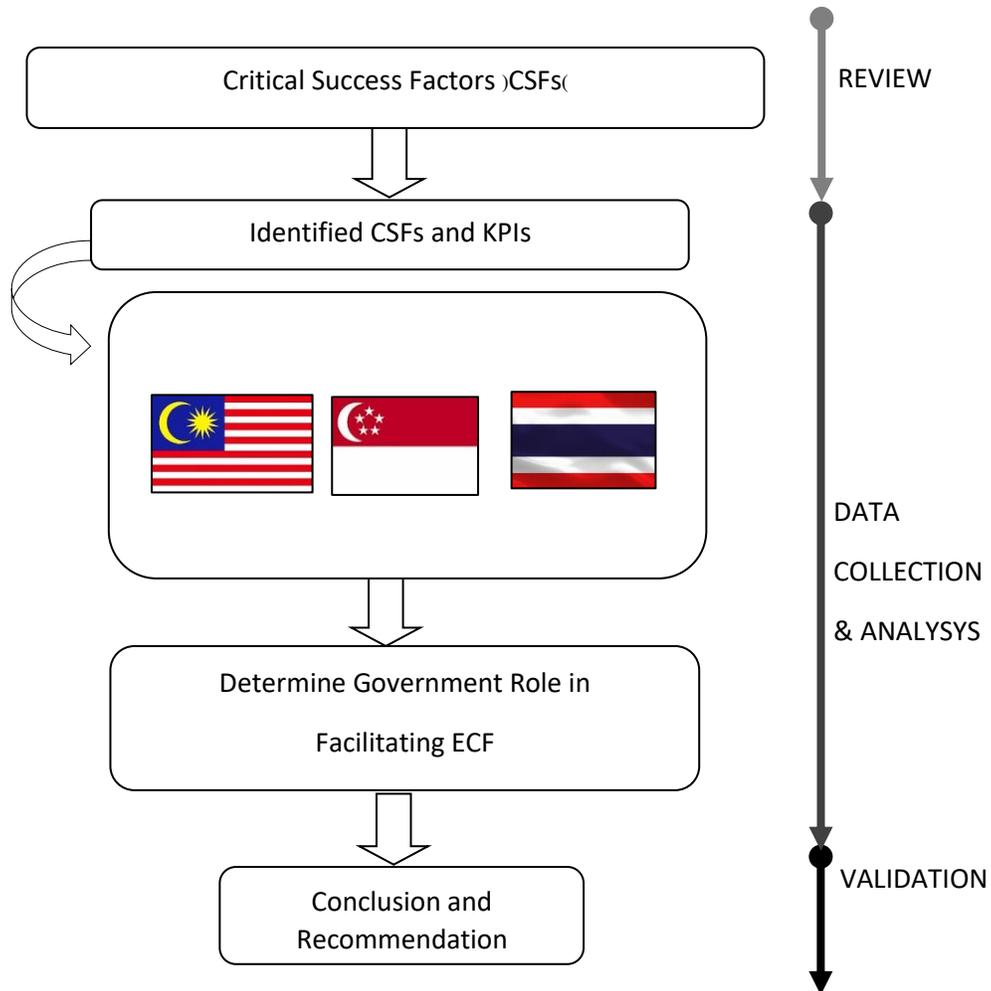
## **OBJECTIVE**

The core aim of this study is to provide valid and reliable information on the development of equity crowdfunding in ASEAN and consequently, producing a high quality of research. Within this broad theme, the study delves to attain the following objectives:

1. To assess the status of equity crowdfunding activity in each country;
2. To explore the government's role in the facilitation of ASEAN's equity crowdfunding and;
3. To provide recommendations on the policy reform needed in developing ECF framework for ASEAN.

## CONCEPT AND INSPIRATION

The Critical Success Factors (CSFs) in related to equity crowdfunding platform which are identified from the previous literatures will serve as basis to identify the key performance indicators thus, used to determine the development status of each country as well as the government role. Therefore, providing recommendation to the ASEAN organization where these three countries are members.



## **PROCESS, TECHNIQUE AND EQUIPMENT**

The method adopted in this study are consist of second-hand review and analysis. Secondary research as stated in the Salem Press Encyclopedia, gives new and profound meaning to the existing primary data when data are harmonized with other (Salem Press Encyclopedia, 2013). Thereby, this study reviewed and analyzed different sets of data collected from research institution's reports like alternative finance industry reports, government memorandums, business monthly reports and newsletter, conferences, equity crowdfunding platforms, related websites and, social media.

This study also carefully looked into three countries namely, Malaysia, Singapore, and Thailand. And, to achieve the overall aim of this study which is to provide valid and reliable information on the development of equity crowdfunding in the three member countries of ASEAN as stated above, methodological triangulation was used. Triangulation is the used of two approaches, which are normally qualitative and quantitative to verify and validate the result (Morse, J., 1989). In this regard, this study used qualitative and quantitative data simultaneously which supplements the findings of the study.

The method of this research began with proper selection of research paper, articles and other related documents to shed a light with the research problem. And after the selection of literatures related to equity crowdfunding's critical success factors, thorough analyzation was done to identify the CSFs and KPIs. Which served as the basis to assess the equity crowdfunding status. Hence, providing recommendations in the facilitation of Equity Crowdfunding in ASEAN.

### **1. EQUITY CROWDFUNDING PLATFORMS**

This study was carried out through in-depth analyzation of secondary data mainly collected from equity crowdfunding platform based in each country from its inception up to first half of 2018. The platform was selected based on the recognition the public as one of one of the leading equity crowdfunding platforms in their respective country. Thus, selecting PitchIn for Malaysia, FundedHere for Singapore, and lastly, Dreamaker equity for Thailand.

## 2. EQUITY CROWDFUNDING STATUS

To recognize the critical success factors and its key performance indicators in order to measure the status of equity crowdfunding in the three cases, defining the meaning of equity crowdfunding success through comprehensive literature review and extensive data analysis of equity crowdfunding status reports is essentially needed. And these literature reviews highlighted “funding success” as perception of crowdfunding platforms. Thus, linking to the successful campaigns projects in the platform, the successfully funded SMEs, the funding raised and the networks (Achlers et. al, 2012). It is also essential to take note that business or firm should cope up with the challenges or problems related in order to survive. And, in the equity crowdfunding context, the primary challenge that a platform should deal with is the associated risk. Thereby, recognizing the metrics as:

- **Volume of the funding raised** pertains to the total amount of the investment raised since the inception until first half of 2018,
- **Successful SME’s** means the total number of SME’s campaigns that are successfully funded,
- **Policy and Regulation**, refer to the efforts made by the government to regulate the platform

In order to determine the market growth which is the growth in the amount of funding raised was calculated by means of getting the percentage through subtracting the market size in the initial year from the following years. The result was then divided by the initial year and multiplied by 100. Or in mathematical formula, the market growth is simply done through the following equation:

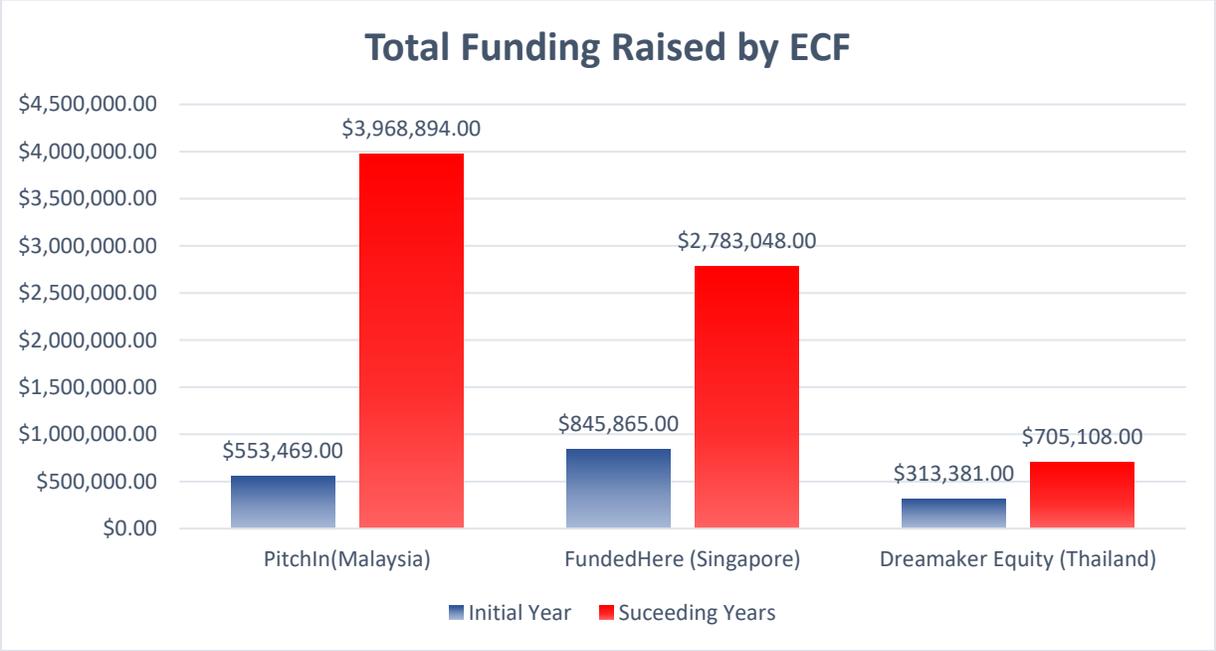
$$\frac{\text{Total Funding Raised(Succeeding Years)} - \text{Total Funding Raised (Initial Year)}}{\text{Total Funding Raised(Initial Year)}} \times 100$$

While rest of the factors namely, successfully funded SMEs, partnerships, risk management and, policy and regulation were analyzed through descriptive analysis.

### CREATIVE WORK

Based on the findings of the study the volume of funds raised factor, PitchIN (Malaysia) successfully funded four SME’s from its initial year in 2016 which accounts for a total amount of US\$2,186,204.00 and increasing exponentially to 617.09% in 2017 until 1<sup>st</sup> half of 2018, amounting to

US\$3,968,894.00 which helped 13 SMEs. All in all, PitchIN (Malaysia) funded 17 SMEs successfully with a total funding raised of US\$4,522,363.00. While, FundedHere (Singapore) generated a funding of US\$845,865.00 for equity crowdfunding projects of the five businesses in its initial year in 2016. And, same with PitchIn (Malaysia) it magnificently increased up to US\$2,783,048.00 or a percentage of 229.017% in its succeeding years. Summing up, FundedHere (Singapore) obtained fundings amounting to US\$3,628,913.00 for 14 business from the year of 2016 to 1<sup>st</sup> half of 2018. Because of the successful activities, FundedHere initiates to have a cross-border flow deal targeting Malaysia and Indonesia. Lastly, for Dreamaker Equity (Thailand) funded one SME with US\$313,381.00 in its initial year and multiplying twice to US\$705,108.00 in the following years, or an increase of 125% funding an additional four SMEs. Hence, Dreamaker equity has supported five SMEs from it was launched in 2015 accounting to a funding of US\$1,018,489.00. Figure 1, displays the market growth of each equity crowdfunding from its initial year.



Source: PitchIn, FundedHere, Dreamaker Equity, 2018

**Figure 1. Market Growth of PitchIN, FundedHere and Dreamaker Equity from its Inception**

Whilst, in term of the governments role in the equity crowdfunding activity which mainly involved regulating the platforms. PitchIn is regulated by the Security Commission of Malaysia, since it was approved to fully operationalize it is said to be the most successful rewards (in the form of equity) crowdfunding platform in Southeast Asia. The PitchIn requires potential investors to be registered and

accredited by the Malaysian Business Angel Network (MBAN) which is listed as their partner. The platform allows with a minimum of investment of RM5,000.00 (US\$1,274.50) up to RM500,000.00 (US\$127,450) per year (PitchIn, 2018). And for Singapore equity crowdfunding, platform is regulated by Monetary Authority of Singapore (MAS) and FundedHere was one of first platform that were granted license to fully operationalize. FundedHere investors are classified into Accredited Investors (AI), Institutional Investors (II) and Professional Investors (PI). And, to be recognized as an investor, following criteria should be met. An accredited investor should at least have S\$300,000 (US\$225,563.91) annual income, while corporations shouldn't exceed S\$10 Million (US\$7.5 Million) in value of net assets for institutional investors and lastly, a minimum of S\$100,000 (US\$75,187.96) annual income for professional investors.(FundedHere, 2018). Lastly, in the case of Dreamaker Equity, though Thailand has already an ECF framework to regulate its crowdfunding activities, Dreamaker Equity is still working to get permission from the Securities and Exchange Commission Thailand to fully operationalize by the end of this year.

Thus, these findings of the study demonstrated that Equity Crowdfunding activity in the three actors of ASEAN is growing rapidly. However, in order to facilitate equity crowdfunding in the region smoothly especially, as they target the cross-border deal flow. The ASEAN should have harmonized policy and regulation or an ASEAN equity crowdfunding framework that have one description of requirements of platforms, investors and entrepreneurs that is inclusive. For example, in Singapore, only individuals with a large monthly income of not less than S\$300,000 (US\$225,563.91) or personal net assets S\$2 million (US\$1.5 million) can invest in crowdfunding platforms, this will limit the participation of individuals from other ASEAN members for only few countries will make the cut for the requirements to be investors based on the minimum wage of each country. Thus, the standardization of the limitation and requirements will eliminate this kind of disadvantages thus, will able to enjoy benefit of the crowdfunding market.

## REFERENCES

ASEAN.) 2015 .(*ASEAN Strategic Action Plan for SME Development 2016-2025*. Jakarta: ASEAN Secretariat.

ASEAN. (2017). *Facilitating Equity Crowdfunding in the ASEAN Region*. Available at: <http://asean.org/storage/2017/09/Final-Facilitating-Equity-Crowdfunding-in-ASEAN.pdf>

Ahlers, G. et. al., (2012). Signaling in Equity Crowdfunding Available at SSRN: <https://ssrn.com/abstract=2161587> or <http://dx.doi.org/10.2139/ssrn.2161587>

Dreamaker Equity.(2018). Website: <http://www.dreamakerequity.com/>

FundedHere.(2018). Website: <https://www.fundedhere.com/>

IFC.(2013). *Microfinance and The Global Financial Crisis A Call for Basel*. Available at: <https://www.ifc.org/wps/wcm/connect/afc335804294f279bf01bf0dc33b630b/Microfinance+and+Global+Financial+Crisis+BASEL+Report-Final.pdf?MOD=AJPERES>

OECD. (2009). *The Impact of the Global Crisis on SME and Entrepreneurship Financing and Policy Responses*. Available at: <https://www.oecd.org/cfe/smes/43183090.pdf>

Pasadilla, G.O) .2010) .*Financial Crisis, Trade Finance, and SMEs :Case of Central Asia* .ADB Working Paper 187 .Tokyo :Asian Development Bank Institute .Available :<http://www.adbi.org/working-paper/2010/01/25/3440.financial.crisis.trade.smes.central.asia/>

PitchIN.(2018) Website: <https://www.equity.pitchin.my/>

Salem Press Encyclopedia, 2013. Secondary data by: Tantawi, Randa, PhD,

UN.) 2015 17 .(*Sustainable Development Goals (SDGs)*. UN. Available at: <https://sustainabledevelopment.un.org/?menu=1300>

Vermoesen, Deloof and Laveren (2012). *Long-term debt maturity and financing constraints of SMEs during the Global Financial Crisis*. Author(s): Source: Small Business Economics, Vol. 41, No. 2 (August 2013), pp. 433-448 Published by: Springer Stable URL: <http://www.jstor.org/stable/43552876> Accessed: 13-11-2017 05:23 UTC

## **Linking customer loyalty with employee satisfaction and employee loyalty: A moderated mediation model**

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### **Abstract**

In recent times, one of the crucial challenges faced by the managers is to acquire their employees and customers' loyalty to build successful business enterprises. If employees are satisfied, they become more loyal to their organization and help to create satisfied and loyal customers. For all organizations, workers are the most critical resource to achieve business success through the loyal customer. The longer a worker works for an organization, the more valuable it becomes. In this paper we use literature review as a key methodology to develop a research model to show the linkage among customer loyalty, employee satisfaction, employee loyalty, and service quality furthermore; here we also show the moderating role of organizational resources.

Keywords: Customer loyalty, Employee loyalty, Service quality, Organizational resources, Employee satisfaction,

### **Introduction**

Several researchers established that satisfied workers are more self-confidence and highly motivated at work, so they can work more efficiently and effectively (Hundley, 2001). They are also more dedicated to continuous improvement of product quality, which in turn, determines the cost of quality and customer satisfaction, which in turn determines the customer loyalty (Mosahab, Mahamad, & Ramayah, 2010). For all organizations, employees are the precious resources to achieve a successful business. Generally, many organizations' management creates their benefits packages, training processes, work system and incentives on the basis of their company policy, which are aimed at producing loyal employees as this leads to a more extensive tenure. The longer a worker works for an organization, the more precious they become.

Therefore, from a perspective of managerial and theoretical, it is vital to identify the employee satisfaction's drivers, continuously monitoring the employee satisfaction and to take the correct assessments to encourage satisfaction as well as loyalty. Many types of research in the literature have focused on these parameters (Eskildsen, & Nussler, 2000; Matzler et al. , 2006). Our research shows that employee loyalty is an emerging driver of customer loyalty. Prior researches have examined the employee satisfaction's role in the development of employee loyalty (Matzler, & Renzl, 2006), but here we investigate the linkage among customer loyalty with employee satisfaction, employee loyalty and service quality and also shows the moderating role of organizational resources. We briefly review the literature on employee satisfaction, employee loyalty, customer loyalty and service quality and we develop eight hypotheses regarding the

relationship between satisfaction loyalty and service quality and use organizational resources as a moderator.

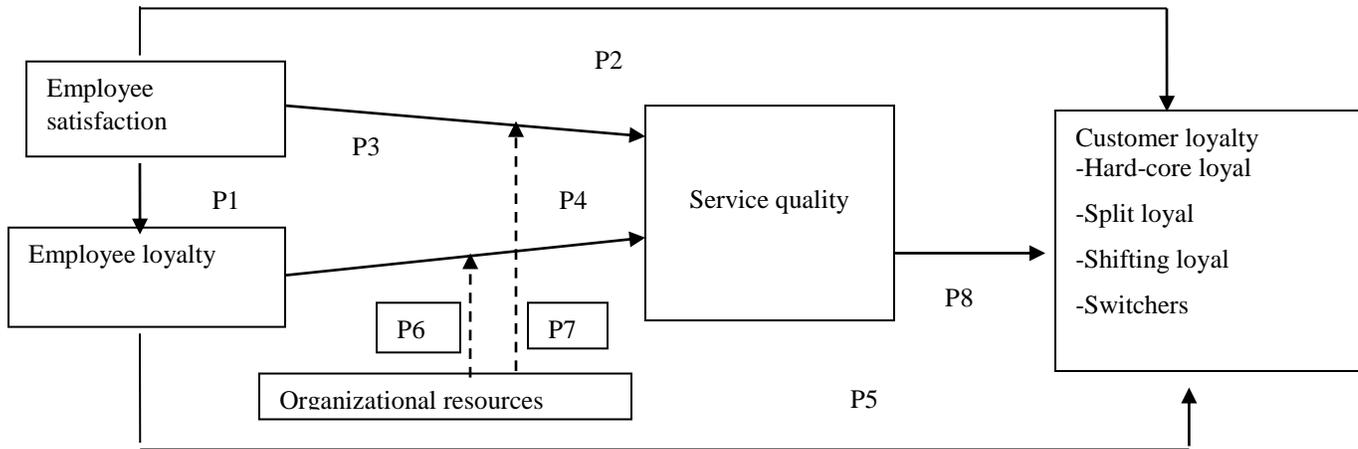


Figure 1. Research model

## Literature Review

### Employees' satisfaction, employee loyalty, and customer loyalty

Employee satisfaction is, defined as, how employees are satisfied with their jobs. The term employee satisfaction was introduced by Hoppock (1935). According to some researchers employee satisfaction is the combination of environmental and physiological situations for that someone can honestly say that he/she is satisfied with their employer (Hoppock , 1935, Silvestro, 2002). Then again, employee loyalty can be defined as the employees who are committed to their organization's achievement and think that being a worker of this company is in their better opportunity. They plan to stay with the company, and not keenly try to find other employment options (Eskildsen, & Nussler, 2000).

In recent times, employee loyalty and satisfaction have become very crucial matters (Matzler, & Renzl, 2006). It has been found in many empirical types of research that, employee loyalty is a strong driver of company's loyalty and commitment (Grønholdt, & Martensen, 2001; Mak & Sockel, 2001).

Every employee felt more productive and competent when they are satisfied and allowed to exploit their capability in their role (Aziri, 2011). If employees get liberty from manager or supervisors to utilize their knowledge, talent, in their job and encouraged by the supervisors, they feel more satisfied, linked, competent and interested in their responsibilities (Hallowell, 1996). The performance of employees has been influenced by the managers. Interactive managers care about their employees' satisfaction, provide consistent performance-based feedback, focus on helping them continually perform at their best, reward competitively and fairly, and provide a dynamic process of orientation, a professional process of selection, and a fair performance reviews and feedback, an appropriate incentive and reward, regular training and career

development, (Koys, 2001; Harter, Schmidt, & Hayes, 2002). As a result, the workers believe that the company is worthy of their extra loyalty and efforts.

Therefore, managers of the organization who create a healthy connection with their workers significantly advance their response to the customer. This involvement displays itself in the additional effort and better reactions with customers. So employees' satisfaction helps to satisfy customers and move them from satisfied to loyal. The higher employee satisfaction will help to achieve higher employees' loyalty which in turn increases the customer loyalty. Therefore, we posit that

*Proposition 1:* Employee satisfaction and employee loyalty is directly associated to each other and

*Proposition 2:* Employee satisfaction and customer loyalty is directly associated to each other

### **Employee satisfaction and Service Quality**

Employee satisfaction is generally connected with inspiration and motivation. But, satisfaction and motivation are entirely different in nature (Diener, Emmons, Larsen, & Griffin, 1985). Employee satisfaction is more of an individual's feelings of achievement, either qualitative or quantitative (Judge, Thoresen, Bono, & Patton, 2001).

In services, one of the essential features of research is service quality (Mosahab, Mahamad, & Ramayah, 2010). Service quality research-based its insight on the activities of customer and the pattern of disconfirmation or confirmation (Parasuraman, Zeithaml, & Berry, 1985). When consumer consumes a goods or services, they compare the quality of that goods or services that they have knowledge to that of their previous anticipations (Lewis, 1991), which leads to an emotional response in the displeasure or satisfaction with the purchased of goods or services (Schneider, & White, 2004). Therefore, researches of services marketing depend on building the concept of service quality on models from consumer behavior rather than from idea of manufacturing (Zeithaml, Berry, & Parasuraman, 1996). Some researchers highlighted that service quality is an assessment of the degree to which the service delivered matches customer's expectations (Lewis, 1991). According to several researchers, service quality can be measured using the instrument of SERVQUAL (Parasuraman et al., 1988, 1991b, 1994) and managed through the model of performance gap (Zeithaml & Bitner, 1996).

In recent times, maximum businesses are service-oriented, so improvement of service quality is very crucial for successful business development, for which each employee should react intelligently and creatively to each service event (Kandampully, 1998). Good companies depend on the intelligent, performance of their employees. Employees' more creative, dynamic and innovative ability helps to satisfied customers and move them from confident to loyal (Combs, Liu, Hall, & Ketchen, 2006). However several researchers found that very limited employees are actively connected, engaged, and loyal, which mean only a few people are contributing their most innovative and dynamic and responses to create better service quality (Tornow, & Wiley, 1991). Satisfied employees are likely to stay at their job longer compared to not-satisfied employees (Parsons, Simmons, Penn, & Furlough, 2003). Hence, if employees are satisfied, they provide better service quality which in turn improves the customer loyalty (Tornow, & Wiley,

1991). So, the best way to achieve higher customer loyalty starts first with employee satisfaction which positively influences the service quality and finally reaches the customer loyalty. Therefore we posit that,

*Proposition 3: Employee satisfaction and service quality are positively related to each other.*

### **Employee loyalty, service quality, and customer loyalty**

Loyal employees are supposed to be more dynamic employees and try to provide more quality services to their customer (Mittal, & Lassar, 1998). In reality, as the employee loyalty increases, the service quality will also increase because; disloyal employees are not interested in investing hard work and time to improve the service quality as well as the profitability of the organization (Powers, 2000). This will also reduce the company's turnover. So employee loyalty and service quality are positively related to each other.

The service providers' primary objective is to develop and provide offerings which satisfy customers' requirements, in that way ensuring their own economic survival. Service providers will need to realize how the customer evaluates the service quality, on what basis they select one company and how they provide their long tenure support (Kandampully, 1998). In general, customers want to establish close connections with service providers (Parasuraman et al., 1991c). It has become gradually more significant for service company's vision to understand the concept of service quality. The concept of the interdependent partnership and loyalty has become remarkable recognition among both leading service organizations and academics (Fournier, & Yao, 1997).

Customer loyalty is defined as the intent of a consumer to continue with a company (Dick, & Basu, 1994). It is the backbone of successful businesses, but it also depends on employee loyalty. Loyal customers are created by loyal employees (Mascarenhas, Kesavan, & Bernacchi, 2006). The businesses of dealers' and clients' could be advanced by the loyal customers. Employee loyalty is an emerging driver of the customer loyalty so; employee loyalty should be a management' primary concern (Hallowell, 1996). Loyal customers are less expensive to maintain it is not easy to create a loyal customer (Wallin Andreassen, & Lindestad, 1998). Generally, it is because management has not developed a suitable culture which promotes employee loyalty (Salanova, Agut, & Peiró, 2005). Therefore, to achieve higher customer loyalty, management should start with creating an engaging and dynamic culture which facilitates the service quality and employee loyalty and in turn create customer loyalty.

So, from the above argument, we posit that

*Proposition 4: Employee loyalty and service quality is positively associated to each other, and*

*Proposition 5: Employee loyalty is positively associated with customer loyalty*

### **Organizational resources (Moderator)**

Customer loyalty predictors in empirical research have generally concentrated on the organizational aspects (Schneider et al., 1998). Organizational resources is defined as the organizational aspects of a job that are functional in achieving work targets, could diminish demand of employment and their related physiological costs, and, could encourage individual

learning, development and growth (Salanova, Agut, & Peiró, 2005). It is expected that employee satisfaction and service quality will be moderated by organizational resources. Similarly, employee loyalty and service quality is also moderated by organizational resources. This is because resources have a motivational potential. Essential human motivation is directed toward the formation, protection, product development, and resources accumulation (Hobfoll, 2001). Some researchers have explained how organizational resources are the antecedents of a process of motivation (Schneider, & White, 2004). Therefore, the available organizational resources can stimulate personal development, employee satisfaction, employee loyalty and increases motivation to create better service quality. So in this way, organizational resources play as a “moderator” role between the employee loyalty and service quality and between the employee satisfaction and service quality. A moderator is a variable which influences the relationship strength among the variables. In this study organizational resources have motivating characteristics to enhance the employees’ satisfaction level and employee loyalty which can improve the service quality and finally achieve customer loyalty. Therefore we posit that

*Proposition 6:* Organizational resources will moderate between service quality and employee loyalty

*Proposition 7:* Organizational resources will moderate between service quality and employee satisfaction

### **Service quality and customer loyalty**

Customer loyalty is referred to behavioral intentions of the customer; it has been measured by the probability that the customer will revisit to an organization (Hellier, Geursen, Carr, & Rickard, 2003). Several studies have demonstrated that brilliant performance is directly connected to customer loyalty (Bitner, Booms, & Tetreault, 1990). Many researchers have also shown a new m of customer loyalty: the service quality. Favorable service quality is positively affecting the customer loyalty (Caruana, 2002). Understandably if service quality is better, the customer will be impressed and satisfied with the service which in turn move the customer satisfied to loyal.

Employee loyalty and employee satisfaction are closely connected to each other and service quality depends on the quality of this interaction (Loveman, 1998). The satisfied employees are more loyal to their organization and highly engaged with their responsibilities and share general insights about the service quality in their unit, compared to the disloyal employee (Silvestro, 2002). It is anticipated that loyal employee will perform wonderfully with customers, who will report positive employee performance. It has been shown in many literatures that, if the service climate is better, the employee performance would be better (Parasuraman, Zeithaml, & Berry, 1985). Hence, there is a positive relationship between service quality and customer loyalty. Therefore, we posit the following.

*Proposition 8:* Service quality is positively connected to customer loyalty.

### **Discussion and Conclusion**

This research was undertaken with the twin purposes of identify, the linkage among employee satisfaction, employee loyalty and service quality and analyzed its influence on customer loyalty

and shows the moderating role of organizational resources in this context. The outcome of this research demonstrated that employee satisfaction, employee loyalty, and service quality has a positive and significant influence on customer loyalty and organizational resources plays an important moderator role to facilitates the customer loyalty. An investigation of the direct connection in the several existing customer loyalty models provided some interesting insights about the relationships among the identified variables, as an instance, loyalty and satisfaction; a few others questioned this concept and advocated the presence of an indirect connection between the two. As evidenced from literature, only highly satisfied customers stay with the company, customers who are just satisfied are open to switching to competing brands (Jones & Sasser, 1995).

This research also found that service quality will be able to increase customer loyalty. This construct is the perception of the customers on the services. If customers' ratings on the service quality are good, it will be able to increase both customer interest and loyalty. Conversely, the study also viewed service quality as a mediator variable between the influence of employee loyalty, employee satisfaction and customer loyalty. If employee loyalty of the company increases, the value of customers will also increase and will eventually be able to develop customer loyalty. Furthermore, it is expected that the variable organizational resources (usually ignored in maximum studies of customer loyalty) also influences satisfaction and loyalty. The recommended framework will also help in assessing the relative importance and nature of their relationship impact on customer loyalty. For future research, it is suggested to add other variables such as experimental marketing, emotional satisfaction to understand the customer loyalty more comprehensively. The future studies can further explore and empirically test the propositions built in the paper.

## References

- Aziri, B. (2011). JOB SATISFACTION: A LITERATURE REVIEW. *Management Research & Practice*, 3(4).
- Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: diagnosing favorable and unfavorable incidents. *The Journal of Marketing*, 71-84.
- Caruana, A. (2002). Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European journal of marketing*, 36(7/8), 811-828.
- Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel psychology*, 59(3), 501-528.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: toward an integrated conceptual framework. *Journal of the academy of marketing science*, 22(2), 99-113.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49(1), 71-75.
- Eskildsen, J. K., & Nussler, M. L. (2000). The managerial drivers of employee satisfaction and loyalty. *Total Quality Management*, 11(4-6), 581-588.
- Fournier, S., & Yao, J. L. (1997). Reviving brand loyalty: A reconceptualization within the framework of consumer-brand relationships. *International Journal of research in Marketing*, 14(5), 451-472.
- Grønholdt, L., & Martensen, A. (2001). Linking employee loyalty, customer loyalty and profitability. In *The 6th World Congress for Total Quality Management* (pp. 332-339).

- Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study. *International journal of service industry management*, 7(4), 27-42.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of applied psychology*, 87(2), 268.
- Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer repurchase intention: A general structural equation model. *European journal of marketing*, 37(11/12), 1762-1800.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory. *Applied psychology*, 50(3), 337-421.
- Hoppock, R. (1935). Job satisfaction.
- Hundley, G. (2001). Why and when are the self-employed more satisfied with their work?. *Industrial Relations: A Journal of Economy and Society*, 40(2), 293-316.
- Jones, T. O., & Sasser, W. E. (1995). Why satisfied customers defect. *Harvard business review*, 73(6), 88.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological bulletin*, 127(3), 376.
- Kandampully, J. (1998). Service quality to service loyalty: A relationship which goes beyond customer services. *Total quality management*, 9(6), 431-443.
- Koys, D. J. (2001). The effects of employee satisfaction, organizational citizenship behavior, and turnover on organizational effectiveness: A unit-level, longitudinal study. *Personnel psychology*, 54(1), 101-114.
- Lewis, B. R. (1991). Service quality: an international comparison of bank customers' expectations and perceptions. *Journal of Marketing Management*, 7(1), 47-62.
- Loveman, G. W. (1998). Employee satisfaction, customer loyalty, and financial performance: an empirical examination of the service profit chain in retail banking. *Journal of Service Research*, 1(1), 18-31.
- Mak, B. L., & Sockel, H. (2001). A confirmatory factor analysis of IS employee motivation and retention. *Information & management*, 38(5), 265-276.
- Mascarenhas, O. A., Kesavan, R., & Bernacchi, M. (2006). Lasting customer loyalty: a total customer experience approach. *Journal of consumer marketing*, 23(7), 397-405.
- Matzler, K., & Renzl, B. (2006). The relationship between interpersonal trust, employee satisfaction, and employee loyalty. *Total quality management and business excellence*, 17(10), 1261-1271.
- Mittal, B., & Lassar, W. M. (1998). Why do customers switch? The dynamics of satisfaction versus loyalty. *Journal of services marketing*, 12(3), 177-194.
- Mosahab, R., Mahamad, O., & Ramayah, T. (2010). Service quality, customer satisfaction and loyalty: A test of mediation. *International business research*, 3(4), 72.
- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Perceived service quality as a customer-based performance measure: An empirical examination of organizational barriers using an extended service quality model. *Human resource management*, 30(3), 335-364.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *the Journal of Marketing*, 41-50.

- Parsons, S. K., Simmons, W. P., Penn, K., & Furlough, M. (2003). Determinants of satisfaction and turnover among nursing assistants: The results of a statewide survey. *Journal of Gerontological Nursing, 29*(3), 51-58.
- Powers, E. L. (2000). Employee loyalty in the new millennium. *SAM Advanced Management Journal, 65*(3), 4.
- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *Journal of applied Psychology, 90*(6), 1217.
- Schneider, B., & White, S. S. (2004). *Service quality: Research perspectives* (Vol. 107). Sage.
- Silvestro, R. (2002). Dispelling the modern myth: Employee satisfaction and loyalty drive service profitability. *International Journal of Operations & Production Management, 22*(1), 30-49.
- Thompson, P., Warhurst, C., & Callaghan, G. (2001). Ignorant theory and knowledgeable workers: Interrogating the connections between knowledge, skills and services. *Journal of Management studies, 38*(7), 923-942.
- Tornow, W. W., & Wiley, J. W. (1991). Service quality and management practices: A look at employee attitudes, customer satisfaction, and bottom-line consequences. *People and Strategy, 14*(2), 105.
- Wallin Andreassen, T., & Lindestad, B. (1998). Customer loyalty and complex services: The impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. *International Journal of service Industry management, 9*(1), 7-23.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *the Journal of Marketing, 31*-46.

## Directors' Remuneration: A Matter of Transparency

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**Abstract:** As consequences of the Asian financial crisis in 1997-1998, transparency is one of the importance issues that trigger debates and works among practitioners and academicians. Transparency is a prerequisite in building a good framework for good corporate governance. Stakeholders have demanded the companies more transparent on their financial and non-financial activities. A very limited research has been explored on the issue of the directors' remuneration disclosure in Malaysia. Therefore, this study investigates how board characteristics influence the transparency of director remuneration. For this purpose, six board characteristics were chosen namely independent directors, board size, female on board, board ethnic, board meeting frequency and board experience. Director remuneration checklist is used to measure the director remuneration disclosure among Malaysian public listed companies. The results show the board ethnic and company size are associated with the extent of directors' remuneration disclosure, while other board characteristics are found to not be associated with the extent of directors' remuneration disclosure.

**Keywords:** Director remuneration, transparency, board ethnics, Malaysia.

## 1 Introduction

Boardroom and corporate governance issues is a hotly debated in both developed and developing countries, especially after the financial scandal in the early 2000s. Following the situation, stakeholders have lost their confidence on corporate governance rules. Malaysia is one of the countries that reacted to the situation with their government took numerous initiatives by promoting a good corporate governance practices. The Malaysian Code on Corporate Governance (MCCG) was first issues in March 2000 that required all listed companies to disclose their level of compliance. Then, the code was revised in year 2007 to focus mainly on the boardroom matters, audit committee and the internal audit function. Furthermore, Corporate Governance Blueprint 2011 was released to set out the desired corporate governance landscape in moving forward. As to deliver the objectives of the Blueprint 2011, MCCG 2012 was introduced with the focus to enlighten the role of the board in providing leadership, enhancing the board efficacy and reinforcing its independence. Additionally, in April 2017, Security Commission Malaysia releases the new MCCG that focus on strengthening corporate culture particularly on accountability and transparency. Restoring stakeholder confidence also can be achieved through improving and enhancing corporate governance, accountability and transparency as recommended by National Economic Action Council (NEAC).

Good corporate governance is a key factor in underpinning the integrity and efficiency of a company while poor corporate governance can weaken a company potential as well as can lead to financial difficulties and can cause damage to company reputation in long-term. Transparency is one of the core principles to have good corporate governance. Transparency means timely, openness, meaningful and willingness to give clear and reliable information to stakeholders. Additionally, transparency ensure that stakeholders can have confidence in decision-making and management process of a company. Transparency and disclosure has been the subject of a great deal of empirical research in Malaysia. (see for example Esa and Zahari, 2016; Esa and Zahari, 2014, Jaafar *et al.*, 2012; Esa and Mohd Ghazali, 2012; Mohd Ghazali, 2010; Akhtaruddin *et al.* 2009; Tam *et al.*, 2007; Mohd Ghazali, 2007; Abdullah, 2006; Mohd Ghazali and Weetman, 2006; Haniffa and Cooke, 2005; Haniffa and Cooke, 2002). Although much attention has been given to the area in the academic literature, more research is needed to further understand and unveil factors influencing corporate disclosure behavior, particularly in developing economies and emerging markets.

It has been widely believed that dispute in corporate governance derives from divorcing ownership and control or so-called as the agency relationship within business organizations. The agency relationship is a relationship between the shareholders as a principal that agrees to hire the directors that act as an agent to run the companies they own. However, the consequences of this problem revealed a conflict of interest and the information asymmetry among them. Therefore, the problem can be cure with appropriate disclosure of information (Healy & Palepu, 2001) and the role of effective board. In fact, Fama and Jensen, (1983) added that boards are the company's most important internal mechanism to minimize the agency relationship problem. Boards are chosen by shareholders to receive the important power from them to monitor and manage actions of others. Additionally, boards have authority to appoint and terminate the top officers and they have power to remove the underperforming managers (Farrell and Whidbee, 2000). Boards also have a crucial role in remuneration scheme setting for top management (Yermack, 2004; Conyon and Peck, 1998).

Equally important, director's remuneration is one of the hot topics debated in the corporate governance literatures (see for example, Esa and Zahari, 2016; Esa and Zahari, 2014; Cremers and Grinstein, 2014; Ferrarini, Moloney and Vespro, 2003). Council (2014) also highlights the remuneration is an essential focus for stakeholders. Critics often believe the payment on the director's remuneration as excessive and not aligned with the performance. As suggest by Muslu (2010), the voluntary disclosure of directors' remuneration would restrain the opportunistic behavior among the directors. Directors' remuneration is the payment made for the directors including salary, bonus, stock options, stock grants, pensions, benefits in kind, and other emoluments that the directors receive during their tenure (Esa and Zahari, 2016). Although the disclosure requirement is not a mandatory for Malaysian companies, the enhanced MCCG 2017 required

all companies to make detailed disclosures on remuneration for each individual director and top five senior managers as well as have at least 50% of independent director as their board members starting end of year 2017. The current study examines specifically the role of board characteristics namely board experience, board independence, board size, female board, board ethnic and frequency of board meeting that influencing the director's remuneration disclosure. This study contributes to the extant literature in a number of ways. First, to consider the potential impact of board characteristics in determination of the director remuneration disclosure from an emerging economy where the market is very much different compared to the developed countries. Second, is to analyse the provided information on directors' remuneration as reported by the Corporate Governance Watch 2016 that most companies in Malaysia are still reluctant to disclose how much directors and key executives are paid. The remainder of the paper is organized as follows: Section 2 reviews the relevant literature and develop the research hypotheses. Section 3 describes the methodology, sample selection and the research techniques. Section 4 presents the results of the study. A concluding section summarizes the whole paper and suggest the future research.

## **2 Literature review and hypotheses**

### *2.1 Board experience*

Prior literatures (e.g. Esa and Zahari, 2016; Johl, Kaur and Cooper, 2015 and Yusoff and Amrstrong, 2012) have documented the importance skill among board members to execute a prosperous business. In fact, Hillman and Dalziel (2013) categorized skills that board members must have into human capital, which includes ability, experience and reputation, and market relationship that has cooperation with other companies. The lack of experienced directors with financial ability is the main reason that contribute into failure of businesses as claimed by Kirkpatrick (2009). The qualified members on board is believes as an important characteristics that director should have to improve firm performance (Esa and Zahari, 2016 and Smith *et al.*, 2006). Additionally, Rajagopalan and Datta (1996) found experience is one of the essential indicators of skills and cognition that the executive brings to their job. Managers with different experience also are found differ in attitudes, knowledge and perspectives and thus, make different strategic choices (Guthrie and Datta, 1997). This study uses the proportion of directors who have accounting and financial ability by total directors. The hypothesis is as follows:

*H1: There is a positive relationship between board experience and the extent of directors' remuneration disclosure in annual report.*

### *2.2 Independent non-executive director*

Independent director do not hold any position in the management and not an employee of the company. Boards with higher proportion of external members have more control over company as suggested in agency theory. Independent directors have expertise in controlling and experienced in internal organization control as claimed by Li, 1994 as well as they are more plausible to eliminate out non-performing managers. The proportion of external directors will influences the effectiveness of the control exercised by the board of directors (Dalton *et al.*, 1998). The MCG 2007 requires all listed companies to have at least one third of their board members are independent directors. Nevertheless, the enhanced MCG 2007 requires the independent directors must at least 50% of the board members by the end of year 2017. Prior studies (see for example, Donnelly and Mulcany, 2008, Huafang and Jianguo, 2007) have documented positive and significant relationship between independent directors and voluntary disclosure while others (e.g. Esa and Zahari, 2016; Esa and Mohd Ghazali, 2012; Barako *et al.*, 2006) found no significant relationship. As the relationship between independent non-executive directors and the extent of director's remuneration disclosure has not been tested widely, therefore the findings will add understanding on the role of independent directors in remuneration transparency among directors. The hypothesis is as follows:

*H2. There is a positive relationship between independent director and extent of directors' remuneration disclosure in annual report.*

### 2.3 Board size

Companies with more board members would increase the quality of reporting and decreasing the information asymmetry between management and stakeholders as claimed by Samaha et al., (2012). Proponents of board's size suggest that larger board would lead to broad exchange of opinion and experiences. Board size is an important yardstick of board's capability to monitor fees paid for top management (Ozdemir and Upneja, 2012). However, Jensen (1993) argued that boards comprising more than seven members might result conflict. Therefore, it is important to study the association between board size and the level of transparency of director compensation. Some prior studies revealed a relationship between board size and disclosure (Esa and Mohd Ghazali, 2012). However, Said, Zainuddin and Haron, (2009) found board size does not influence the disclosure of corporate responsibility in the annual report and websites. The hypothesis is as follows:

*H3. There is a positive relationship between board size and the extent of directors' remuneration disclosure in annual report.*

### 2.4 Female board

The presence of female members in the boardroom is likely embedding diversity (Fernando, 2007) and improve the opportunity to accomplish the circumstances that puts a company in a superior business position. Board diversity would enhanced the board independence as suggest in agency theory (Carter et al., 2007). Additionally, Adam and Ferreira (2009) added that demographic diversity would increases board effectiveness and include more female directors in the boardroom as suggested in The Higgs Report commissioned by the British Department of Trade and Industry. More policies were designed to raise participation of female directors in the boardroom. It shows that presence of women directors has given a positive impact towards board functioning and companies performance. In fact, the Malaysian Cabinet has approved legislation where corporate companies must achieve at least 30 percent representation of women in decision-making position in the private sector as well as, to promote gender equality (Fong, 2011). Prior studies revealed that women directors would enhanced the corporate social responsibility (CSR) practices, CSR disclosure (see for example Zhang et al., 2013; Fernandez-Feijoo et al., 2012) and company performance (Zhang et al., 2013). Women presence in the boardroom is belief not only focus on financial performance but also emphasis on non-financial performance measures (Stephenson, 2004). Based on the above-mentioned discussion, the following hypothesis is developed:

*H4. There is a positive relationship between female board and the extent of directors' remuneration disclosure in annual report.*

### 2.5 Board ethnic

The ethnic diversity of board is claimed would results in good governance as well as create more profit for business (Carter, D'Souza, Simkins and Simpson, 2010). Different facets of diversity namely ethnic and demographic also would give an impact to business process and disclosure practices as well as audit services (Haniffa and Cooke, 2002). Cencus 2010 revealed the total population of Malaysian was 28.3 million with ethnic composition consist of Malays and Bumiputera 67.4 percent, Chinese 24.6 percent, Indians 7.5 percent and others 0.7 percent (Department of Statistic Malaysia). Prior literatures (e.g. Haniffa and Cooke, 2005; Haniffa and Cooke, 2002) revealed Malay directors improved transparency in the financial statements. However, Lim (1998) added that cultural values between Malays and Chinese were not significantly different. Based on the above discussion, the current study focused on dominant ethnic position in Malaysia population. Thus, the following hypothesis is posited:

*H5. There is a positive relationship between Malay board and the extent of directors' remuneration disclosure in annual report.*

### 2.6 Board meeting

Board meeting frequency is an important activity contribute to the firm performance (Nkundabanyanga et al., 2013). Meeting activity would give board members sharing an idea, discuss any issues in the meeting agenda together, improve communication, promote coordination and to help jobs done. Meeting frequency

is one of the tool to measure commitment of boards and to see whether board is active and effective (Nkundabanyanga et al., 2013). Brown and Caylor (2004) revealed a positive relationship between board meetings and company performance. However, that study did not examine director remuneration in particular and were examining company performance rather than company disclosure. As the association between board meetings and the extent of director remuneration disclosure has not been investigated widely, the current study asserted this variable to see the impact of board meeting frequency towards disclosure of director remuneration. The following research hypothesis is therefore formulated:

*H6. There is a positive relationship between board meeting and the extent of directors' remuneration disclosure in annual report.*

### 2.7 Other control variables

The current study used three firm characteristics as control variables (firm size, profitability and leverage) in the multiple regression models for testing the main hypotheses (Esa and Zahari, 2016; Esa and Mohd Ghazali, 2012; Mohd Ghazali, 2007; Haniffa and Cooke, 2005; Abdul Hamid, 2004; Hackston and Milne, 1996; Belkaoui and Karpik, 1989). The used of control variables are due to their correlations with the dependent variables (Meyers, Gamst, and Guarino, 2006). Research shows a positive and significant association between disclosure and firm size (Ahmed Haji, 2013; Haniffa and Cooke, 2005). This study expects a similar association between company size and director remuneration disclosure. Additionally, prior literatures (e.g. Mohd Ghazali, 2007; Haniffa and Cooke, 2005) documented an association of disclosure and profitability. The current study expects a significant association between director remuneration disclosures. While, mixed results are found in the association between leverage and disclosure (Ahmed Haji, 2013).

## 3 Methodology

### 3.1 The model and data

To investigate the relationship between the board characteristics and director's remuneration disclosure, multiple regression analysis was used. The regression model used and variable definition is as follows:

$$DRDI = \beta_0 + \beta_1 Bexp + \beta_2 Ined + \beta_3 Bsize + \beta_{41} Fob + \beta_5 Beth + \beta_6 Bmeet + \beta_7 Prof + \beta_8 Lev + \beta_9 Cosize + \varepsilon$$

Where:

DRDI =Director remuneration disclosure index

Bexp =[Board experience] number of directors who have accounting and financial expertise

Ined =[Independent non-executives director] proportion of Independent directors on the board

Bsize =[Board size] total number of directors on the board

Fob =[Female director on board] number of female director on the board

Beth =[Board ethnic] proportion Malay director on the board

Bmeet =[board meeting frequency] total number of board meeting

Prof =[Profitability] measured by profit before tax over total assets

Lev =[Leverage] measured by total liabilities over total assets

Cosize =[Company assets] measured by total assets

The sample used in the current study is composed of companies listed on Bursa Malaysia. These are the Malaysia's 100 largest listed companies that are based on the highest total assets and revenue size. The largest companies was selected due to consent that largest companies are commonly transparent. The company annual reports were retrieve from the Bursa Malaysia website. The present study only selected non finance companies. Finance related companies were excluded due to the unique characteristics and different compliance of regulation govern by Banking and Financial Institution Act of 1989. This approach is in line with prior studies (e.g. Esa and Zahari, 2016; Esa and Mohd Ghazali, 2012; Mohd Ghazali and Weetman, 2006; Haniffa and Cooke, 2005). Therefore, the final sample comprised only 87 companies.

### 3.2 Directors' remuneration disclosure checklist

The current study use a disclosure checklist adopted from Ramli (2001) in order to measure the extent of directors' remuneration disclosure practices of Malaysia's 100 largest listed companies. One group of item was excluded due to irrelevant for most of the Malaysia's 100 largest listed companies. A sub sample of 30 companies' annual report was analysed whether the item of the information provided in directors' remuneration disclosure specifically on the details of directors' share option schemes appears in the annual reports. However, none of the sub sample companies disclosed the item. The final disclosure checklist of the current study contains 22 items. Method used to score the directors remuneration items in the checklist is a dichotomous or unweighted scoring approach. If an item appears in the annual reports, a score of 1 is assigned and non-appears items are assigned with 0. This method was chosen due to all information was equally valued regardless of their importance or relevance to any particular user group (Chau and Gray, 2002). As dependent variable of the current study, directors' remuneration disclosure index was calculated with the ratio of actual scores obtained to the maximum possible score (i.e. 22 items) by a particular company.

## 4 Research Finding

The descriptive statistics of the independent variables are tabulated in table 1 below. The results show the ranges of board experience (Bexp) is between 2 to 9 with an average 4.73 of board directors with financial experience based. With regards to independent directors (Ined), the minimum scores reported is 23%. It is imply some of the 100 largest listed companies did not comply with the mandatory requirement to have at least one third independent director as board representation. What is more, the total of director in the boardroom is ranges between 5 to 15 with an average of 8.91. Nevertheless, number of female director on the board is between 0 to 6 imply that some of the sample companies did not include female board as a representative in their boardroom. The average number of board meeting held is 6.53 implying a more meeting activity might require director commitment towards organizational performance. Additionally, for board ethnics, the result shows an average 43.10 percent of directors are represent by Malay directors. The average ratio is not consistent with the prior literatures (eg. Muhamed Yunos, Ismail and Smith, 2016; Rahman and Ali, 2006) that revealed 37 percent and 48 percent respectively.

**Table 1.** Descriptive Statistics of Continuous Independent Variables.

	Minimum	Maximum	Mean	Std. Deviation
Bexp	2.00	9.00	4.73	1.83
Ined	0.23	0.86	0.46	0.13
Bsize	5.00	15.00	8.91	2.28
Fob	0.00	6.00	1.06	1.14
Beth	0.00	100.00	43.10	23.82
Prof	-8.19	102.92	11.26	17.12
Lev	-209.00	114.85	47.68	34.77
Cosize	19.75	24.99	22.30	1.20
Bmeet	2.00	21.00	6.53	2.98

Table 2 presents simple correlation between directors' remuneration disclosure (DRD) index and independent variables. From this table, out of nine independent variables, it can be seen that female on board (Fob), board ethnics (Beth), company size (Cosize), and board meeting (Bmeet) were significantly correlate with the directors' remuneration disclosure at 0.01% level as well as leverage is also found to significantly correlate at 0.05% levels. However, board experience (Bexp), Independent non-executive director (Ined), board size (Bsize) and profitability (Prof) are found to be insignificant with directors' remuneration disclosure.

**Table 2** Correlation Analysis.

	Bexp	Ined	Bsize	Fob	Beth	Prof	Lev	Cosize	Bmeet	DRDI
Bexp	1									
Ined	-.185	1								
Bsize	.550**	-.437**	1							
Fob	.279**	-.129	.372**	1						
Beth	.057	.084	.106	.241*	1					
Prof	.048	.003	-.099	.129	-.065	1				
Lev	-.065	-.010	-.065	-.181	-.019	-.008	1			
Cosize	.246*	-.008	.304**	.212*	.110	-.237*	-.108	1		
Bmeet	.177	.059	.093	.345**	.312**	.089	-.265*	.248*	1	
DRDI	.052	.076	.059	.295**	.325**	.006	-.216*	.370**	.370**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed) & \* . Correlation is significant at the 0.05 level (2-tailed)

The results of the regression of the DRD index against the board characteristics and control variables that connected with the hypotheses of the current study are presented in Table 3. The regression model, which comprises nine independent variables, results in an adjusted  $R^2$  of 22.8%. This indicates that nine variables tested were able to explain only 22.8% of the variation in the extent of directors' remuneration disclosure among Malaysia's 100 largest listed companies. Company size and board ethnic was found significant and positively associated with the extent of directors' remuneration disclosure. However other board characteristics (eg. Bexp, Ined, Bsize, Fob, Bmeet) and firm specific characteristics (Prof, Lev) were not statistically significant in explaining the extent of directors' remuneration disclosure. The company size with a  $p$  value of 0.004 is significant at 1% level. The result reveals that the decision to disclose directors' remuneration disclosure is influenced by this variable. This result confirms with prior literatures (see for example Esa and Zahari, 2016; Mohd Ghazali, 2007 and Elston and Goldberg, 2003). The big companies tend to disclose more information pertaining directors' remuneration. Additionally, the positive association indicate that larger companies are more transparent compared to others.

The board ethnics is statistically significant at 5% level. As hypothesized, companies in which the board is representative by the Malay directors, portrays a good value as they disclosed more than others did. The findings prove to support Hypothesis 6. It is consistent with prior study by Haniffa, and Cooke (2005) as the study examined the association between culture and corporate reporting. The findings might be due to the tender culture belong to Malays and good rapport to the government. As the governments privilege ethnic group, Malays director switching out the attention of stakeholders away from their good rapport with the government by becoming a more transparent companies. However, none of other variables such as board experience, independent non-executive director, board size, female on board, profitability, leverage, independent non-executive directors, board meeting are significant. This indicates that the decision to disclose directors' remuneration information in the annual reports is not influenced by these factors.

**Table 3** Results of multiple regression for the extent of director remuneration disclosure.

	Beta	t	Sig.	VIF
(Constant)		-1.521	.132	
Bexp	-.066	-.570	.571	1.511
Ined	.018	.169	.866	1.294
Bsize	-.088	-.653	.516	2.010
Fob	.146	1.305	.196	1.396
Beth	.219	2.130	.036**	1.178
Prof	.057	.560	.577	1.153
Lev	-.119	-1.204	.232	1.097
Cosize	.321	2.998	.004***	1.278
Bmeet	.153	1.384	.170	1.370

Adjusted  $R^2 = 0.228$ , F statistic = 3.822, Significance = 0.000, N = 87

Note: \*\*\*, \*\*, \* are significant at 1%, 5% and 10% level respectively.

## 5 Summary, conclusion and future research

The current study examined the transparency of directors' remuneration in Malaysia as one of the developing capital markets countries. Additionally, it examines the effect of board characteristics and firm specific characteristic on the transparency level of directors' remuneration. The finding reveals that company size and board ethnic are two significant variables that influences the directors' remuneration disclosure in Malaysian 100 largest listed companies' annual reports. However, board experience, independent non-executive director, board size, female on board, profitability, leverage, independent non-executive directors, board meeting are found to not be statistically significant in explaining the level of directors' remuneration disclosure in annual reports of Malaysian listed companies. This implies that company size and Malay director are important antecedents in influencing directors' remuneration disclosure. Similar to all studies, this study has some limitations. The major limitation in this current study is the data collection issues. The sample of this study is only focus on a big size company. Hence, future studies may wish to examine using multiple size of companies. This study also analysed the company annual report alone. While, the annual report is not the only channel used to disperse the directors' remuneration information. Thus, future studies may use other channels to give enough information on directors' remuneration. Future research also can consider other variables such as ethics variables as important factor to enhance the disclosure and transparency.

## References

- Abdul Hamid, F. Z. (2004). Corporate social disclosure by banks and finance companies: Malaysian evidence. *Corporate Ownership and Control*, 1(4), pp. 118–130.
- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, (94), pp. 291–309.
- Ahmed Haji, A. (2013). Corporate social responsibility disclosures over time: evidence from Malaysia. *Managerial Auditing Journal*, 28 (7), pp. 647-676.
- Barako, D., Hancock, P., & Izan, H. (2006). Factors influencing voluntary corporate disclosure by Kenyan companies. *Corporate Governance: An International Review*, 14(2), pp.107–125.
- Belkaoui, A. R. & Karpik, P. G. (1989). Determinants of the corporate decision to disclose social information. *Accounting, Auditing & Accountability Journal*, 2(1), pp. 36–51.
- Brown, L. D., & Caylor, M. L. (2004). Corporate Governance and Firm Performance, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=586423](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=586423)
- Carter, D.A., Simkins, B.J., D'Souza, F., & Simpson, W.G. (2007). The diversity of corporate board committees and financial performance, SSRN, September 20, pp.1-30.
- Carter, D.A., D'Souza, F., Simkins, B.J., & Simpson, W.G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), pp. 396–414.
- Chau, G. K. & Gray, S. J. (2002). Ownership structure and corporate voluntary disclosure in Hong Kong and Singapore. *The International Journal of Accounting*, 37, pp. 247–265.
- Conyon, M. J. & Peck, S. I. (1998). Board size and corporate performance: Evidence from European countries. *The European Journal of Finance*, 4, pp. 291-304.
- Council, A. C. G. (2014). Corporate Governance Principles and Recommendations. Australian Corporate Governance Code, 3rd Edition.
- Cremers, M. & Grinstein, Y. (2014). Does the market for CEO talent explain controversial CEO pay practices?. *Review of Finance*, 18 (3), pp. 921-960.
- Dalton, D., Daily, C., Ellstrand, A. & Johnson, J. (1998). Meta analytic review of board composition, leadership structure and financial performance. *Strategic Management Journal*, 19, pp. 269–290.
- Donnelly, R. & Mulcahy, M. (2008). Board structure, ownership, and voluntary disclosure in Ireland. *Corporate Governance: An International Review*, 16, pp. 416–429.
- Elston, J.A. & Goldberg, L.G. (2003). Executive compensation and agency costs in Germany, *Journal of Banking & Finance*, 27(7), pp. 1391-1410.

- Esa, E. & Zahari, A.R. (2016). *Do Board Educational Background, Occupational Background and Ownership structure Matter for Directors' Remuneration Disclosure? Some Malaysian Evidence*, in: Al-Shammari, M. and Masri, H. (Eds.), *Ethical and Social Perspectives on Global Business Interaction in Emerging Markets*, IGI Publication, pp.150-164.
- Esa, E. & Zahari, A.R. (2014). *Ownership structure and directors' compensation disclosure in Malaysia*, in: Sabri Boubaker and Duc.K. Nguyen (Eds.), *Corporate Governance and Corporate Social Responsibility: Emerging Markets Focus*, World Scientific Publishing, pp.267-285.
- Esa, E. & Mohd Ghazali, N. A. (2012). Corporate social responsibility and corporate governance in Malaysian Government linked companies. *Journal of Corporate Governance*, 12(3), pp. 292–305.
- Fama, E. F. & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 25, pp.301–325.
- Farrell, K. A., & Whidbee, D. A. (2000). The consequences of forced CEO succession for outside directors. *Journal of Business*, 73(4), pp.597–627.
- Fernandez-Feijoo, B., Romero, S. & Ruiz, S. (2012). Does board gender composition affect corporate responsibility reporting? *International Journal of Business and Social Science*, 3(1), pp. 31-38.
- Fernando, A. A. J. (2007). An Examination of relationship between board structure and firm value: a Sri Lankan experience. A paper presented at Fourth International Conference on Business Management, Sri Lanka.
- Ferrarini, G., Moloney, N., & Vespro, C. (2003). Executive remuneration in the EU: comparative law and practice executive remuneration in the EU: Comparative Law and Practice, (June).
- Fong, L. F. (2011, July 26). More women now on board. *The Star*. Retrieved from <http://www.thestar.com.my>
- Guthrie, J. P., & Datta, D. K. (1997). Contextual influences on executive selection: Firm characteristics and CEO experience. *Journal of Management Studies*, 34(4), pp.537-560.
- Hackston, D. & Milne, M.J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal*, 9(1), pp. 77-108.
- Haniffa, R. M. and Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), pp. 317–349.
- Haniffa, R. M. & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, 24, pp. 391–430.
- Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440.
- Hillman, A., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28, pp.383–396.
- Huafang, X. & Jianguo, Y. (2007). Ownership structure, board composition and corporate voluntary disclosure. *Managerial Auditing Journal*, 22(6), pp. 604–619.
- Jaafar, S. B., James, K. & Abdul Wahab, E. A. (2012). Remuneration committee and director remuneration in family owned companies: Evidence from Malaysia. *International Review of Business Research Papers*, 8(7), pp. 17–38.
- Jensen, M. (1993). The modern industrial revolution, exit and the failure of internal control systems, *Journal of Finance*, 48, pp. 831–880.
- Johl, S. K., Kaur, S., & Cooper (2015). Board characteristics and firm performance: evidence from Malaysian public listed firms. *Journal of Economics, Business and Management*, 3, pp. 239–243.
- Kirkpatrick, G. (2009). *The corporate governance lessons from the financial crisis*, *Financial Market Trends (OECD)*, 1, pp. 1-13.
- Li, J. (1994). Ownership structure and board composition: a multi-country test of agency theory predictions. *Managerial and Decision Economics*, 15(4), pp. 359-368.
- Lim, L.Y. (1998). Cultural attributes of Malays and Malaysian Chinese: implications for research and practice. *Malaysian Management Review*, 33(2).

- Meyers, L. S., Gamst, G., & Guarino, A. J. (2006). *Applied multivariate research: Design and interpretation*. Sage.
- Mohd Ghazali, N. A. (2010). Ownership structure, corporate governance and corporate performance in Malaysia. *International Journal of Commerce and Management*, 20(2), pp. 109–119.
- Mohd Ghazali, N. A. (2007). Ownership structure and corporate social responsibility disclosure: some Malaysian evidence. *Corporate Governance*, 7(3), pp. 251–266.
- Mohd Ghazali, N. A. & Weetman, P. (2006). Perpetuating traditional influences: Voluntary disclosure in Malaysia following the economic crisis. *Journal of International Accounting, Auditing and Taxation*, 15, pp. 226–248.
- Mohd Yunos, R., Ismail, Z., & Smith, M. (2016). Ethnicity and accounting conservatism: Malaysian evidence. *Asian Review of Accounting*, 20(1), pp. 34 – 57.
- Muslu, V. (2010). Executive directors, pay disclosures, and incentive compensation in large European companies. *Journal of Accounting, Auditing & Finance*, 25.
- Nkundabanyanga, S. K., Ahiauzu, A., Sejjaaka, S. K., & Ntayi, J. M. (2013). A model for effective board governance in Uganda's services sector firms. *Journal of Accounting in Emerging Economies*, 3(2), pp.125-144.
- Ozdemir, O. & Upneja, A. (2012). Board structure and CEO compensation: evidence from US lodging industry. *International Journal of Hospitality Management*, 31(3), pp. 856-863.
- Rahman, R.A. and Ali, F.H.M. (2006), "Board, audit committee, culture and earnings management: Malaysian evidence", *Managerial Auditing Journal*, 21(7), pp. 783-804.
- Rajagopalan, N. and Datta, D., K. (1996). CEO characteristics: does industry matter?, *Academy of Management Journal*, 39(1), pp. 197-215.
- Ramli, M. I. (2001). *Disclosure in annual reports: An agency theoretic perspective in an international setting*. (Unpublished PhD Thesis). University of Plymouth, UK.
- Said, R., Zainuddin, Y. H., & Haron, H. (2009). The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. *Social Responsibility Journal*, 5(2), 212-226.
- Samaha, K., Dahawy, K., Hussainey, K., & Stapleton, P. (2012). The extent of corporate governance disclosure and its determinants in a developing market: The case of Egypt. *Advances in Accounting*, 28(1), 168–178.
- Smith, N., Smith, V. & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2500 Danish firms, *International Journal of Productivity & Performance Management*, 55, pp. 569–593.
- Stephenson C. 2004. Leveraging diversity to maximum advantage: The business case for appointing more women to boards. *Ivey Business Journal*, 69 (1), pp.1–5.
- Yermack, D. (2004). Remuneration, retention, and reputation incentives for outside directors. *Journal of Finance*, 39 (5), pp. 237–269.
- Yusoff, W. F. W., & Amrstrong, A. (2012). What competencies should directors possess? Malaysia perspective. *International Journal of Business and Management*, 7, pp. 142–149.
- Zhang, J.Q., Zhu, H. & Ding, H. B. (2013). Board composition and corporate social responsibility: an empirical investigation in the post Sarbanes-Oxley era, *Journal of Business Ethics*, 114(3), pp. 381-392.

## **Disruptive innovations - A vehicle of growth: Case study of Adobe India.**

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### Case Context

Though Adobe has been one of the leading companies in the media industry owning various creative applications like Photoshop, Indesign, Illustrator and had achieved impressive growth its management was not satisfied with the then existing state of affairs of his company.. The major concern was that while the revenue of Adobe from its existing products was not increasing and new products/ product updates were infrequent, there was increasing competition for its existing products from its rivals. Further, the products of his company were primarily being sold on perpetual licensing basis for desktops. Cloud based technologies were emerging permitting subscription based business model that could also enlarge the scope of usage of products on mobile devices. These technologies could also enable the company to leverage its expertise and experience relating to content and data. The new technologies appeared to offer tremendous scope and bright future. However, there were grave associated risks in introducing these disruptive innovation technologies. The move having far reaching consequences could make or break his company and needed an in-depth examination at all levels. He knew that risk has to be taken lest the company loses its competitive advantage and puts its very survival at stake. But the challenges were how to put the customers in the centre of everything; identify the right technologies to deliver digital experiences, provide value added services and make all stakeholders accept the disruptions.

Literature review-

Adobe India is not a listed company. No information is available on stock exchanges. The Annual reports of the company are also not available. However, being a company, registered under the Indian Companies Act, it is required to file various reports/ returns that are available on the website of Ministry of Corporate Affairs. All the available returns have been reviewed. There have been some cases against the company, under the tax laws. These have provided valuable inputs. The interviews of the senior management officers/ CEO available at various websites gave insight into the achievements of the company, the challenges it faced and the future course of action proposed. The material on the website of the company and blogs has been extensively used. The information about its competitors and competing products and future challenges are primarily based on web searches. The report refers to sources at all relevant places.

### Introduction

Adobe Systems India Private limited (Adobe India), a software based company, was established in India on 13/7/1997<sup>1</sup> with 100% Foreign Equity. It operates under the Software Technology Park Scheme<sup>2</sup> at Noida, Uttar Pradesh. This scheme<sup>3</sup> envisages development and export of software and services. In December, 2012, the Registered Office of the company was changed from Delhi to Noida<sup>4</sup>.

The broad based objects<sup>5</sup> of Adobe India include business of computer software, system and application packages and network services. The decisions in the company<sup>5</sup> are taken in the general body meetings and by the Board appointed by the shareholders. The Articles of Association (AoA) were amended to give stability of tenure to the Directors<sup>6</sup>. Adobe India is wholly owned subsidiary of Adobe system Inc USA (Adobe Inc).<sup>7</sup> The holding company does not have any business operations in India<sup>8</sup>. The entire management control of Adobe India, thus vests with a foreign entity, the Adobe Inc. that appoints Board of Directors on the Board of Adobe India and also takes decisions in its general body meetings. This situation prevailed right from the beginning when 99.9% shares in the Adobe India were held by Adobe Inc and 0.01% shares were held by Adobe System Pty Ltd Australia<sup>9</sup>.

Adobe India is well connected to the Adobe Inc. through various technological means<sup>10</sup>. It carries on R&D activities for making improvements in the applications and functionalities of the software, either developed by or for Adobe Inc. R&D works are being assigned to it by Adobe Inc. and ownership over the software developed by Adobe India remains with Adobe Inc. The fees for these R&D activities are based on actual project costs plus a predetermined profit.

Adobe India has also been providing marketing and sales support services to Adobe Systems Software Ireland Limited<sup>11</sup> (another subsidiary of Adobe Inc), under Professional Service Agreements, for its product's distributors and resellers in India. The Ireland Company acts as the intermediate holding company<sup>12</sup> for subsidiaries of Adobe Inc in Asia-Pacific regions. Ireland being low tax country, Adobe Inc reduces millions of dollars in corporate taxes every year<sup>13</sup>. Adobe India is thus providing not only the Research and Development services but also marketing and consulting services.

#### Mergers / acquisitions of Adobe India:

There have been two cases of mergers. The first merger of Adobe India was with 'Adobe software India Private limited', another subsidiary of Adobe Inc. (96.77% shares with Adobe Inc and 3.23% with Adobe system pvt ltd Australia). Both Adobe India and Adobe software were providing similar services and sales support to Adobe Inc. products in India. After merger Adobe software India Private limited was liquidated<sup>9</sup>.

The second merger was with 'Efficient frontier Technology India Private Limited'<sup>14</sup>. Adobe India wanted to improve upon its Digital Marketing Solutions; and 'Adobe (Omniure) Social Analytics. For this purpose it was interested in technologies/ infrastructure of 'Efficient frontier Technology India Private Limited' relating to simplified search engine marketing (SEM) solutions; marketing engagement platform and an ad buying capability for Facebook. After merger the Efficient Frontier Technology India Private Limited was liquidated<sup>15</sup>.

#### Business environment:

Prior to 2012 main business activity<sup>16</sup> of Adobe India was Research & Development and that too for Adobe Inc. only. Its total revenues were insignificant. The main reasons for low revenue were that (i) for R& D activities assigned to it, it was receiving fee with limited profit margin (ii) it was dealing with expensive products with irregular updated versions sold via license based model (iii) it was providing services for desktop only and (iv) there was un-authorized usage (piracy). Adobe India had to launch various initiatives<sup>17</sup> to battle software piracy. This concern was equally applicable to Adobe Inc. whose products Adobe India was developing/ marketing. New technologies were emerging that enabled provision of products/ services to customers on their mobile devices also. A need was felt to rectify the situation to adapt to these changing circumstances.

The situation was far worse for Adobe Inc, its holding company. The main product<sup>18</sup> of Adobe Inc was its Adobe Creative Suite (CS),<sup>19</sup> that was being sold on perpetual-licensing based model. The substantial revenue was, therefore, non-recurring (the recurring revenue was about 5 percent of total annual revenue). As the quantities of CS sold was not increasing (about three million units a year), there was hardly any revenue growth. The recession in 2008 and 2009, aggravated the situation when the revenue started declining. The rate of decline for Adobe Inc was more than the rate of decline of such other software companies that had high recurring revenue. The only ways Adobe Inc could have raised revenue were either by increasing prices for new customers or by providing updated versions to existing customers. Increasing prices could have been counter-productive. Most of the existing customers were not interested in purchasing updated versions as they were satisfied with existing products.

Adobe Inc products were desk top based and there were various competing products<sup>20</sup> in this segment (Exhibit-1). Adobe customers were switching from desk top to mobile devices of different sizes. This was changing customer's requirements. The new software companies operating under a cloud model were able to increase

their sales as well as number of clients. Opportunities were emerging in the fields of management of ever increasing data and Adobe Inc intended to make use of such opportunities.

#### Business model innovation at Adobe India level:

To meet its main concerns regarding diversification and expansion of its business activities; expansion of geographic jurisdiction; reduction of piracy and to ensure steady revenue growth, Adobe Inc, decided to explore option of becoming digital marketing technology provider. This would involve discontinuance its licensing model and shifting to the cloud based subscription model.

The company being listed company, the concerns of Board members; shareholders; market and customers had to be met. There was risk of competitors taking advantage of dissatisfaction of existing customers due to the shift. To retain continued interest of customers in periodic subscription model, additional values had to be created. It was essential that services to be provided to subscribers are of better quality, timely and address their retrieval and security related concerns. Organizational changes were involved. For example, the accounting team had to gear up from catering to a few large contracts to billing millions of customers.

The announcement of intent of discontinuing licensing based model, did not receive positive response for various reasons<sup>21</sup>. The main reasons were – need to pay subscriptions for all times to come and the perceived inability of new subscribers to edit their files after they stop subscriptions for creative cloud. The adverse reaction was also from those of its existing CS clients who had unsteady income. Corporate also did not like idea of replacement of the entire Adobe Creative Suite portfolio (acquired at substantial cost on perpetual licenses) with the new subscription model. This concern had to be met by a gradual replacement of the Adobe portfolio.

After examining the implications, and to become digital marketing technology provider, Adobe Inc launched Creative Cloud in the USA in 2012 and decided to make it operational first in India in November, 2013. Subsequently, it was launched globally in June 2014. The transition was made in a phased manner. For some time licensed based sale continued simultaneously with the subscription model. The subscribers to Adobe Creative Cloud were offered, besides existing tools of CS, additional features like mobile apps and services. During that period, additional costs had to be incurred to keep both business models working. Many subscriptions were received from the new customers also.

The apprehension that the existing dissatisfied users might go in for those comparable products that were still sold based on the perpetual licensing model, turned out to be true. As expected, after the launch of Creative Cloud, Adobe's competitors started to lower their prices and launch attractive promotions in order to attract dissatisfied Adobe users<sup>22</sup> (Exhibit-2) Many other concerns had to be addressed before completely shifting to subscription based model.

#### Impact of Change:

The result was that initially, at the holding company's level, the strategy eroded the firm's market capitalization. However, there were significant improvements thereafter<sup>23</sup>. Revenue increased from \$4147m (2014) to \$ 7304m (2017) while net income increased from \$268m (2014) to \$1694m (2017) - (Exhibit-3 and 4). At Adobe India level, with the introduction of creative cloud in India, an online store was launched. Indian customers were permitted to subscribe in Indian rupees. Since then, there has been steady increase in the revenue of Adobe India. Revenue increased from INR 2 billion in 2012-13 to 14 billion in 2015-16<sup>24</sup>. During the same period the profit increased from INR 200 million to 1.4 billion (Exhibit-5 and 6).

#### R&D and Product Innovation strategy:

Globally, Adobe's Creative Cloud, Adobe Marketing Cloud, and Adobe Document Cloud are the bread and butter of Adobe Inc. A large number of products for these clouds have been developed in Indian R&D centers located in Noida and Bengaluru<sup>25</sup>. For Adobe Creative Cloud various tools besides mobile and web products have been developed in India. Adobe Document Cloud<sup>26</sup> and Adobe Experience Cloud<sup>27</sup> are other most used cloud services. They work on any device and result in cost savings besides reduction in environmental pollution. Experience Cloud, improves delivery of services to the end users in any sector with large-scale customer data.

Adobe India is also involved in research on Adobe sensei, an Adobe Cloud Platform. The Artificial Intelligence of Sensei assists users of the Adobe Creative Cloud to complete creative works faster. It also transforms paper based documents into digital documents within Adobe Document Cloud. The machine learning of adobe Sensei processes the customer's related data within Adobe Experience Cloud to evaluate customers' behavior for providing personalized services to Adobe's customers. These features of Adobe clouds and Adobe Sensei have tremendous commercial applications.

The research model of Adobe is based on collaborative approach<sup>28</sup> whereby besides in-house research teams, collaborations with interns etc. is resorted to. Research through interns comprise about half of the labs' projects.

#### Competitors in cloud technology:

Others companies have developed their own clouds. Oracle has its customer experience cloud (CX Cloud Suite) that is focused on various AI and machine learning applications. Oracle is constantly improving upon its cloud platform. Purchase of Crosswise is an effort in this direction. Evaluation of Oracles existing and ever increasing enterprises data aims to provide better customer services. Data of Microsoft is available at Microsoft Dynamics 365, Microsoft Power BI and Microsoft Azure. Salesforce is competitors of both Adobe and Microsoft clouds. It competes with Adobe with its Marketing Cloud. It also competes with Microsoft with its sales cloud. There is thus intense competition from other companies, in application of clouds in various fields.

The strategy adopted by Adobe to compete with its competitors is of collaboration. To compete with common competitor, Adobe has entered into arrangement with Microsoft. Under this arrangement, services of Adobe Experience are available on Microsoft Azure. AI of Adobe's Sensei can access and use data from Microsoft's CRM and combine it with experience cloud. Data can be in any form namely, statistics, documents, images, illustrations or animations. While Microsoft data is usable by Adobe, the reverse facility is not available yet. Adobe has similar arrangements with Amazon. Future work is in progress. To retain their competitive edge, Adobe and Microsoft are also endeavoring to share their core libraries based on AI ( library of 'Sensei' of Adobe and library of 'Cortana and search tools' of Microsoft respectively). This will also enable Adobe to compete with Salesforce's artificial intelligence platform, Einstein for its expansion of business in CRM AI. Microsoft also plans to make Adobe's e-signature system their preferred e-signature solution, and Adobe would make Microsoft's new chat-based workspace their preferred collaboration tool on their cloud offerings.

Despite competition, Adobe India has been able to undertake cloud based diversifications for business in education, Government, Banking, Financial Services, Insurance and retail sectors. In SME<sup>16</sup> sector, it is working with numerous industries to streamline their workflow. In enterprise business it has large value contracts with strategic enterprises in various sectors<sup>29</sup>. Adobe is involved in various projects in Gujarat that have enabled electronic issue, management and storage of various documents. Another area of application is e-commerce as reflected in adobe's collaboration with Tata- CLiQ.

Tata- CLiQ is a fast developing Indian e-commerce website where shopping for branded goods is on-line. The goods are delivered from the physical stores of various retail outlets of Tata Group to its over one million high end customers. The customers can pick up from as well as return to the retail outlet stores. This combines the benefit of in-store shopping and the conveniences of online shopping. It owes its success to the Adobe Experience cloud (including Adobe Media Optimiser, Adobe Analytics, Adobe Campaign and Adobe Target). Adobe Analytics creates customer segments and assists in ascertaining their needs of customers of luxury brands so that personalised services are offered to them on website and mobile applications. Adobe Campaign creates personalised campaigns. Adobe Media Optimizer assists in delivery of the relevant content to luxury brand customers. Other advantages of Adobe experience cloud to Tata-Cliq include increased volume of sales; reduced operational costs and brand affinity.

Thus entire competition revolves round CRM. Capabilities required for CRM include analysis of data, recognition of facial, speech and object etc. All companies are trying to get expertise in some of these features. For Adobe to remain in competition, continuous research and innovation is the only way out.

#### Innovation strategy:

The innovative strategy at Adobe India revolved around preparations for shift from traditional license based delivery to the subscription based delivery of software through cloud. Even prior to such move by Adobe, other software companies have adopted subscription based delivery mode through cloud. This was a disruptive innovation and required a well planned innovation strategy for the move to succeed. Not all industries or even all industry players in an industry can successfully achieve success in this changed business model. In the absence of proper innovation strategy the chances are that the move, having far reaching consequences, would fail. Requisite structural, functional, financial and other changes in the company have to be evaluated and proactive action has to be taken before actual change. The competitors and their reaction also need careful analysis.

A few essential steps need to be taken for such a change. The first pre-requisite is the availability of sound Cloud technology. If required, company may have to collaborate and partner with cloud-platform providers. For an existing product, it has to be ensured that value additions to the services offered are in place and company is capable of continuous technological and other innovations to generate continued interest of its customers. Additional value was created by Adobe, for example, by acquiring Behance. Company may examine need or otherwise of collaborations mergers/ acquisitions etc. Mergers may be Horizontal (where the two merging companies shared the same market / product line). Merger of Adobe India with Adobe software India Private limited falls in this category. Merger may be Conglomerate (where merged entities did not have any common business area or relationship). Merger of Adobe India with Efficient frontier Technology India Private Limited falls in this category. However merger is useful as the product/ services of merged entities complement or supplement each other.

Once it is decided to go in for the subscription model it needs to be decided whether change should be immediate or in a phased manner. There may be a need to continue license mode in parallel with the subscription mode at least initially for the existing customers. However, running two business models in parallel involves huge expenses and cannot be viable alternative.

The new system must address recovery, and security concerns. Organizational changes are involved. For example, the accounting team has to gear up from managing up-front revenue recognition and a few large contracts to billing millions of customers. Further, price is a major factor that determines success or failure of subscription model. Keeping prices and bundle of services low is a must.

Structural, functional, managerial changes that would be necessitated would have to be identified. For example, will sales personnel who are used to making large license-plus-maintenance deals need training to deal with smaller monthly or yearly subscription packages. The work of accounts wing may increase manifold from a few transactions to millions of transactions.

If new markets are captured, the foreign currency and tax concerns would also have to be addressed. Other considerations include the capabilities of the company- financial and other; technology; environment in the target areas of operations and the financial and other impacts that would be associated with the change. A company after study may discover technological, cultural or market perception-based barriers and address them beforehand.

#### Future Challenges for Adobe:

The preferences and expectations of the customers undergo rapid changes as and when either new or improved products or services are developed or new devices are acquired by them. No company in high tech field can, therefore, afford to remain satisfied with such products and services offered by it that meet the present requirements of its customers. The existing services have to be improved upon and new products have to be developed to meet future needs. Further diversifications that leverage the company's capabilities are essential not only to increase revenues/ profits but also to remain relevant. That is the only way to ensure that it remain competitive vis-à-vis its competitors and gains more and more market share. Its present share is less (Exhibit-7) and there is scope for increase in market share.

In this context, Adobe India shall also have to keep itself ready to face challenges from the following:

- a) The devices<sup>32</sup> with competing products - Some companies have already started putting image editing and video software (that competes with Adobe's products) into smart phones and tablets for a low or no cost. Hardware and Camera manufacturers may also pre-install their own software and sell as the bundled products<sup>33</sup>. If competing products are available free on some devices there is no reason why would customer incur expenditure by way of recurring subscriptions for Adobe's products.
- b) The competing research - Research into new areas would have to be accelerated to get first movers advantage. For example Adobe has suite of updates for Sensei<sup>34</sup>, the company's platform for artificial intelligence competes with that IBM's Watson and Sales force's Einstein.
- c) Marketing channel and other partners - There can be no permanent partners and poaching cannot be ruled out. Adobe has already changed its market policy<sup>35</sup>. The marketing policy may require constant review to retain channel partners.
- d) Matching prices -The toughest challenge will be on pricing front. There would be a need to rationalize prices at the cost of profits.

References:

1. Certificate of incorporation.
2. [www.mca.gov.in](http://www.mca.gov.in)
3. Standalone Balance Sheet of Adobe Systems India Private Limited for period 01/04/2011 to 31/03/2012.
4. [www.mca.gov.in](http://www.mca.gov.in)
5. Software Technology Park Scheme.
6. <https://www.stpi.in/11025>.
7. The special resolution of Adobe Systems India Pvt. Ltd. dated 29th September, 2007.
8. [www.mca.gov.in](http://www.mca.gov.in)
9. Memorandum and Articles of Association of Adobe Systems India Private Limited [www.mca.gov.in](http://www.mca.gov.in)
10. The special resolution dated 29th September, 2007.
11. [www.mca.gov.in](http://www.mca.gov.in)
12. Overview of Adobe Systems India Pvt. Ltd.
13. <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=25792644>
14. Indian subsidiary of US company does not constitute PE - Article of US-India tax treaty.
15. [https://www.taxpundit.org/phocadownload/Taxpundit\\_Reporter/Taxpundit\\_Reporter\\_2017/December\\_2017/1217Taxpundit34.pdf](https://www.taxpundit.org/phocadownload/Taxpundit_Reporter/Taxpundit_Reporter_2017/December_2017/1217Taxpundit34.pdf)
16. Order of The High Court of Allahabad dated 6th September, 2007
17. [www.mca.gov.in](http://www.mca.gov.in)
18. Oder of Delhi High Court in Adobe Systems Incorporated vs Assistant Director Of Income Tax dated 16 May, 2016
19. <https://indiankanoon.org/doc/33553801/>
20. Order of the income tax appellate tribunal Delhi bench: ITA No.1163/Del/2014 Assessment Year: 2009-10
21. [https://www.taxpundit.org/phocadownload/Taxpundit\\_Reporter/Taxpundit\\_Reporter\\_2017/December\\_2017/1217Taxpundit34.pdf](https://www.taxpundit.org/phocadownload/Taxpundit_Reporter/Taxpundit_Reporter_2017/December_2017/1217Taxpundit34.pdf)
22. Adobe pays €35m tax on €1.9bn revenue-Irish examiner
23. <https://www.irishexaminer.com/business/adobe-pays-35m-tax-on-19bn-revenue-457707.html>
24. Adobe shows its creativity with Ireland tax base Share
25. <https://www.ft.com/content/6273646e-fb77-11e2-8650-00144feabdc0>
26. Search jobs efficient frontier India pvt ltd-
27. [http://www.jobs-bank.com/company\\_details.php?admin=1&cid=6292](http://www.jobs-bank.com/company_details.php?admin=1&cid=6292)
28. "XBRL financial statements duly authenticated as per section 134 (including Board.pdf".
29. [www.mca.gov.in](http://www.mca.gov.in)
30. Adobe Acquires Efficient Frontier To Boost Its Digital Marketing Solutions, [Robin Wauters@robinwauters](mailto:RobinWauters@robinwauters) / Nov 30, 2011
31. <https://techcrunch.com/2011/11/30/adobe-acquires-efficient-frontier-to-boost-its-digital-marketing-solutions/>
32. Adobe Adds Another \$400 Million to Its Ad Business Shopping Spree
33. <http://allthingsd.com/20111216/adobe-adds-another-400-million-to-its-ad-business-shopping-spree/>
34. India has significant role in Adobe's transformation journey-- From an abysmal business, Adobe started to bring all its changes to Indian market simultaneously
35. <http://www.rediff.com/business/report/india-has-significant-role-in-adobes-transformation-journey/20150616.htm>
36. Adobe Counteracts Software Piracy in India
37. <http://www.channeltimes.com/story/adobe-counteracts-software-piracy-in-india/>
38. Adobe executives discuss the company's move from selling shrink-wrapped products to offering web-based software and services.
39. <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/reborn-in-the-cloud>

40. Adobe creative Suite
41. [https://en.wikipedia.org/wiki/Adobe\\_Creative\\_Suite](https://en.wikipedia.org/wiki/Adobe_Creative_Suite)
42. Software as a Subscription, not as a Service
43. <http://cio.sia-partners.com/software-subscription-not-service>
44. Backlash begins against Adobe's subscription-only plan
45. <https://www.computerworld.com/article/2497273/enterprise-applications/backlash-begins-against-adobe-s-subscription-only-plan.html>
46. Adobe competitors pounce after subscription backlash
47. <https://www.cnet.com/news/adobe-competitors-pounce-after-subscription-backlash/>
48. Adobe Systems Inc financials
49. <http://financials.morningstar.com/income-statement/is.html?t=ADBE&region=usa&culture=en-US&ownerCountry=USA>
50. Relevant financial statements under companies Act filed with Ministry of Company Affairs
51. [www.mca.gov.in](http://www.mca.gov.in)
52. Adobe considers India as an important innovation hub for product development
53. <http://www.firstpost.com/tech/news-analysis/adobe-considers-india-as-an-important-innovation-hub-for-product-development-3691639.html>
54. Adobe- Our solutions
55. <https://www.adobe.com/in/about-adobe/fast-facts.html>
56. Reskilling our R&D engineers for next wave of technology: Adobe India – Article by Shanmugh Natarajan, Managing Director-Adobe India
57. <https://economictimes.indiatimes.com/tech/software/reskilling-our-rd-engineers-for-next-wave-of-technology-adobe-india/articleshow/62426377.cms>
58. Adobe Careers
59. [https://adobe.wd5.myworkdayjobs.com/external\\_experienced/job/Bangalore/Research-Scientist\\_54723-1](https://adobe.wd5.myworkdayjobs.com/external_experienced/job/Bangalore/Research-Scientist_54723-1)
60. Emphasis on research, cloud to herald digital transformation in India: Adobe
61. <https://cio.economictimes.indiatimes.com/news/cloud-computing/emphasis-on-research-cloud-to-herald-digital-transformation-in-india-adobe/53376747>
62. Always make the winning move- With customer insight others don't have
63. <https://strategyn.com/innovation-strategy/>
64. You Need an Innovation Strategy - Gary P. Pisano
65. <https://hbr.org/2015/06/you-need-an-innovation-strategy>
66. Market research adobe systems.
67. [http://tippie.biz.uiowa.edu/krause/s17\\_ADBE2.pdf](http://tippie.biz.uiowa.edu/krause/s17_ADBE2.pdf)
68. [http://tippie.biz.uiowa.edu/krause/s17\\_ADBE1.pdf](http://tippie.biz.uiowa.edu/krause/s17_ADBE1.pdf)
69. Challenges from emerging technologies
70. <http://www.adweek.com/digital/adobe-and-ibm-are-rolling-out-more-artificial-intelligence-tools-for-brands/>
71. Adobe revamps its channel structure
72. <http://www.dqweek.com/adobe-revamps-its-channel-structure/>

Exhibit 1 (Competing products)

Adobe product	Product description	Alternates available (on App stores)
Photoshop	Modify and manipulate pictures	Pixelmator, Acom. Photshop elements, Auotodesk, Sketchbook, GIMP.
Illustrator	Vector graphic editor	Sketch, iDraw, Arband, inkskape
Fireworks	Bitmap and vector graphic editor	Sketch, Webcode
Indesign	Desktop publishing software	Quarlpres, Pages, SwiftPublisher, Scribus
Lightroom	Manage digital images	Aperture, darktable, Corel, Aftershot,

		Capture one.
Dreamweaver	Web design and development application	Coda Sublime Text.
Premiere	Time-line based video editing software	Final cut Pro, Lightworks
After effects	Digital motion graphics, visual effects, and compositing app	Motion, Blender
Audition	Digital audio workstation	Logic Pro X, Audacity, Fission, Avid Pro

Exhibit 2- Actions taken by Adobe’s competitors

Competing Company	Product	Action
Corel	CorelDraw, PaintShop Pro, AfterShop Pro, and Painter.	Permitted free trial of its software to existing Adobe users for 30 days. They could buy Corel software at reduced cost.
Xara	illustration and photo-editing software for Windows, but not on other operating systems.	Reduced, by 100 \$, the price of its product for the existing Adobe users with added advantage of free upgrade to future new version.
Quark	QuarkXPress -software for desktop publishing supplanted by adobe-InDesign	Permitted its old customers of its old version of QuarkXPress to upgrade to its new version without any cost.
Nuance	PDF tools	Initiated a campaign to attract higher-education institutions
Mac	Pixelmator	Released new version of its illustration tools that compete with Illustrator of Adobe.

Exhibit 3- Trend of increase in net income for Adobe Inc

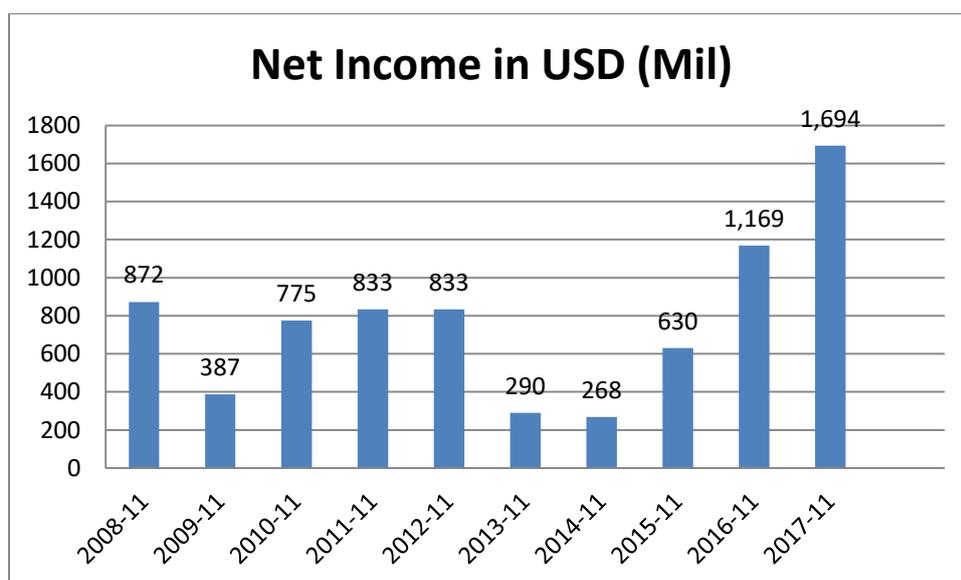


Exhibit 4- Trend in increase in revenue for Adobe Inc

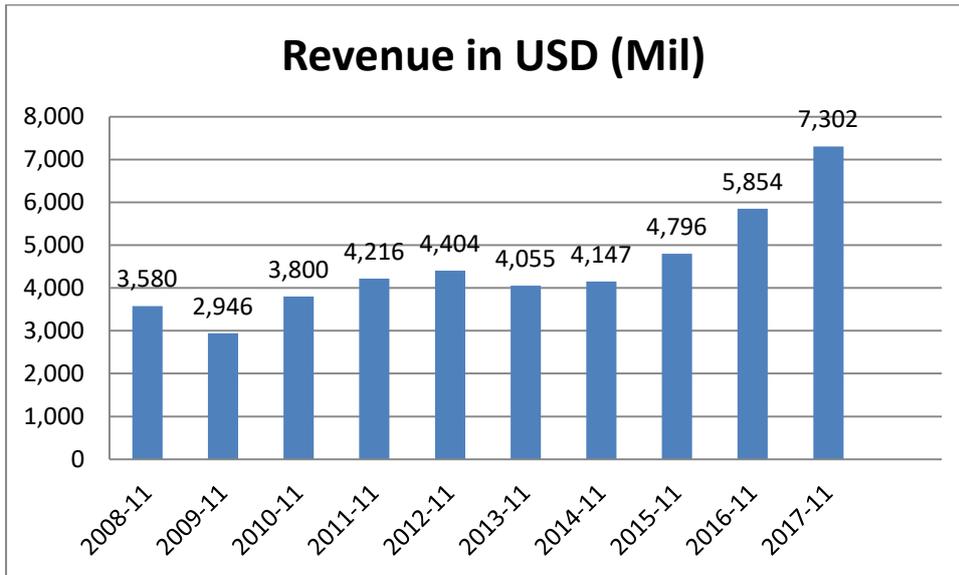


Exhibit 5- Trend in increase in revenue for Adobe India

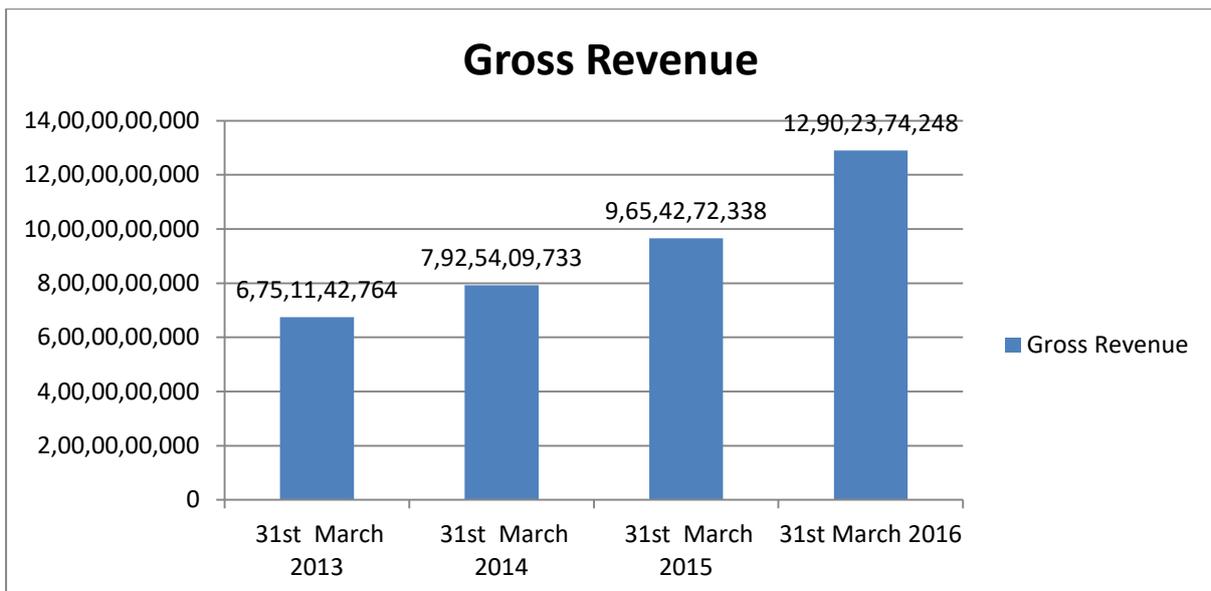


Exhibit 6- Trend in increase in net profit for Adobe India

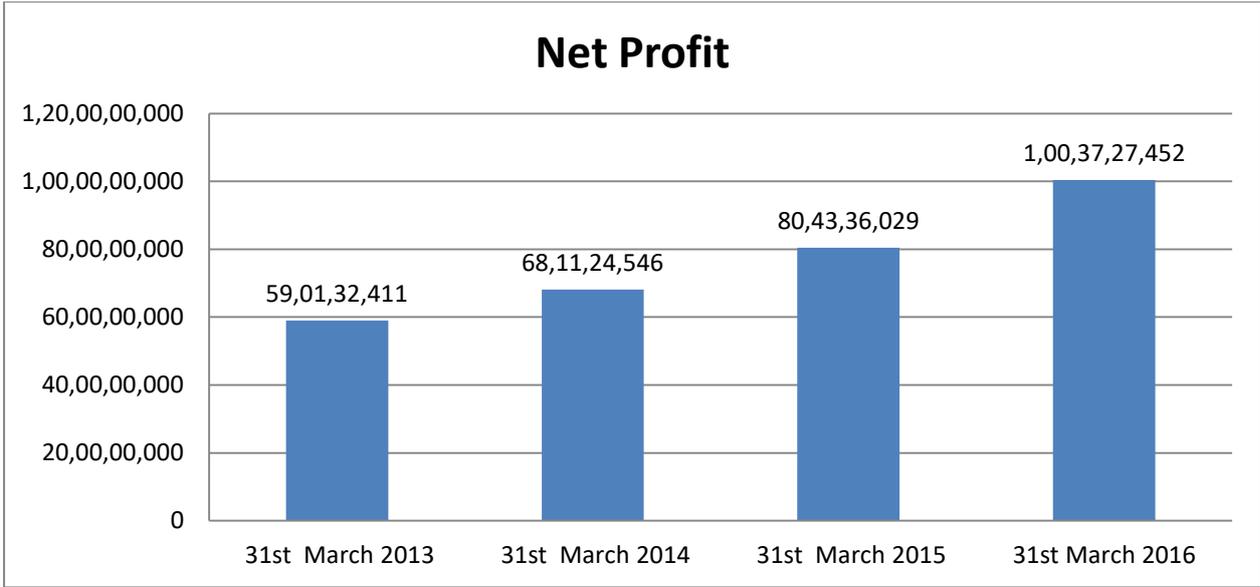
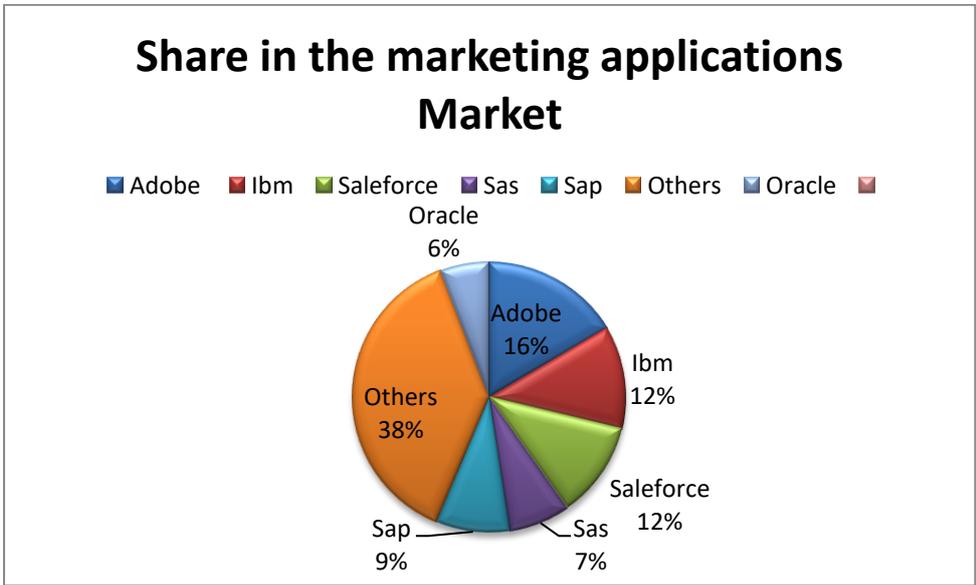


Exhibit 7- Share of Adobe Inc in marketing application market



# AI BASED TRAFFIC MANAGEMENT AT URBAN INTERSECTION

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**Abstract** — Due to the consistent increase in the volume of traffic over the years, conventional traffic control procedures have not been able to efficiently manage the flow of traffic, especially at intersections. Artificial intelligence may provide an effective solution to traffic related problems. The present paper seeks to propose an artificial intelligence based solution to maximize vehicular throughputs and minimize delays at intersections. The proposed system uses fuzzy logic and image processing analysis for control of traffic at local intersections. The system is an improvement over existing Traffic Light Controllers. Conventional traffic light controllers don't operate on the basis of real time data, rather, they consider heuristic data. Thus, the solutions provided by such systems are rendered largely ineffective in real time situations. The proposed system optimizes switching of traffic lights and prevents congestion of traffic because of its ability to sense the area where the traffic is getting more dense by a camera; the controller extends green light time where traffic is getting accumulated, and avoids situations similar to when conventional traffic light systems show a red light even if there is no corresponding traffic.

## **I. INTRODUCTION**

Traffic signal control is one area in intelligent transportation systems (ITS) that has received significant research attention over the years due to its ability to directly affect urban transportation systems. Congestion of traffic has become a serious problem today. Increasing urbanization and vehicles have only aggravated the problem. Slow development of roads and highways, and opposition of the public to street widening at several places have compelled city managers to seek optimal uses of present infrastructure to effectively manage traffic flow.

Transportation systems are dynamic and complex, and difficult to exactly model. Due to this, several current methods lack sound theoretical bases (Abbas et.al,2001). Transportation system modeling is important to effective control system development and physical process simulation. Majority of current traffic light controllers use pre-defined hardware that function as per an inflexible program which doesn't modify on a real-time basis. The present study develops a fuzzy traffic controller to control traffic at intersection under different conditions. The proposed controller regulates timing of traffic light and phase sequences on the basis of real time data to ascertain efficient vehicular flow with minimum waiting time, delay time and queue length. Efficiency of proposed fuzzy inference system based intelligent controller has been confirmed on the basis of comparison of experimental results of vehicle-actuated controller (VAC) and proposed fuzzy traffic controller (FTC).

Some cities use programmed software for traffic control. However, such software programs do not work efficiently and sufficiently in times of heavy traffic. Employment of traffic guide officers at times of heavy traffic may solve the problem to a degree. Fuzzy logic is used for model development of physical processes. Fuzzy models are relatively less complex externally, easy to understand, and appropriate for non-linear processes. As such, it is advantageous to work with models that are governed by fewer rules. The process selected in the present paper emphasizes reducing the waiting time of vehicles at a single intersection. The model is developed using MATLAB software. The rest of the paper is structured as follows: Section II lays down literature review. Methodology & results are explained in section III. Section IV contains concluding remarks.

## **II. LITERATURE REVIEW ON TRAFFIC LIGHT CONTROL SYSTEM**

Post 1960, many systems have been proposed for traffic management at intersections and traffic signal time control. Most methods have relied on fixed-time or pre-time controllers and historical data to establish traffic signal time (Abdulhai et.al,2003). Fixed-time method does not consider current traffic demands and is unable to manage unexpected traffic conditions. This method considers historical traffic volume, and the traffic signal cycle time is separated into many phases. Each phase lasts for a fixed amount of time (called the safety time) before switching to the next phase. Safety time increases per hour if cycle time is short. Therefore, intersection capacity decreases with smaller cycle times. Longer cycle times lead to longer

waiting times and queues. To resolve this issue, Webster put forth a formula which considered flow rate of every lane in a link(Webster et. al, 1958). The formula helps determine an optimal cycle time and suitable green time duration in every phase. Fixed-time methods are unable to predict and react to real time traffic flow and patterns, and are inappropriate for events like accidents and other traffic disruptions. To improve traffic control, real time controllers were introduced in the 1970s. Traffic-actuated methods of control use inductive detectors for actual traffic condition observation. Traffic-actuated controllers can sense if the last vehicle in queue at the stop line in the red phase has passed. Such sensing is helpful for effective green time extension or termination, and done through gap measurement between vehicles. Green time termination is done when the gap between vehicles is more than the maximum stipulated gap. Optimal detector placement at intersections affects actuated method performance.

## 2.1 Review of Various Traffic Control Systems

Vehicular traffic in urban areas varies with space and time, just like human behavior. Controlling such traffic warrants great degrees of adjustment; traffic control solutions must be responsive to traffic variability. The goal is that the responsiveness must contribute and reciprocate better traffic performance specially at intersectional traffic and net workings (Gartner et. al,1983). It is noteworthy that the degree of traffic responsiveness depends on several factors such as strategy sophistication of strategy, capacity of hardware, surveillance and communication equipment for communication, and its operation. Table2.1 shows major UTC (Urban Traffic Control) systems functioning or under development across the globe. The systems included in the following sections are: SCOOT (UK), SCATS (Australia), OPAC (USA), PRODYN (France), UTOPIA (Italy), SAGE (France), STAUKO/VERON (Germany).

**Table 2.1 : Characteristics of various operational adaptive traffic control systems**

Model	Detector	Control	Solution	Architecture	Prediction	Parameters	Actuated	Objective
SCOOT	US	Pro & Re	DCO	Central/local	Yes	S, C, O, PS	Yes	Stops, delay And capacity
OPAC	AL	Pro	TCO	Central/local	Yes	S, C, O	No	Delay
SCATS	SL	Re	Rule base	Central/local	No	S, C, O	Yes	Capacity

UTOPIA	US	Pro	TCO	Central	Yes	S, PS	Yes	Stops and Delay
PRODYN	AL & US	Pro	TCO	Decentral/local	Yes	S, O	No	Total delay
MOTION	AL	Pro & Re	TCO	Central/local	Yes	S, C, O, PS	Yes	Delay and Stops
RHODES	AL	Pro	TCO	Hierarchical	Yes	S	No	Delay and Stop
ACS Lite	SL & AL/US	Pro & Re	DCO	Central/local	No	S, O	Yes	Phase utilization

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Detector: SL-Stop line, AL-Advance location, US-Upstream location  
 Control: Re-Reactive, Pro-Proactive  
 Solution: DCO-Domain constrained optimization, TCO-Time constrained optimization  
 Parameters: S – Split, C – Cycle, O – Offset, PS-phase sequence

### III. PROPOSED MODEL

The present study proposes a vision based traffic control system which collects real time data and on the basis of such data, decides which traffic light to show. This implies that if on an intersection one road is relatively empty while other roads are heavily occupied, the system would read the data in real time and would not display green light for the road that is relatively empty while keeping traffic on other roads waiting; if the road is unoccupied, the system would signal the traffic on other roads to move on the basis of density of traffic on those roads, thus enabling systematic and efficient flow of traffic while reducing waiting time and congestion. The proposed algorithm works effectively in different situations and can retime green traffic light to ensure efficient traffic management.

#### 3.1 Methodology

The framework involves development of critical components such as junction controller, and corridor controller. In this study a real-time traffic control model of an isolated intersection to estimate maximum green time for each phase of the cycle is developed using fuzzy logic model for vision-based system. It also address the problem of short term fluctuations.

Subsequently a corridor control model to estimate common cycle time to coordinate signals of the given corridor is developed. Real-time traffic data is captured at the traffic intersection by applying image processing technique and the resultant output is given as input into Fuzzy Inference System. This paper presents a MATLAB simulation of fuzzy traffic control System for controlling traffic flow at an isolated signalized intersection. The MATLAB algorithm has been developed on the basis of waiting time and vehicle queue lengths at current and other phases. The developed models are evaluated using MATLAB simulation. The simulator supplies detector information to the models, which in turn determine required green times and cycle times to the simulator. Finally, the operational performance of these models are compared against vehicle actuated controller.

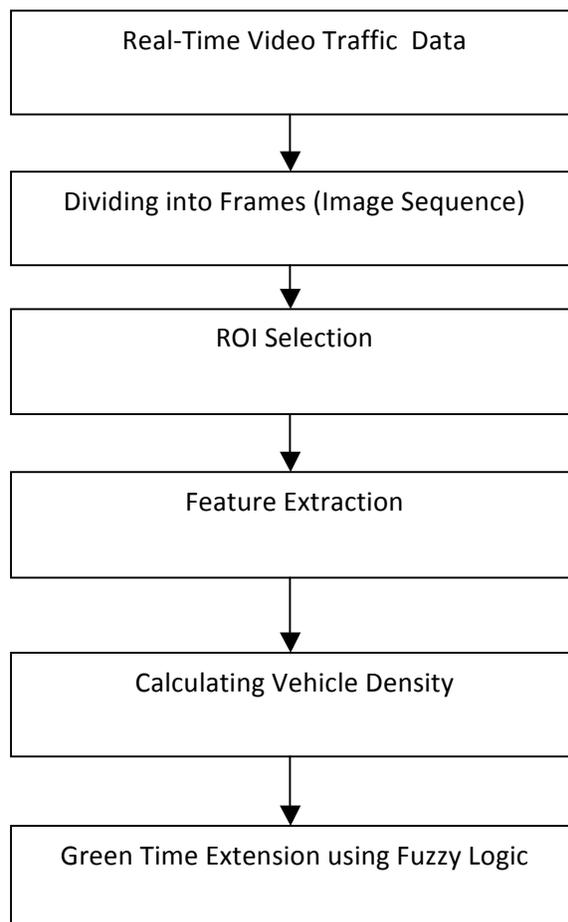


Fig1. The Process of Proposed Model

### **3.2 Real-time Traffic signal control**

In particular, this method can be used to eliminate the need of accurate prediction models associated with dynamic programming modeling and its variants. It is more appropriate in the present case of non-lane based movement and heterogeneous vehicle composition because the predictions are highly inaccurate in such conditions(Cai et.al,2009). Artificial intelligence is a sub-field of machine learning, and is different from supervised learning methods such as neural networks. For supervised learning methods, there must be a set of training pairs with input and expected output values(Nalge et.al,2011). The training is to optimize the weights of neural network such that the outputs from neural networks are as close to the expected outputs as possible. For some applications, it is extremely difficult to obtain such training pairs for supervised learning, and reinforcement learning is thus introduced to solve this problem. Reinforcement learning can learn directly from the interaction between the control agent and environment.

The concept of reinforcement learning is straight forward. The control agent first senses the environment and identifies its current state. Based on the current state of the environment, the agent selects an action from the action set and applies it to the environment. The state of the environment affected by this action will change consequently. The control agent observes the state change and concludes a reward (penalty) value from the state change. This reward (penalty) value and the resulting new state are then used to update the control agent (Mirchandani et.al,2001).

## **IV. CONCLUSION AND FUTURE WORKS**

The algorithm is tested on a typical four-phase isolated intersection for low, medium, and high traffic condition. Results indicates that model performed much better for medium and high traffic flows. It is also found that a pre-determined minimum green time with pre-time control id advisable for low traffic conditions. In order to bring adaptive feature to vision based traffic controller a fuzzy learning based adaptive control model is developed. The model determines maximum green time for each phase of the subsequent cycle by considering the traffic flow pattern on all the approaches. The model is tested on a typical four phase isolated intersection for saturated traffic condition. Although model demonstrated its ability to adapt changing traffic

flow pattern, the performance improvement is significant because the model is able to respond to traffic fluctuations on real time.

In future, research may focus on fuzzy control methods for investigating even more complex situations involving multiple intersections and intricate traffic patterns. Further, fuzzy control methods may also be examined in railways.

## References

1. Abbas, M.M. (2001) Real Time Offset Transitioning Algorithm for coordinating Traffic Signals, PhD thesis, Purdue University, Indiana, USA.

2. Abdulhai, B, Pringal, R. And karakoulas, G.J (2003). “Reinforcement Learning for true adaptive traffic signal control,” Journal of Transportation Engineering (ASCE) Vol, 129, pp. 278-285.

3. Cai, C., Wong C. K. and Heydecker, B. G. (2009). “ Adaptive traffic signal control using approximate dynamic programming,” Transportation Research Part C , vol. 17 pp. 456-474.

4. Gartner, N. H., (1983), “opac a demand-responsive strategy for traffic control,” TRR: Journal of the Transportation Research Board, pp.75-81.

5. Mirchandani, P. and Head, L. (2001), “A real-time traffic signal control system: architecture, algorithms, and analysis”, Transportation Research Part-C, Vol. 9, pp. 415-432.

6. Nalge, M., Nair, R., kancharla, C., Mathew, T. V. and Rangaraj, N. (2011), Real-time Adaptive control policy for intersection with downstream detection in 18th World Congress on Intelligent Transport Systems’, number 3254, Orlando.

7. Webster, F. V. (1958), Traffic signal settings, Technical Report 39, Great Britain Road Research Laboratory. Road research technical paper.

**Title: BUSINESS DEVELOPMENT AND WOMEN EMPOWERMENT THROUGH  
RURAL WOMEN WORKER COOPERATIVES: AN EMPIRICAL STUDY WITH  
SPECIAL REFERENCE TO DAIRY COOPERATIVES IN KERALA, INDIA**

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**BUSINESS DEVELOPMENT AND WOMEN EMPOWERMENT THROUGH RURAL  
WOMEN WORKER COOPERATIVES: AN EMPIRICAL STUDY WITH SPECIAL  
REFERENCE TO DAIRY COOPERATIVES IN KERALA, INDIA**

**Abstract**

**Purpose:** The purpose of the study is to measure the business development and progress of women empowerment through the performance of dairy cooperatives in rural Kerala.

**Design / Methodology / Approach:** Using random sampling techniques, structured interviews were conducted with women involved in three different dairy cooperatives.

**Findings:** The study shows that the dairy cooperatives have been instrumental in the business development and economic empowerment of women, which in turn improved the living standard of the rural people of the studied areas.

**Interpretation:** The dairy cooperatives of rural Kerala play an important role in the women empowerment of rural Kerala.

**Practical Implications:** The economic gains and other benefits provided by a dairy cooperative contribute towards greater empowerment of rural women, measured across five different dimensions of women empowerment.

**Research Limitation/Implications:** The outcome of the study may not be generalized as the study heavily depended on the sample opinion as well as the secondary data collection from the published report of dairy cooperatives. The research findings could enable the management of dairy cooperatives to improve gender policies, taking in to account the importance of women empowerment in the broader framework of development objectives.

**Originality / Value of the Study:** Even though the state has successful worker cooperatives across business sectors, there do not exists exclusive studies which establish the link between women empowerment and rural women worker cooperatives.

Keywords: Rural Cooperatives, Dairy cooperatives, women empowerment, Rural Kerala, Milk Marketing Federation

## **1. Introduction**

Rural cooperatives play a dominant role in the upliftment of rural women of India. A rural cooperative may be defined as “a group of producers who are basically workers who have organized themselves to help each other for their own benefit” (Frederick, 2012). It comes in to existence with the aim of improving the living standards of the rural community as a whole. In general, a cooperative is a business owned and democratically controlled by the people who use its services and whole benefits are derived and distributed equitably based on use .

The promotion of dairy cooperatives is one of the strategies of rural development in India. As dairy products are highly perishable, there are high costs for its timely transport and processing. This leads to an oligopolistic market structure where cooperatives are perceived as a successful way to strengthen the producer’s position versus traders and processors. The current research looks at the potential of Dairy cooperatives for women’s empowerment in rural Kerala.

## **2. Background of the Study**

Out of the population of 1299 millions, 885 millions (ie,68%) of India’s population live in village . A significant percentage of population still depends on livestock farming as the principle livelihood source. (World Bank, 2018). The Dairy Cooperatives plays a pivotal role in the development of rural women and hence contribute to the rural economy of the nation. The present study is conducted to explore the potential of Dairy Cooperatives in the empowerment of women rural Kerala.

## **3. Review of Literature**

Early works on cooperatives by different disciplines have concentrated on the problems, performance and future prospects of rural cooperatives. According to Valsamma (2005), there is no other agency as effective and suitable other than a strong and viable co-operative system to alleviate the sufferings of the people under the trap of moneylenders. Research on Women’s Industrial Co-operative Societies (WICS) in Kerala by Vasanthakumari (2006) identified marketing as the most important problem faced by the

these societies . The other problems in the order of their severity are finance, raw materials, labour, technical, managerial and power. All these measures can go a long way towards the betterment of the WICS.

Different authors have defined the term ‘ Women Empowerment’ in different ways .Alsop et. al (2006) has defined the term as a group’s or individual’s capacity to make effective choices, that is, to make choices and then to transform those choices into desired actions and outcomes.” While, Mosedale 2005 have defined the term as “A spiral, changing consciousness, identifying areas to target for change, planning strategies, acting for change, and analysing activities and outcomes’. Burchi and Vicari (2014) support the hypothesis that membership in a primary producer cooperative has a positive impact on intra-household decision-making power of women. Meera and Krishne Gowda (2013) conducted a case study of rural women in dairy cooperatives in Karnataka , by interviewing 160 women of different WDCS they assess economic empowerment in terms of increase in income, access to cash, access to credit, knowledge of husband's income, confidence in financial transactions and aspiration for economic autonomy. Using a before-after approach, they claim that the annual dairy income has almost tripled after joining the WDCS and that 55 % of the interviewed women have access to credit facilities because of dairy cooperatives. They concluded that “the dairy cooperatives are playing a vital role by creating employment opportunities for women, access to income and access to credit. This is a sure march towards economic empowerment of women.”

The present study is initiated with a purpose to appraise the performance of Dairy Cooperatives in enhancing women empowerment in rural Kerala.

#### **4. Statement of Problem**

The problem statement of the current study is “Do the Dairy cooperatives under Kerala Milk Marketing Federation (MILMA) across the districts of Kerala contribute towards women empowerment of rural Kerala?

## **5. Objectives of the Study**

1. To search for whether the selected dairy cooperative contributed towards women empowerment through its operation in a rural area.
2. To identify whether the income from participation in dairy cooperatives contribute to greater economic autonomy of women.

## **6. Hypotheses of the Study**

H<sub>1</sub>: Cooperative action facilitates and promotes Women Empowerment by providing economic benefits and opportunities for participation and decision-making.

H<sub>2</sub>: Income from participation in dairy cooperative contributes to great economic autonomy of women.

## **7. Research Methodology**

### **7.1 Selection of Sample**

Out of 879 dairy cooperatives of Kerala Cooperative Milk Marketing Federation, 486 members from cooperative Dairies of four Districts have been taken at random as the sample for the present study. Out of 486 members 220 are women members while 266 are men members.

### **7.2 Questionnaire Used / Data Collection**

To collect the opinion of the members of various cooperatives, a close-ended structured questionnaire has been used. A number of items have been included in the questionnaire to know the gender composition of the members as well as the dimensions of women empowerment. The investigators have collected the data by visiting all the sample members of various dairy cooperatives. Secondary data has been collected from the annual reports and official websites of the dairy cooperatives for the period 2011 – 12 to 2017 – 18.

### **7.3 A Short Profile of Dairy Cooperatives in Kerala**

The Kerala Co-operative Milk Marketing Federation ( KCMMF or Milma) was registered as a co-operative society in 1980 with its head office in Thiruvananthapuram, as the implementing agency for operation Flood in the state of Kerala. It operates on the principle ‘ of the farmer, by the farmer an for the farmer’ Ernakulam Regional Co-operative Milk Producers’ Union Ltd (ERCMPU), Trivandrum

Regional Co-operative Milk Producers' Union Ltd (TRCMPU & Malabar Regional Co-operative Milk Producers' Union Ltd (MRCMPU) are affiliated to the Kerala Co-operative Milk Marketing Federation Ltd. The major objective of KCMMF is “the Socio-economic progress of the dairy farmer through procuring, processing and marketing of milk” The mission of milma is “farmers' prosperity through consumer satisfaction .

The Kerala Co-operative Milk Marketing Federation has four units, namely Ernakulam Dairy, Thrissur Dairy, Kottayam Dairy and Kattappana Dairy. The Union procures milk from farmers through affiliated Anand Pattern Dairy Co-operatives (APCOS) as well as from the traditional societies, which are not affiliated. The Union could ensure consistent and remunerative price to milk producers even when prices of most of other agricultural produces were volatile. The prosperity of 2.80 lakh odd milk producers of the state depends upon the Ernakulam Milk Union's ability to provide an assured and regular market and remunerative price round the year for the milk produced by them.

Ernakulam Milk Union has four dairy plants viz., Ernakulam Dairy at Tripunithura, Thrissur Dairy at Ramavarmapuram, Kottayam Dairy at Vadavathoor and Kattappana Dairy at Nirmala City. In addition, it has a Products' Dairy at Edappally, manufacturing Ghee, Sterilized Flavoured Milk, Peda, Ice cream, Yogurt etc. While milk from nearby societies are procured and processed at dairies, milk from hinterland is procured through 87 Bulk Milk Cooling Units (BMCUs) set up in the Dairy Co-operative Societies (DCS) and chilling centers located at Muvattupuzha and Chalakudy.

#### **7.4 Variables and its measurements**

The dependent variable, women empowerment is measured using a framework namely, women empowerment in agricultural Index (WEAI) developed by Alkire et al (2011). The WEAI framework is considered as the most appropriate framework for the current study as it is closely linked to agriculture.

The major items/ variables are

- (i). **Production:** This domain includes decisions about agricultural production, assessing sole or joint decision-making about food and cash crop farming, livestock, fisheries, and autonomy in agricultural production.
- (ii). **Resources:** This domain looks at ownership of, access to and decision-making power over productive resources such as land, livestock, agricultural equipment and credit.
- (iii). **Income:** This domain evaluates control over use of income and expenditures, in terms of sole or joint decision-making within the household.
- (iv). **Leadership:** This domain considers membership in economic or social groups and comfort speaking in public as measures for leadership in the community.
- (v). **Time:** This domain regards the allocation of time to productive and domestic tasks and the individuals` satisfaction with their leisure time.

## **8. Data Analysis & Findings**

Analysis of the data is presented in the following heads namely, Key Characteristics of the Respondents, Expected benefits of membership in Dairy cooperatives, Importance of dairying by farm size, Economic Implications of dairy cooperative membership for the respondents.

Data analysis using Spearman`s Rank Order Correlation between the level of women empowerment and the share of dairy income in the household income, as well as the correlation between the level of women empowerment in dairy production and the dairy returns per day is also represented. Finally a comparison of male and female members of Dairy Cooperatives on 5 measures of women empowerment through cooperatives is presented separately. (Refer table no.8.1 to 8.6)

### **8.1 Key Characteristics of Respondents**

The present study analyses the participation of 220 male and 266 female members in the dairy cooperatives of Rural Kerala. The interview is conducted among 266 female members in the age group of 22 to 70 of various diary cooperatives. The average number of family members of a female member

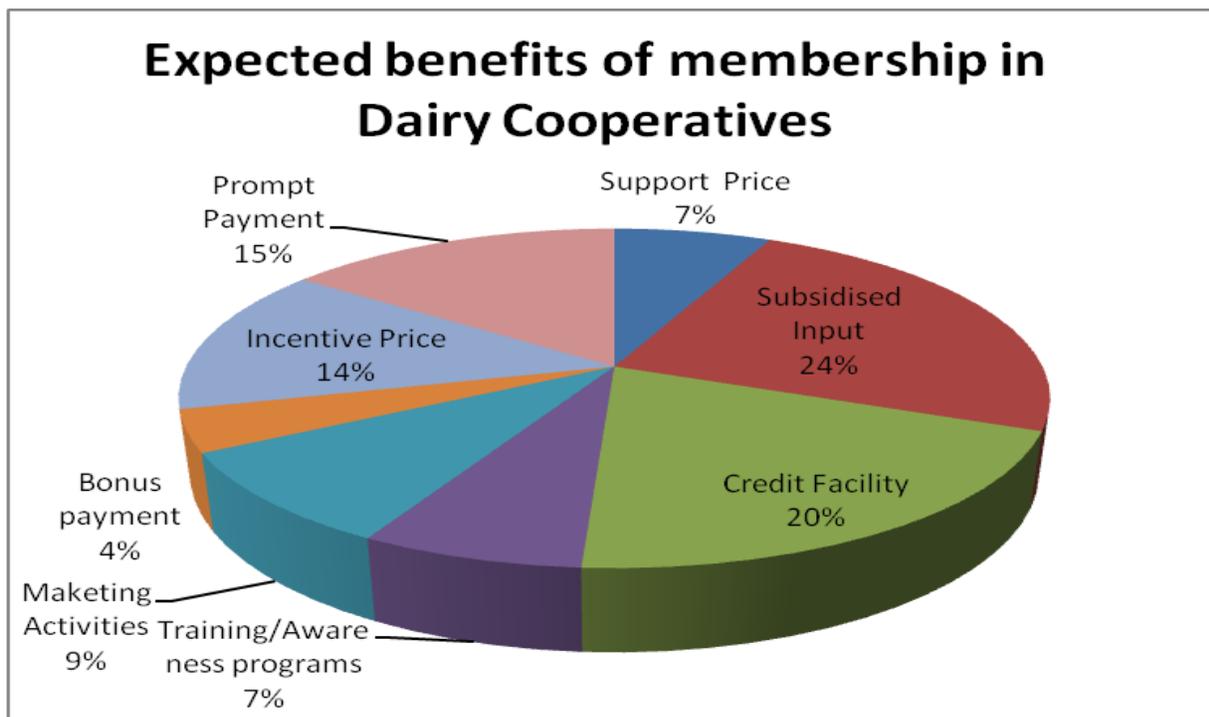
participant is 5. The annual gross earnings of the member participants is significant which is obtained as 0.014, using Mann Whitney U Test. The other details are furnished in table 8.1.

<b>Table 8.1 Key Characteristics of Respondents ( Mann Whitney U Test)</b>									
	All respondents (N=486)				Male Member respondents (N=220)		Female member respondents (N=266)		Significance *
Indicators	Mean	S.D	Min	Max	Mean	S.D	Mean	S.D	
Age (years)	35	8	22	70	34	8.1	41	8.01	0.408
Years of Education	9	9.5	2	14	10	10.5	8	8.5	0.012
Size of the farm ( Cents)	6	6.5	0	15	7.5	7.75	6	6.2	0.306
No of family members	6	3.2	2	8	5.5	3	5	2.5	0.419
Annual gross earnings ( values in 000'Rs per year )	300	320	150	450	354	362	179	129	0.014

## 8.2 Expected benefits of membership in Dairy cooperatives

The expected benefits of being a member of Dairy cooperatives are credit facility to member participants, subsidized cattle feed, support price at the time of reduced prize for dairy products, prompt payment at a regular interval, incentives, bonus and marketing activities for all dairy products. The details are depicted in table 8.2.

**Table No.8.2 Expected benefits of membership in Dairy cooperatives**



### 8.3 Economic Indicators of households

The economic indicators of households are detailed in table 8.3

**Table 8.3: Economic Indicators of Households by Male and Female members of Dairy Cooperatives**

Indicator	Male Member respondents (N=220)		Female member respondents (N=266)	
	Mean	S.D.	Mean	S.D.
Land size (ha)	4.8	3.5	3	1
Gross income (Rs/year)	0.8	1	1.6	0.95
Herd size (heads)	2.4	2	0.4	0.82
Share of gross income from dairying (%)	7.6	2.84	3.4	1.64
Total milk produced (liters/day)	18.8	18.8	5	4.7
Daily gross return from dairying (Rs/day/animal)	41%	18%	27%	26%
Daily gross return from dairying (Rs/day/animal)	79	41	38	39

#### 8.4 Correlation Between the Level of Women Empowerment and the Share of Dairy Income in the Household Income

To test the correlation between the level of women empowerment and the share of dairy income in the household income, the non-parametric variables, the spearman's rank correlation coefficient method is used. It is found that a significant positive correlation exists between the two variables( $r = .669$ ,  $p = 0.035$ )

**Table : 8.4 Correlation Between the Level of Women Empowerment and the Share of Dairy Income in the Household Income,**

Correlations			Level of women empowerment	share of dairy income in the household income
Spearman's rho	Level of women empowerment	Correlation Coefficient	1.000	0.669*
		Sig. (2-tailed)		0.035
		N	200	200
Share of dairy income		Correlation Coefficient	0.669*	1
		Sig. (2-tailed)	0.035	
		N	200	200
*Correlation Coefficient is significant at the 0.05 level ( 2-tailed)				

#### 8.5 Correlation Between The Level Of Women Empowerment in Dairy production And The Dairy returns per day .

The spearman's Correlation coefficient between the Level of Women Empowerment in Dairy production and the Dairy returns per day shows a significant positive correlation . It indicates that where dairying has a higher importance for the total household economy in relative terms, women are more likely to take

decisions about the dairying activities. Therefore it can be concluded that membership in dairy cooperatives increases women's autonomous decision making in dairy production.

**Table 8.5 Correlation between the level of women empowerment in dairy production and the Dairy returns per day .**

Correlations				
			Level of women empowerment in Dairy prouction	Dairy returns per day .
Spearman's rho	Level of women empowerment	Correlation Coefficient	1.000	0.469*
		Sig. (2-tailed)		0.025
		N	200	200
	Dairy returns per day .	Correlation Coefficient	0.469*	1.000
		Sig. (2-tailed)	0.025	
		N	200	200
*Correlation Coefficient is significant at the 0.05 level ( 2-tailed)				

### 8.6: Women empowerment Index

The empowerment index constructed based on 5 dimensions shows that there is a positive empowerment effect for women member participants of the study. Negative empowerment outcome is found only with two dimensions namely power on income usage and the available time for leisure activities. Power on income usage is still with male family members than female members. The details are furnished in table no. 8.6

**Table 8.6 Worker cooperatives empowerment**

Dimensions	Male member of Dairy cooperative A	Female member of Dairy Cooperative B	Average level of Empowerment A+B	Differences B-A
Dairy production	32%	48%	40%	16%
Access to credit facility	29%	38%	34%	8%
Power on Income usage	39%	35%	37	-4%
Leadership ability	25%	33%	29%	8%
Time availability	37%	28%	33%	-9%

Regarding the empowerment index discussed above and its five domains, the data shows that women in mixed cooperatives feel more empowered compared to women in single-sex cooperatives. The difference is especially high for control over use of income, purchase and sale of assets and ownership of land. For example, most of the women in mixed-gender DCS control the income from dairying, whereas in single-sex cooperatives men tend to increase their control over the dairy income.

It was hypothesised that Cooperative action facilitates and promotes Women Empowerment by providing economic benefits and opportunities for participation and decision-making. When the dimension like dairy production is concerned the hypothesis has to be accepted while power on income usage are concerned, the hypothesis can be rejected. It is revealed through the study that female members of the dairy cooperatives are less empowered to take decisions on usage of income.

## 9. Conclusions

It is observed in many of the studies that rural cooperatives have a potential to provide independent income for poor and rural women enhancing the well being of the whole family. With the intention of promoting women's economic autonomy, NGOs and Government have focussed their attention on dairy cooperatives.

The present study is initiated to contribute to the understanding of the impact of membership in a dairy cooperative on women's empowerment in the context of rural areas in Kerala. The study revealed that the households sell through dairy cooperatives produce a larger amount of milk per day and earn higher returns from dairying. They are also benefited from other facilities such as provision of feed stuff and veterinary services.

The women empowerment is measured across the entire five dimensions of women empowerment index and it is revealed that members are more empowered in terms of the three dimensions of women empowerment.

## **10. Recommendations**

The paper concludes that the scope of further empowerment of women through Dairy cooperatives is constrained by the way property rights and gender relations are structured in the state. Based on the findings the following suggestions may be done.

1. Most of the members of the Dairy Cooperatives are from medium income level as well as from higher caste. Management may take steps to improve the participation of all categories of people.

2. Communication system need to be improved in order to enable the rural Kerala to be aware of the cooperative movements by highlighting the services provided by Dairy Cooperatives for the economic benefits as well as for the empowerment of rural women.

3. It may be recommended to explore the possibility of a third kind of dairy cooperatives in form of a 'gender-sensitive' cooperative. Women and men can become shareholders in these cooperatives, but women are especially encouraged to participate and get special support, e.g. trainings.

4. Women's participation has to go beyond the formal reservations of seats at the village level. The long-term goal should be the equal participation of women as shareholders and directors of the cooperative.

5. Women should be involved in the dairy cooperative organizations not only at the village but also at the district and state level. Women in higher positions may be more successful in advocating for women's rights and in the development and implementation of programs designed for women.

### **11. Selected References**

1. Agarwal, B. (2007): Gender inequality, cooperation and environmental sustainability. In Baland, J.-M., Bardhan, P., Bowles, S. (ed.): *Inequality, Cooperation, and environmental sustainability*. Princeton University Press.
2. Ahmed, S.M, Chowdhury, M., Bhuiya, A. (2001): Micro-credit and emotional well-being: Experience of poor rural women from Matlab, Bangladesh. *World Development* Vol. 29, No. 11: 1957-1966
3. Alderman, H (1987): Cooperative Dairy Development in Karnataka, India: An Assessment. International Food Policy Research Institute.
4. Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A.R., Seymour, G., Vez, A. (2012): The Women's Empowerment in Agriculture Index. IFPRI Discussion Paper 01240.
5. Alsop, R., Bertelsen, M.F., Holland, J. (2006): Empowerment in Practice. From Analysis to Implementation. *Directions in Development*. The World Bank.
6. Anderson, S. (2007): The economics of dowry and bride price. *Journal of Economic Perspectives*. Volume 21, No 4: 151-174
7. Bernstein, P. (1976) 'Necessary Elements for Effective Worker Participation in Decision Making', *Journal of Economic Issues* 10: 490–522.
9. Birchall, J., Ketilson, L. H. (2009) Resilience of the Cooperative Business Model in Times of Crisis. Geneva: International Labour Organization.
10. Burdin, G., Dean, A. (2009) 'New Evidence on Wages and Employment in Worker Cooperatives Compared with Capitalist Firms', *Journal of Comparative Economics* 37(4): 517–33.
11. Cheney, G., Straub, J., Speirs-Glebe, L.. (1998) 'Democracy, Participation and Communication at Work: A Multidisciplinary Review', in Roloff, M. E. (ed.) *Communication Yearbook* 21, pp. 35–92. Los Angeles, CA: Sage
12. Cornforth, C. (1995) 'Patterns of Cooperative Movement: Beyond the Degeneration Thesis', *Economic and Industrial Democracy* 16: 487–489
13. Frederick, D.A. (2012): Co-ops 101. An introduction to cooperatives. Cooperative Information Report 55. USDA
14. Hanappi-Egger, E. (1996) 'The Hidden Trade-Offs of Cooperative Work: An Empirical Study', *Organization Studies* 17(6): 1011–22.

15.Pencavel, J. H., ed. (2013) *The economics of worker cooperatives*. Cheltenham: Edward Elgar Publishing.

16.Webb, T., Cheney, G. (2014) 'Worker-Owned-and-Governed Cooperatives and the Wider Cooperative Movement: Challenges and Opportunities within and beyond the Global Economic Crisis', in Parker, M., Cheney, G., Fournier, V.. (eds) *The Routledge Companion to Alternative Organization*, pp. 64–88. London: Routledge.

17.Witherell, R., Cooper, C., Peck, M. (2012) *Trade Unions and Cooperatives: Challenges and Perspectives*. Pittsburgh, PA: United Steelworkers Union.

## Dynamics of Protein Supplement Industry

### WHEY PROTEIN

Whey protein is the ultimate source of protein and is the highest quality protein available. Whey protein is also a rich source of branched chain amino acids (BCAAs), containing the highest known levels of any natural food source. Whey protein comes from cow's milk, is a rich source of the body's essential amino acids, is efficiently digested and absorbed and is the most nutritious protein available.

Whey is also fast ingesting, meaning it gets to where it's needed - fast! Whey protein supplements play a huge roll in post-workout nutrition, when your body is in a catabolic state and needs a fast injection of protein.

Effects whey protein has on performance:

1. Increased lean muscle mass
2. Decreased recovery times and faster muscle repair
3. Reduced post-workout muscle breakdown
4. Increase metabolic rate

### ADVANTAGES

1. Whey is an Excellent Source of High-Quality Protein: It is a complete, high-quality protein, containing all of the essential amino acids. In addition, it is very digestible, absorbed from the gut quickly compared to other types of protein. These qualities make it one of the best dietary sources of protein available.

2. Whey Protein Promotes Muscle Growth: Strength training coupled with the consumption of high-protein foods or protein supplements has been shown to be an effective preventive strategy. Particularly effective are high-quality protein sources, such as whey, which is rich in a branched-chain amino acid called leucine. For this reason, whey protein is effective for the prevention of age-related muscle loss, as well as for improved strength and a better-looking body.

3. Increase size and strength: Hitting the gym hard hoping to make strength gains? Researchers at Baylor University in Waco, Texas, took 19 men performing resistance training over a 10-week period and gave some of them 14 grams of whey and casein protein along with 6 grams of free amino acids, while giving the rest a 20-gram placebo. Those who consumed the whey had greater increases in fat-free mass and muscle strength. The key is to follow the example of the study and consume whey one hour before and after the exercises.

### Different types of whey protein

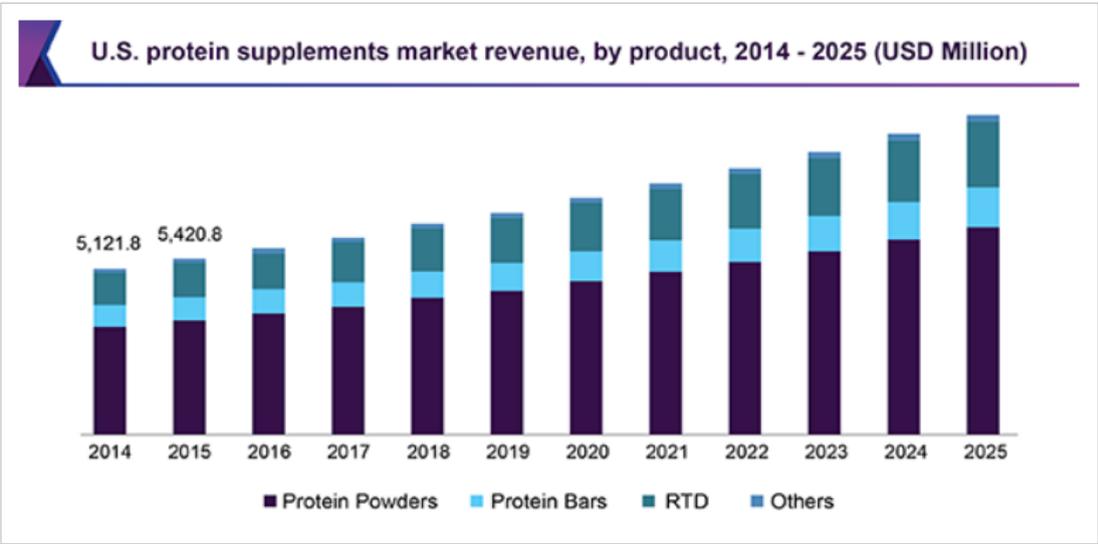
Isolate whey protein is processed to remove fat and lactose, but it's also lower in health-boosting bioactive compounds. Protein by weight content is 90% and higher. Hydrolysate whey protein is pre-digested and partially hydrolysed, which means water is added during the production process to break down the constituent compounds. This makes them easier for your body to digest but also increases the cost. Native whey protein is the purest form because it is extracted directly from skimmed milk rather than being a by-product of cheese production like concentrate and isolate. It is very low in fat, lactose and bioactive compounds, while its protein content by weight is typically 95% and higher.

Consumers: The "sport-related" protein product sector is booming. It's estimated that the world will be chewing and gulping down £8bn a year of bars, drinks, and other supplements by 2017. But there's now a wave of products where the branding marks a departure from the traditional world of the protein supplement. The classic protein drinks have usually been characterized by displays of over-sized bottles and tubs, often with labels depicting rippling torsos. The powders and bars targeted hardcore gym-goers and amateur athletes. The typical customer was someone who wanted to build muscle and aid recovery after a serious workout. But the latest generation is positioned more around healthy lifestyle. But there's an elephant in the room. People in the West usually already get more than enough protein. Healthy protein intake depends on weight, with a recommended intake figure of 0.8g per kg of weight per day often cited. Age is also a factor. Over the course of a day, the average man should be eating around 55g of protein, while a woman needs 45g, says the British Dietetic Association. In the US, the national public health body, the Centers for Disease Control and Prevention, recommends 56g for an average man and 45g for a woman.

**GLOBAL PROTEIN SUPPLEMENT MARKET**

The global protein supplement market is majorly driven by the rise of health & fitness centers and growth in health-related awareness among people. Moreover, alarming obesity rates indicating increase in demand for weight management, growth in urbanization, and rise in disposable income are some other factors that fuel the market growth. However, availability of cheap substitutes of protein supplements along with negative publicity & false claims affect the reputation of these and are expected to limit the growth of the market. The introduction of protein supplements in the developing nations and expansion as well as strengthening of distribution channels in different regions are anticipated to provide lucrative opportunities for the market.

Industry Insights: The global protein supplements market size was valued at USD 12.4 billion in 2016 and is expected to rise at a CAGR of 6.3% from 2017 to 2025..

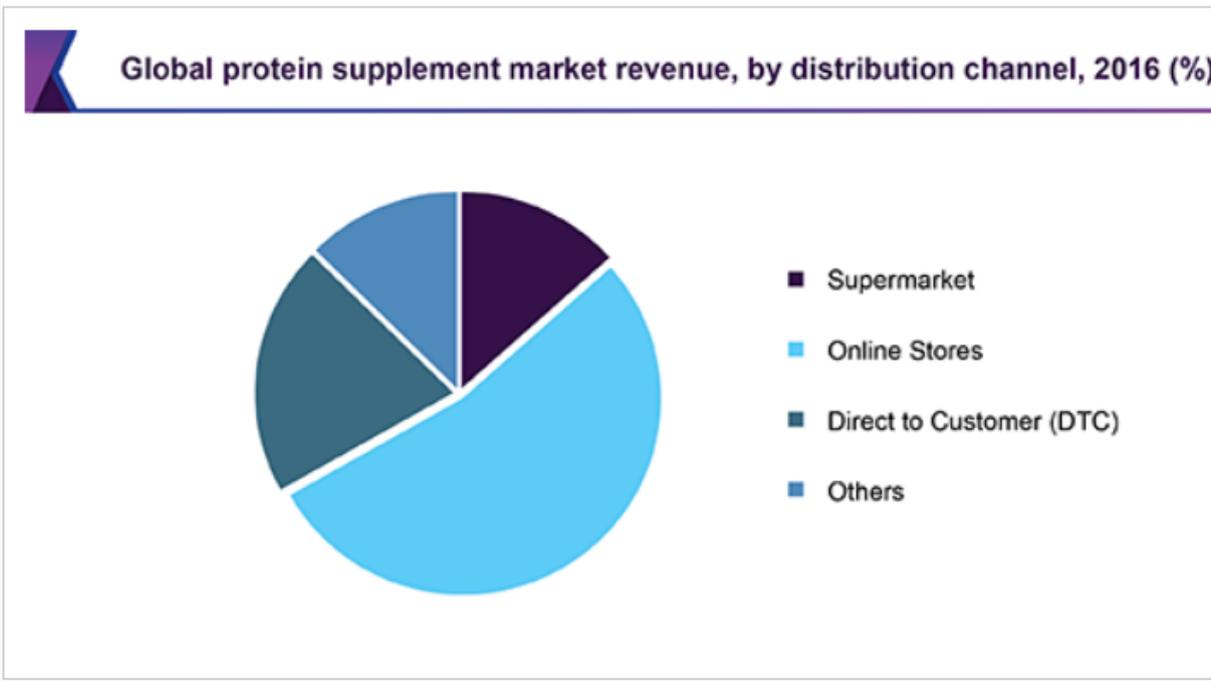


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North America and Europe are the largest markets for these products owing to the aging population in western economies including the UK, the U.S., Italy, and Germany. Growing consumer focus on leading healthy & active lifestyles, maintaining a healthy diet, and regular exercise is expected to fuel growth

Product Insights: RTD is expected to display high gains at a CAGR of 7.0% from 2017 to 2025. The increasing demand for sports nutritional supplements coupled with the rising demand for easy and readily available protein supplementation is expected to fuel market growth over the forecast period.

Distribution Channel Insights: Online stores accounted for majority sales in 2016 and valued at USD 6.62 billion. The increasing number of internet users, ease of access, fast paced lifestyle, 24/7 availability, convenience, and access to wide options are the factors driving online sales. Moreover, discussion portals, discounts & offers on products, and various promotional strategies are expected to fuel online sales over the forecast period.

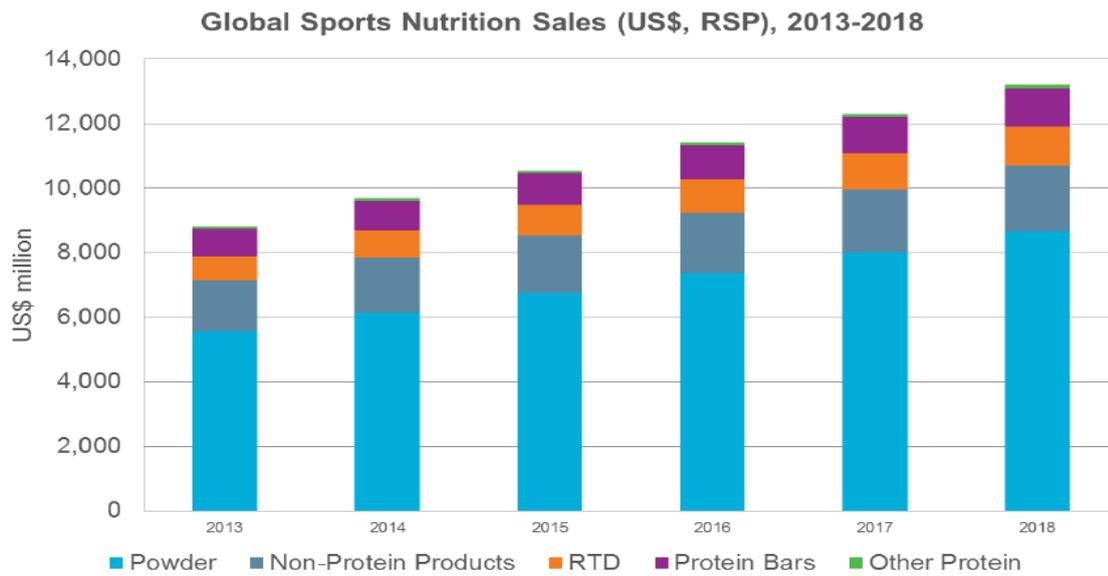


### PROTEIN SUPPLEMENT MARKET IN USA

E-commerce Market Share Report: Protein Supplements: What we found is that online shoppers love protein. We estimate that consumers spend about \$1.4 billion per year online on health supplements in the U.S. and have grown by over 30% in the past 18 months. In the past 12 months, we estimate that consumers purchased 55 million units of over 34,000 distinct health supplement items at an average price of \$25.

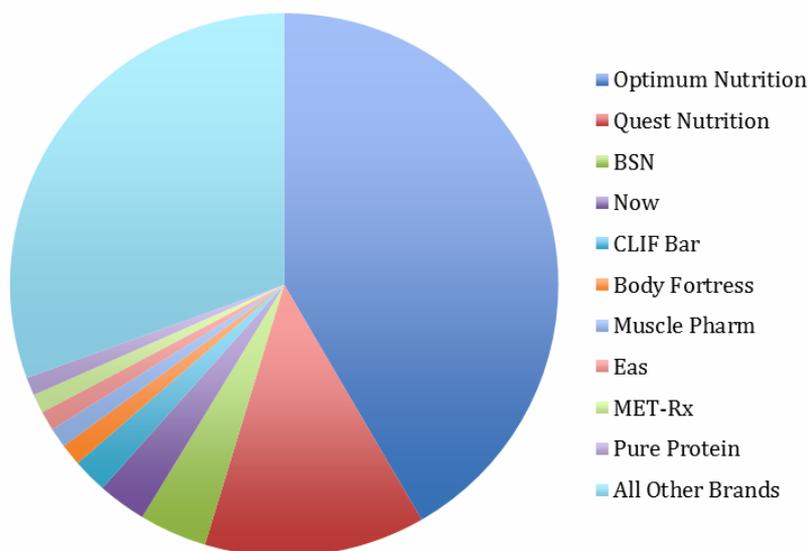


### Global sports nutrition forecasted growth



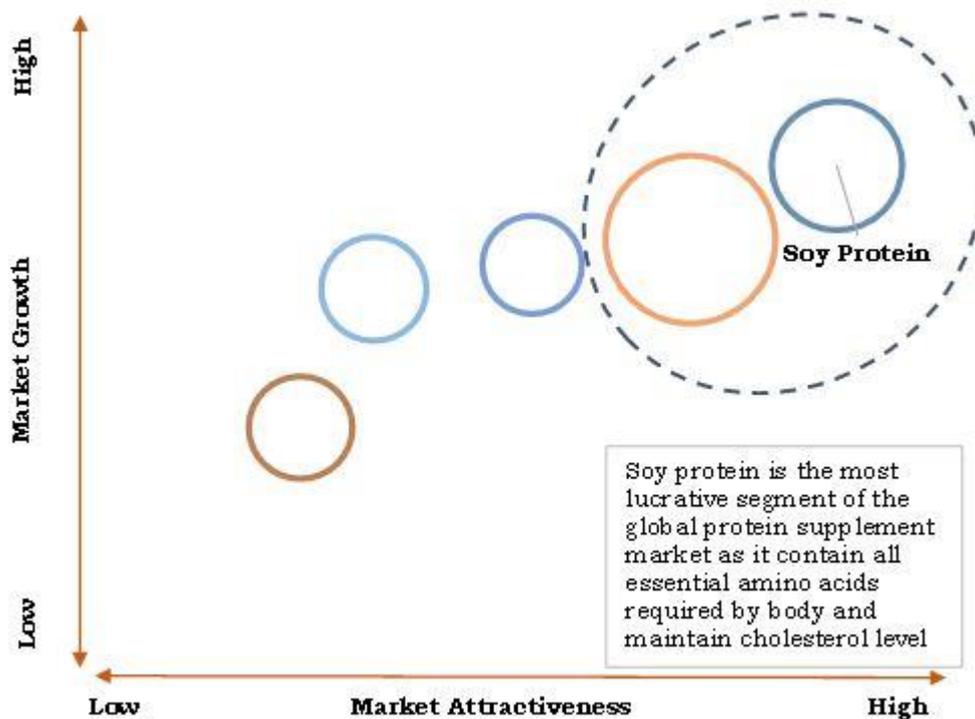
Over 10 million units of protein powder and bars were purchased at an average price of \$34 per unit.

The clear market leader in online sales of protein, with a dominating 42% market share, is Optimum Nutrition (ON). ON has 3 times the share of its next closest competitor, Quest Nutrition, who makes Quest Bars, and has 13% market share.



Over 670 brands make up the remaining 45% of this fragmented market with no single company having more than 4% share.

**Plant Protein Market:** Plant proteins are often seen as sustainable and good for the planet because they are less resource-intensive than animal proteins. Soy protein type is the most lucrative segment of the global protein supplement market. It possesses high market potential for investment, owing to ease in digestibility, presence of low quantity fat, and cholesterol maintenance. North America holds the highest share of the overall global protein supplement market while the Asia-Pacific region owns the highest growth rate. Yellow peas have become the latest alternative milk source to gain mainstream attention. While taste tops the list of reasons to eat plant-based proteins, perceived health benefits are on consumers' minds, as nearly half (46%) of Americans agreed that plant-based proteins are better for you than animal-based options, and three quarters (76%) said plant-based foods are healthy. These consumers are more likely to seek plant-based protein products with no artificial ingredients (41%), that are high in protein (35%) and fiber (28%), and those that are non-GMO (28%).

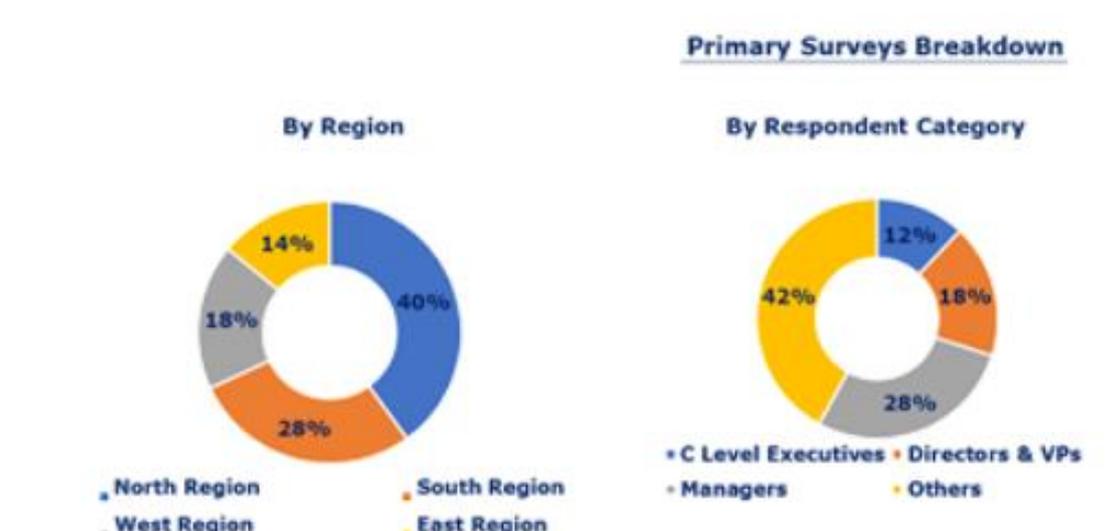


- Soy proteins are expected to witness steady growth at a CAGR of 5.8% from 2017 to 2025 owing to its low cost and rising usage in functional foods. Plant-based products are expected to display fastest growth at a predicted CAGR of 7.9% from 2017 to 2025 due to various health benefits offered including lower risk of heart disease, reduced risk of type 2 diabetes, and protection against weight gain.

**Whey Protein Market:** Whey is a liquid product procured from manufacturing of cheese or curd..Although whey protein market is growing year by year exponentially. But, there are 2 major reasons why whey protein market is falling and the following reasons are:

- 1) Digestibility issues: Whey protein contains lactose (the sugar found in milk). Lactose is problematic for an increasing number of us, and can lead to flatulence, diarrhea and feeling bloated. In fact, it is believed that as much as 65 percent of the human population has an impaired ability to digest lactose after infancy.
- 2) Whey is heavily processed: In order to make whey palatable, manufacturers fill whey products with horrible artificial sweeteners. Acesulfame potassium and sucralose are common in many whey products. Artificial sweeteners have no place in a healthy body, and would definitely have contributed to my digestive problems when I was taking whey.

**INDIAN MARKET:** Indian nutraceuticals market is expected to reach \$ 8.5 billion by 2022 from \$ 2.8 billion in 2015, according to a study jointly undertaken by Assocham and RNCOS. In 2015, India accounted for a share of around 2 percent of the global market. By 2022, this share is anticipated to increase to a value of approximately 3 percent owing to country's large population base, increasing urban belt and awareness. In 2015, the Indian dietary supplements market was valued at \$ 1.8 billion. With growing awareness, number of people opting for dietary supplements has been increasing. "Higher purchasing power has prompted Indians to be more health conscious and adopt a healthy diet routine completed with consumption of nutritional supplements," opined D S Rawat, secretary general, Assocham. India whey protein market is projected to grow at a CAGR of around 20% during 2017-2022, majorly on the back of growing awareness about the health benefits associated with whey protein products.



### Innovation in Protein Supplement Market

Innovation in the manufacturing of proteins that contain a broad range of amino acids targeting specific functions—including energy balance, weight loss, muscle repair, and satiety—is expected to promote growth as well.

1)Chocolate Bar Protein: A lot of companies has started offering protein in the form of chocolate bar such as Kind LLC's Strong,this protein bar comes under plant protein as it contains Almonds, pumpkin seeds, honey and pea crisps. Epic's Beef health bar falls under animal protein is concerned.

2) Pancakes: Flap jacked protein pancake consists of Buttermilk, Whole Oat Flour, Whey Protein Isolate, Quinoa Flour, Coconut Flour, Peaches, Baking Soda, Baking Powder, Salt, Xanthan Gum.

3) Cheese Based Products : Companies have targeted various cheese consumption alternatives for protein consumption such as Sonoma Creamery's Mr. Cheese O's,Eden Creamery's Halo Top Creamery All Natural. Light Ice Cream (Lemon Cake) w 7g Protein organic and Powerful Men LLC's Powerful

4) Ready to Drink (RTD): As the industry is booming for RTD the companies are focussing on easy to consume drinks there are few companies who came up with such drinks which are Maximum Potential LLC's True Solution Nutrition Shake,South Beach Diet Corp.'s South Beach Snack Smoothie and Muscle Milk Coffee House provides 20g of high-quality protein in per bottle

#### Reason for increase in Fake supplements

- Bodybuilding supplements are sold as dietary supplement and currently there is no Regulatory body in India that governs and regulates the manufacturing, import, sales and distribution of bodybuilding supplements.
- Its very hard to detect fake supplements.

Making a fake supplement is very cheap therefore the profitability ratio is extremely high. Manufacturing cost = Rs. 200 Market price = Rs. 4500. So you can imagine the profit.

Often people consult their gym instructors or gym owners for guidance on bodybuilding supplement. More often than not these guys suggest some supplements and promise to make it available at cheaper rates. These are usually fake products from grey market. Be cautious if your trainer or gym owner is trying hard to convince you to buy a particular brand of protein supplement. You can take advice from him but do a good research and if needed buy the same product from genuine shops.

Most people buy supplements from local pharmacy or local stores, so grey marketers directly deal with these people and give them higher margin for selling their fake supplements

#### Effects of Fake Supplements

But almost 70 per cent of dietary supplements being sold across the counter are fake, counterfeit, unregistered and unapproved, the study noted.

The ingredients used to make fake supplements are cheap, they are made to look real by trying to give them the same color and texture as the original products. These ingredients are harmful for body. Some companies add cheap steroids to the product to show quick results which can be really very dangerous for our body

#### Common Steroids in Protein Powder

- DIANABOL – Muscle Mass & Strength Agent.

- ANAVAR – Cutting & Lean Muscle Agent.
- TRENBOLONE – Cutting & Bulking Agent.
- WINSTROL – Lean Mass & Strength Agent.
- ANADROL – Bulking & Strength Agent.
- CLENBUTEROL – Fat Burning Agent.
- DECA DURABOLIN – Muscle Mass and Strength Agent.

**SIDE EFFECTS OF STEROIDS:** Effects of anabolic steroids in men can include: reduced sperm count, infertility, shrunken testicles, erectile dysfunction, stomach pain, severe acne. In women, anabolic steroids can cause: facial hair growth and body hair. loss of breasts, swelling of the clitoris, a deepened voice, problems with periods, hair loss.

## HOW TO IDENTIFY FAKE PRODUCTS

- 1) Seal usually have name of the brand endorsed on it, If the seal is plain and of low quality then its probably fake
- 2) Hologram / Logo: Rule no 2 is to check the logo of the brand and hologram, Most of the popular brand have a hologram mark which is difficult to forge.
- 3) Spelling Mistakes: There are no spelling mistakes in original products.
- 4) Label: Another thing to look for is how well the label was glued to the box. Sounds a little ridiculous but it is true. I have seen at least 10 different samples of fake supplements and on all of them, the label started to come off within a week.
- 5) LOT Number Verification: We can verify genuine product by looking at the LOT No, Some companies provide online service to validate LOT no of their product. Fake Supplements will have invalid LOT Number
- 6) Scoope: Scoope should be there in the protein supplement box with the correct logo on the scoope.
- 7) Official Value: It's important to see the ingredients should be correct and the supplier name too.
- 8) Expiry Date: It should be there on the bottom of the box.

## References

<https://www.indianbodybuilding.co.in/Articles/5-rules-to-detect-fake-bodybuilding-supplement/>  
<https://www.prnewswire.com/news-releases/india-dietary-supplements-market-forecast--opportunities-2021-techsci-research-report-589986211.html>  
[http://www.business-standard.com/content/b2b-pharma/rise-in-health-awareness-to-take-nutraceuticals-market-to-8-5-bn-by-2022-117041900637\\_1.html](http://www.business-standard.com/content/b2b-pharma/rise-in-health-awareness-to-take-nutraceuticals-market-to-8-5-bn-by-2022-117041900637_1.html)  
<https://www.grandviewresearch.com/press-release/global-protein-supplements-market>

<https://www.grandviewresearch.com/industry-analysis/protein-supplements-market>  
<https://www.alliedmarketresearch.com/protein-supplement-market>  
<https://globenewswire.com/news-release/2017/11/28/1206750/0/en/21-Billion-Protein-Supplements-Market-2025-Analysis-By-Raw-Material-Source-Product-Distribution-Channel-Application-And-Segment-Forecasts.html>  
<https://www.alliedmarketresearch.com/protein-supplement-market>  
<https://www.chikpro.com/protein-market-trends/>  
[https://www.nutraceuticalsworld.com/contents/view\\_features/2018-04-02/demand-for-protein-propels-market-diversity-product-innovation/](https://www.nutraceuticalsworld.com/contents/view_features/2018-04-02/demand-for-protein-propels-market-diversity-product-innovation/)  
<https://www.livekindly.co/vegan-protein-market-reach-16-3-billion-2026/>  
<http://www.artofwellbeing.com/2015/10/04/plant-based-protein-supplements/>  
<https://www.techsciresearch.com/report/india-whey-protein-market/1291.html>

## **Abstract**

### **Assessing the Impact of Entrepreneurial Orientation in Fostering Entrepreneurial Intentions of University Graduates: An Empirical Analysis**

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Entrepreneurial intentions being central to the entrepreneurial process have been a focal point of discussion for academicians, researchers and policymakers across the globe. This scenario has led to a steep rise in policies encircling entrepreneurship development through technology-based startup creation in India and other developing economies. However, these policies cannot achieve their desired goal and global benchmark due to lack of understanding of the critical factors and appropriate directions for enactment.

The entrepreneurial research has identified a variety of psycho-personal, demographic and environmental factors affecting entrepreneurial intentions of young individuals across diverse socio-political and economic contexts. Yet, the available evidence proposes that intention to choose an entrepreneurial career eventually develops from the perception of entrepreneurial support or barriers from the surrounding environment. Such factors in the entrepreneurial environment do not impact an individual's entrepreneurial intentions in isolation; rather they steer his/her entrepreneurial orientation by fostering the favourable or unfavourable evaluation of the entrepreneurial career choice.

Driven by the above motivation, the present study explores the key environmental antecedents affecting the entrepreneurial orientation of technical university graduates. The proposed hypothesised framework suggests entrepreneurial orientation as the determinant of entrepreneurial intentions which is shaped by the entrepreneurial environment of young engineering students in a university setup. The environmental antecedents chosen from the extant literature are; access to finance, access to business information, social networks and university support, whereas the perceptual deriver affecting students' entrepreneurial intention is entrepreneurial orientation. Primary data was collected through a survey of 516 final year undergraduate engineering students across two Centrally Funded Technical Institutions (CFTIs) in India. The reliability and validity measures of the constructs are testified through Confirmatory Factor Analysis (CFA), and the proposed hypotheses are validated using Structural Equation Modeling (SEM).

The results indicate that the environmental antecedents (access to finance, access to business information, social networks and university support) have significant positive influence on students' entrepreneurial orientation, which in turn has a significant positive relationship with entrepreneurial intentions. Thus, the results of this study suggest that the barriers and support received from the government and university context significantly impact entrepreneurial orientation, which in turn affects entrepreneurial intentions of young aspiring entrepreneurs.

This study may enable the academicians, researchers, and policymakers to frame policies for building & promoting a holistic entrepreneurial environment to foster entrepreneurial intentions of young individuals in India and similar developing country contexts. The study has a likely potential to help university administrators and policymakers, to develop strategies and effective policies that may provide the desired entrepreneurial support essential for fostering the entrepreneurial orientation of the university students towards entrepreneurship thereby assisting them to achieve their career goals and broader objective of nation-building.

***Keywords:*** *Environmental antecedents, Entrepreneurial orientation, Entrepreneurial intentions, University support, Technical university students*

# **Assessing the Impact of Entrepreneurial Orientation in Fostering Entrepreneurial Intentions of University Graduates: An Empirical Analysis**

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## **1. INTRODUCTION**

Entrepreneurship has emerged as an imperative tool for the progress and prosperity of the modern civilisation across all these years of industrial evolution (Acs, Arenius, Hay and Minniti, 2004; Shane and Venkataraman, 2000). Hence, fostering entrepreneurship development has become a focal point in the public policy across all industrial countries. Such political measures can be attributed to the reason that entrepreneurship is a leading factor in achieving economic growth, and positive social development in terms of providing employment, new and innovative products & services to the population and increase competitiveness enabling social empowerment (Acs et al., 2004). Inspired by the significant benefits of entrepreneurship, there is a precipitous rise in policies and government patronage to provide best ecosystems for entrepreneurs across all the nations invariably. This trend has steered immense rise in policies encircling startup creation in India as well. This movement has gained momentum of late with the launch of “Startup India” campaign by the honourable Prime Minister of India Sri Narendra Modi. However, these policies cannot achieve their desired goal and global benchmark due to lack of understanding of the critical factors and appropriate directions for enactment. Hence, it is pivotal to understand the fundamental factors in the entrepreneurial context stimulating entrepreneurship development and achieve the desired outcome of such ambitious plans.

It is evident from studies that the new-age entrepreneurs have access to formal university education and training compared to those in salaried employment (Robinson and Sexton, 1994). Moreover, the socio-economic contributions of these enterprises/businesses (generating employment, economic growth, and social inclusion) founded by university graduates have been found to be significant (Lüthje and Franke, 2003). These outcomes have driven the integration of entrepreneurship education/training programmes to the university education system. The most recent and eminent trend is that educational institutions in India and around the globe have started playing a central role in strengthening entrepreneurial competencies through mentorship and support to the aspiring entrepreneurs at the nascent stage of their startup journey. Universities have shifted their focus from traditional to entrepreneurship oriented education, instilling confidence in the budding entrepreneurs to turn their entrepreneurial ideas into reality.

Many studies (Engle, Schlaegel and Dimitriadi, 2011; Keat, Selvarajah and Meyer, 2011; Schwarz, Wdowiak, Almer-Jarz and Breitenecker, 2009) carried on university graduates across different country contexts have tried to predict entrepreneurial intentions through the impact of various exogenous variables (psycho-personal, demographic and environmental). According to Díaz-Casero et al. (2012), the factors in the entrepreneurial environment do not affect entrepreneurial intentions directly; rather affects the perception of desirability and feasibility thus steering the attitudinal orientation and behaviour of an individual towards adopting an entrepreneurial career. Hence it is crucial to assess the impact of the entrepreneurial environment in shaping the orientation and intentions of an individual

in the university ecosystem. Driven by the above motivation, the study explores some relevant contextual factors in a technical university set up and attempts to assess their impact on entrepreneurial orientation thus shaping the entrepreneurial intentions of young engineering students.

## **2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### **2.1. Entrepreneurial orientation and intentions; the relationship**

Studies in the past (Lüthje and Franke, 2003; Schwarz et al., 2009) have investigated that “Intent to act” is central to the creation of an enterprise as this happens to be the key driver of the entrepreneurial process. Although some researchers (Thompson, 1999) view entrepreneurship as an innate behaviour, others claim it to be a conscious decision, which is significantly influenced by learning from educational systems, socialization and environmental context (Lüthje and Franke, 2003). Furthermore, psychological & personality traits, demographic factors, environmental influence, family background, education and training of an individual have significant impact on perceived ease or difficulty of choosing an entrepreneurial career (Dinis, do Paco, Ferreira, Raposo and Gouveia Rodrigues, 2013; Lüthje and Franke, 2003; Schwarz et al., 2009). Ironically, predicting the exact set of characteristics and circumstances to create new ventures has been proven to be difficult due to the dynamism of the entrepreneurial process. Substantial research in the past has focused on the role of many psychological, personality, demographic, and contextual factors affecting entrepreneurial intentions of university students across several countries (Lüthje and Franke, 2003; Nabi and Liñán 2013). The personality or trait approach to predict entrepreneurial intentions has been extensively studied and validated by many researchers (Dinis et al., 2013; Zhao, Seibert and Lumpkin, 2010) for quite a long time, very few (Díaz-Casero et al., 2012; Schwarz et al., 2009) studies have considered the comprehensive impact of the entrepreneurial context on entrepreneurial intentions.

It has been observed that not all individuals possessing some or other entrepreneurial personality will necessarily intend to venture into the entrepreneurial journey. So the intriguing fact remains; what makes some people, but not others, with such personality traits to develop entrepreneurial intent. Answering such a question necessarily demands us to explore individual entrepreneurial intent from a strategic decision point of view of an individual and a consistent & validated means to measure it.

Although personality trait predicting propensity for entrepreneurial activities has been extensively studied since last three decades (Rauch and Frese, 2007; Zhao et al., 2010), it lacks the explanatory power to predict entrepreneurial behaviour. To address this weak predicting capacity of trait approach, the concept of entrepreneurial attitude orientation (EAO) was introduced by Robinson, Stimpson, Huefner and Hunt (1991). They suggested a scale comprising of four subscales (achievement, self-esteem, personal control & innovation) and 75 items to measure individual’s EAO. However, at the firm level, Miller (1983) probably for the first time introduced the concept of entrepreneurial orientation characterised by innovativeness, proactiveness and risk-taking affinity. Subsequently, Lumpkin and Dess (1996) augmented these measures of EO by incorporating some additional measures such as autonomy and competitive aggressiveness. Successive studies (Lumpkin and Dess, 1996; Rauch, Wiklund, Lumpkin and Frese, 2009) have extensively studied entrepreneurial orientation (EO) as an important construct at the organisational level. It has been shown to influence profitability, growth, performance and product innovation in entrepreneurial firms (Johan and Dean, 2003; Moreno and Casillas, 2008, Rauch et al., 2009). However, there is a paucity of research to define and measure entrepreneurial orientation at

the individual level. Hence it is inevitable to explore entrepreneurial orientation at the individual level that would help us to understand the aspiring entrepreneur's perception towards different support and barriers from the entrepreneurial environment necessary for initiation, growth and success of their entrepreneurial journey.

Based on the presumption that an individual with a favourable appraisal of the entrepreneurial career would have a positive intention for new venture creation, the following hypothesis is proposed:

*H<sub>1</sub>*: Entrepreneurial orientation positively influences an individual's intention to adopt entrepreneurial career.

## **2.2. Contextual factors and individual entrepreneurial orientation**

A review of the entrepreneurship literature shows that new venture creation is a complex process largely dependent on surrounding environmental context. Investigating individual traits or demographic factors alone without understanding the entrepreneurial environment has not been effective in predicting the decision-making process involved to become an entrepreneur. Pittaway and Cope (2007) have argued that an individual's entrepreneurial intention can be shaped by his or her perception of support and barriers to starting the new venture, cultural values, and the contextual environment. Thus, identifying the key determinants in the entrepreneurial environment affecting entrepreneurial orientation thus steering intentions can provide insight into the extent to which entrepreneurial behaviour is more strongly determined by a person's perception or context.

Though personal and contextual antecedents affecting the entrepreneurial intent of an individual had been a key issue of research for quite a long time, there is conspicuous lack of studies that have considered the impact of motivational drivers like attitudes or orientation on entrepreneurial intentions. Only a limited number of studies investigated the influence of perceived contextual support and barriers on students' intentions to become entrepreneurs (Franke and Lüthje, 2004; Díaz-Casero et al., 2012). Moreover, these results are partly inconsistent because it is not known in most contexts whether environmental factors drive the students' intentions toward starting a new business or not (Fini, Grimaldi, Marzocchi, and Sobrero, 2012; Schwarz et al., 2009).

Driven by the above motivations, our study investigates some contextual factors acknowledged by previous studies (Engle et al. 2011; Turker and Selcuk, 2009) as part of the entrepreneurial environment having a significant impact on entrepreneurial intentions across multi-country contexts. However, these contextual factors do not affect students' cognition directly; rather they shape their perception towards the favourable or unfavourable evaluation of the entrepreneurial career path. This study is a novel attempt to investigate and validate entrepreneurial orientation as the perceptual driver of entrepreneurial intent which is influenced by the entrepreneurial context of the young aspiring entrepreneurs. The relevance of the contextual factors under study is discussed in the following section;

### **2.2.1. Access to financing**

According to past research evidence, accessibility to financial resources or startup capital acts as a significant antecedent to entrepreneurial intentions (Kristiansen and Indarti, 2004; Sandhu, Sidique and Riaz, 2011). The source of financing to start a new business can be obtained from personal resources or bank loan or through a partnership with the investor. Though, access to financing or availability of capital can undoubtedly foster one's inclination towards entrepreneurship (Kristiansen and Indarti, 2004; Pruett, Shinnar, Toney, Llopis and Fox, 2009; Sandhu et al., 2011) a recent study by Pruett (2012) in the United States, obtained

a non-significant relationship. Since the results are inconsistent, the following hypothesis is proposed to investigate the above relationship:

*H<sub>2</sub>*: Access to financing positively influences the entrepreneurial orientation of individuals to adopt entrepreneurial career.

### **2.2.2. Access to business information**

The ready availability of information about the market, prospective customers, and competitors before starting a business is crucial to starting a new venture, achieving competitive advantage and sustained growth (Kristiansen and Indarti, 2004). The entrepreneurial decision is made through a cognitive process affecting the perception of feasibility and can be understood with relevant and accurate information about the markets, sources of inputs, technological solutions, design, and government rules and regulations (Franke and Lüthje, 2004; Kristiansen and Indarti, 2004). Accessibility of information, therefore, can affect the entrepreneurial orientation of the nascent entrepreneur leading to the following hypothesis:

*H<sub>3</sub>*: Access to business information positively influences the entrepreneurial orientation of individuals to adopt entrepreneurial career.

### **2.2.3. Social networks**

Past literature concurrently agrees that social networks have a significant impact on the decision of an individual to choose an entrepreneurial career path. Access to social capital in terms of personal and professional networking plays a critical role in the acquisition of necessary resources such as financing, human resource & logistics, essential for survival and growth of nascent entrepreneurial venture (Kristiansen and Indarti, 2004; Sandhu et al., 2011). Thus, personal & professional networks seem to have a strong and positive impact on an individual's orientation to be an entrepreneur leading to our fourth hypothesis:

*H<sub>4</sub>*: Social networks of individuals have significant positive impact on their entrepreneurial orientation to adopt entrepreneurial career.

### **2.2.4. University support**

According to past research evidence (Keat et al., 2011; Lüthje and Franke 2003), students' entrepreneurial intentions are directly affected by perceived entrepreneurship related barriers and support factors. Specifically, a favourable evaluation of perceived support fosters their entrepreneurial intentions whereas a hostile environment for business founders, e.g. lack of technical skills and restrictive entrepreneurial environment, results in diminished intentions to become entrepreneurs irrespective of students' orientation towards self-employment (Díaz-Casero et al., 2012). To gauge the role of universities in career choice intentions of the university graduates the following hypothesis is proposed:

*H<sub>5</sub>*: Supportive university environment positively affects the entrepreneurial orientation of individuals to adopt entrepreneurial career.

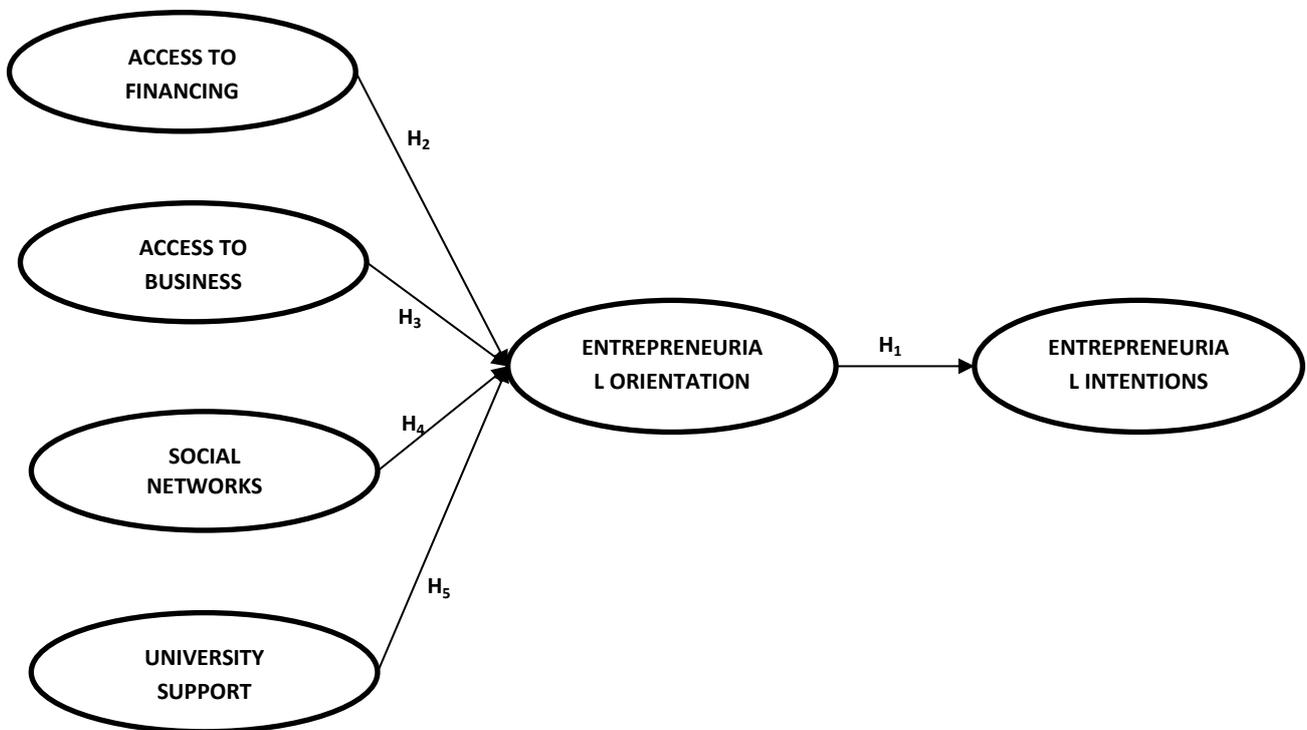
## **3. METHODOLOGY**

### **Sample and data collection**

Purposive sampling technique was used for this study with an objective to select a sample that can yield the most comprehensive understanding of the object of study. This sampling method was deployed to collect responses from the student sample across two Centrally Funded Technical Institutes during the academic year 2016–2017.

A structured questionnaire was developed for collection of primary data to measure the independent and dependent variables of the proposed model such as; access to financing (FIN), access to business information (INF), Social networks (SNT), university support (UNS), entrepreneurial orientation (EO) and entrepreneurial intentions (EI). The questions in this section were formulated as sentences to capture the responses on a five-point Likert-scale, ranging from 1 indicating “completely disagree” to 5 indicating “completely agree”. The questionnaires were distributed to 900 undergraduate engineering final year students of two CFTIs during the academic year 2016-17 (National Institute of Technology Rourkela, and Indian Institute of Technology, Kharagpur). The responses were screened to eliminate missing data and skewed responses, finally yielding 516 responses found to be useful for further analysis.

**Figure 1** Hypothesised conceptual framework



## 4. DATA ANALYSIS AND RESULTS

### 4.1. Descriptive analysis

The descriptive statistics denoting the mean, standard deviation and correlation coefficients of the constructs are given in Table 1. The results confirm that the constructs are positively and significantly correlated with each other.

**Table 1** Means, standard deviations and correlation coefficients

Constructs	Mean	SD	Correlations						
			EI	EO	FIN	INF	SNT	UNS	
EI	4.023	.729	1.000						
EO	3.930	.898	.422***	1.000					
FIN	3.515	.994	.380***	.528***	1.000				
INF	3.493	.999	.386***	.522***	.444***	1.000			
SNT	3.659	1.056	.386***	.451***	.367***	.462***	1.000		
UNS	3.654	.939	.421***	.559***	.573***	.538***	.411***	1.000	

## 4.2. Analytical approach

The proposed hypothesised model as shown in Figure 1 proposed that the factors affecting entrepreneurial orientation (EO) and intentions (EI) of an individual in the entrepreneurial environment be; access to financing (FIN), access to information (INF), social networks (SNT), and university support (UNS). These contextual factors are assumed to steer orientation of an individual towards entrepreneurship, which in turn impacts the entrepreneurial intentions. Two-step analytical approach was applied for analysing the reliability and validity of constructs followed by assessment and testing the proposed hypotheses by applying structural equation modelling (SEM) using SPSS (21.0) and AMOS (21.0) software. In the first step, the measurement model assessment was conducted to ascertain the construct validity and goodness of fit for the constructs under investigation followed by the second step where SEM was conducted for empirical analysis of the structural relationship between the constructs by path estimates.

### 4.2.1. Construct reliability and validity

“Construct validity is the extent to which a set of measured variables represent the latent constructs which are designed to measure theoretically” (Hair, Black, Babin, and Anderson, 2010). In this study, we adopted face validity, convergent validity and discriminant validity. Face validity is the extent to which a measurement instrument is subjectively viewed by taking scales from the existing literature and adapting to it in the present study environment. Though past entrepreneurial literature has definite measures for entrepreneurial intentions and other constructs under study, there is fierce work for mapping individual entrepreneurial orientation. However, a recent measurement scale suggested by Bolton and Lane (2012) comprising of 10 items were deployed for this study with some modification by reducing the number of items to eight (8) based upon the feedback from focused group discussions. The test instrument comprising of 30 items deployed to measure the six constructs in the hypothesised model was examined for validation through exploratory factor analysis (EFA) followed by confirmatory factor analysis (CFA) (Hair et al., 2010; Ho, 2006). To examine the total variance explained by each factor, we retained only those factors with eigenvalues greater than one and factor loadings more than 0.5, which validates the measurement instrument comprising of 23 items (Hair et al., 2010; Ho, 2006).

The result of scale reliability for Cronbach’s alpha ( $\alpha$ ) for the instrument comprising of 23 items is 0.932 along with Cronbach’s alpha value for other individual constructs is shown in Table 2, which is found to be acceptable and shows that the instrument is reliable (Nunnally and Bernstein 1994).

According to the two-step analytical approach suggested by Hair et al. (2010), CFA was used first to estimate the convergent validity, discriminant validity and goodness of fit statistics followed by testing of hypotheses through SEM in the second step. The three

indicators of convergent validity are individual factor loadings, average variance extracted (AVE) and composite reliability (CR). The results pertaining to the measurement model are given in Table 2.

A construct should have standardised estimates of 0.5 or higher and statistically significant; AVE of 0.5, or higher recommends adequate convergence and composite reliability estimate of 0.7 or higher suggests good reliability (Hair et al., 2010; Nunnally and Bernstein, 1994). The results of standardised estimates, AVE and CR being within specified thresholds confirm the convergent validity. As mentioned under the diagonal values of Table 3, the square root of the AVE values for all the constructs are greater than the corresponding inter-construct correlations, which supports the discriminant validity of the constructs (Hair et al., 2010). Further, the inter-construct correlations among the six constructs are moderate to low thus refuting any multicollinearity concerns.

The goodness-of-fit statistics of the measurement model as shown in Table 2 with six constructs indicates adequate model fit ( $\chi^2 = 468.08$ ;  $DF = 214$ ;  $p < 0.001$ ;  $\chi^2/DF = 2.187$ ; Goodness of Fit (GFI) = 0.927; Normed Fit Index (NFI) = 0.937; Relative Fit Index (RFI) = 0.926; Tucker-Lewis coefficient Index (TLI) = 0.958; Comparative Fit Index (CFI) = 0.965; Root Mean Square Error of Approximation (RMSEA) = 0.048) and an accepted score of  $\chi^2/DF = 2.187$  (i.e.  $< 3$ ) is attained (Hair et al., 2010). Thus, the measurement model reflects good construct validity and desirable psychometric properties.

**Table 2** Measurement model results

Constructs	Measurement items	Standardised estimates	AVE	CR	<i>p</i> value
Access to financing	FIN1	.848	0.685	0.867	.000
	FIN2	.784			.000
	FIN3	.748			.000
Access to business information	INF1	.818	0.639	0.841	.000
	INF2	.777			.000
	INF3	.733			.000
Social networks	SNT1	.864	0.684	0.866	.000
	SNT2	.834			.000
	SNT3	.762			.000
University support	UNS1	.771	0.613	0.862	.000
	UNS2	.751			.000
	UNS3	.762			.000
	UNS4	.732			.000
Entrepreneurial orientation	EO1	.766	0.623	0.892	.000
	EO2	.794			.000
	EO3	.762			.000
	EO4	.760			.000
	EO5	.749			.000
Entrepreneurial intentions	EI1	.829	0.628	0.894	.000
	EI2	.814			.000
	EI3	.785			.000
	EI4	.826			.000
	EI5	.719			.000

**Notes:** AVE represents average variance extracted; CR represents composite reliability of the construct.

[ $1 < CMIN/DF$  range  $< 3$ ,  $p < .05$ ; GFI, NFI, RFI, IFI, TLI, CFI  $> 0.9$  or close to 1 indicate a good fit; RMSEA  $< 0.05$  indicates a close fit (Hair et al., 2010)]

**Table 3** Discriminant validity

Constructs	EI	EO	FIN	INF	SNT	UNS
EI	(0.792)					
EO	0.459	(0.789)				
FIN	0.424	0.600	(0.828)			
INF	0.433	0.596	0.521	(0.799)		
SNT	0.432	0.505	0.414	0.530	(0.827)	
UNS	0.456	0.633	0.683	0.612	0.488	(0.783)

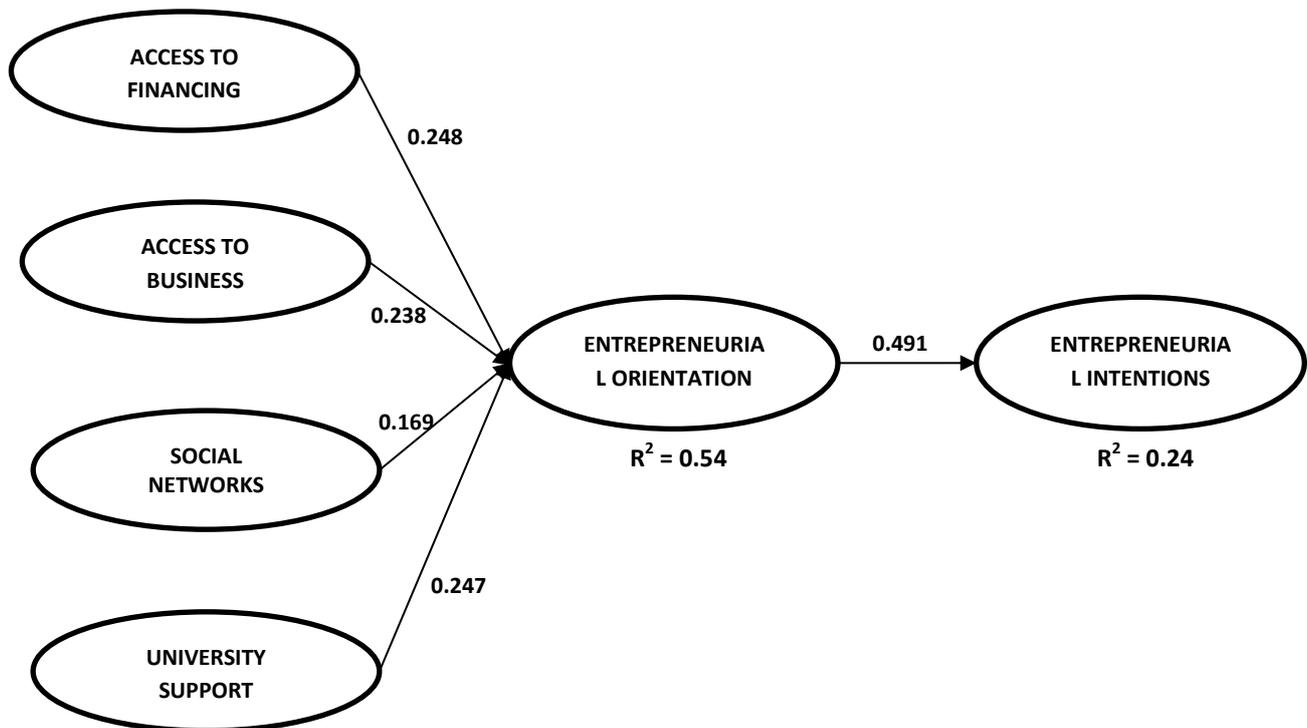
**Note:** The values in the diagonal represent the squared root estimate of AVE

#### 4.2.2. Testing of hypotheses

The theoretical model assumes that the contextual factors have some influence on individual's entrepreneurial orientation and thus on entrepreneurial intentions. Structural Equation Modelling is a powerful tool which offers a simultaneous test of an entire model which enables evaluation of the consistency of the model along with the data by removing measurement errors (Byrne, 1996).

After obtaining a satisfactory measurement model, the second step in SEM analyses was undertaken for evaluation of the structural model. The goodness of fit statistics indicated that, the structural model (Figure 2) demonstrated adequate fit to the data ( $\chi^2 = 511.84$ ;  $DF = 218$ ;  $p < 0.001$ ;  $\chi^2/DF = 2.348$ ;  $GFI = 0.921$ ;  $RFI = 0.921$ ;  $TLI = 0.953$ ;  $CFI = 0.959$ ;  $RMSEA = 0.051$ ).

**Figure 2** Path model estimates for the hypothesised relationships



As per the path coefficients denoted in Figure 2, and Beta estimates ( $\beta$ ) & CR (t-value) values mentioned in Table 4, the proposed hypotheses have been empirically validated. According to the results, EO was found to have strong positive impact on EI (H1:  $\beta = 0.491$ ) thus supporting the first hypothesis. The rest four hypotheses depicting the influence of the contextual factors under study (UNS, FIN, INF & SNT) on individual's entrepreneurial orientation were found to be highly significant and positive. While, three of these factors; UNS (H2:  $\beta = 0.247$ ), FIN (H3:  $\beta = 0.248$ ), and INF (H4:  $\beta = 0.238$ ) were seen having a stronger influence on EO, one of the factors; SNT (H5:  $\beta = 0.169$ ) seemed to have comparatively weaker impact on EO.

The structural model evaluation is not complete without assessing the explanatory capacity of the model denoted by  $R^2$ -statistic which depicts the percentage of total variance of each endogenous construct explained by its predictors. The model explains 54% of the variance in the latent construct entrepreneurial orientation (EO) based on the four contextual antecedents, whereas 24% of the variance in entrepreneurial intentions (EI) is explained by the contextual antecedents and EO. The result converges with previous studies using linear models which explained less than 40% of the variance (Liñán and Chen 2009). As discussed in the earlier sections, the intent to choose an entrepreneurial career is an outcome of the interplay among various factors (personality, contextual or demographics). This low explanatory power of the model can be attributed to non-inclusion of other factors in the entrepreneurial context of the students such as their personality, attitudes, gender, family background, role models or cultural factors.

**Table 4** Inferences drawn on hypotheses

Hypotheses	Relationship	Beta Estimate ( $\beta$ )	S.E.	CR (t-value)	p- value	Results
H <sub>1</sub>	EO → EI	0.491	0.040	10.157	***	Accepted
H <sub>2</sub>	FIN → EO	0.248	0.058	4.313	***	Accepted
H <sub>3</sub>	INF → EO	0.238	0.053	4.227	***	Accepted
H <sub>4</sub>	SNT → EO	0.169	0.039	3.545	***	Accepted
H <sub>5</sub>	UNS → EO	0.247	0.069	3.872	***	Accepted

$R^2$  (Entrepreneurial orientations) = 0.54

$R^2$  (Entrepreneurial intentions) = 0.24

Notes: N = 516, \*\*\* Denotes significance level at  $p < 0.001$

## 5. DISCUSSION

Entrepreneurial orientation has been referred as the “strategy making processes that provides organisations with a basis for entrepreneurial decisions and actions” (Rauch et al., 2009). A considerable volume of entrepreneurial research has examined the concept of entrepreneurial orientation in performance and success at the firm level and has been extensively studied both theoretically and empirically. However, to our knowledge, a negligible attempt has been made to study the role of entrepreneurial orientation at the individual level to adopt and succeed in an entrepreneurial career.

This study is a novel approach to introduce entrepreneurial orientation (EO) as an important construct in the decision-making process of an individual to choose an entrepreneurial career. This study incorporated four contextual factors from the entrepreneurial environment into a conceptual framework and explored whether these antecedents have any influence on the perceptual orientation and entrepreneurial intentions of technical university students in India.

Previous researchers (Kristiansen and Indarti, 2004; Pruett et al., 2009; Sandhu et al., 2011) have stressed on availability or lack of resources, such as financial capital, information about the business environment, human and social capital significantly affecting the entrepreneurial intentions of aspiring entrepreneurs. However, they evaluated the direct impact of the availability of resources on entrepreneurial intentions. The results of this study suggest that availability or lack of the above resources affects the perception of support or barriers of the students thus influencing their risk perceptions and steering their orientation towards entrepreneurial behaviour. In other words, lack of access to entrepreneurial resources may lead to anxiety, a lower expectation of success and diminished affinity towards risk thus curbing their entrepreneurial orientation and behavioural intentions. In contrary to the argument of Sandhu et al. (2011), social networks although having a significant positive impact, seemed to have the weakest impact on EO in comparison to the other two (access to financing and business information) which can be attributed to the process of decision making by these young students. These results imply that entrepreneurial career choice decision being a consciously planned process and hence not likely to be significantly affected by the opinions of others.

As suggested by Bolton and Lane (2012), the study was carried on university students to analyse the role of university context in affecting EO of young individuals. Many studies in the past (Franke and Lüthje, 2004; Turker and Selcuk, 2009) have investigated career choice intentions of university students being at the decisive point of choosing their careers. However, most of them (Autio et al., 2001; Turker and Selcuk, 2009) have advocated in favour of the direct influence of university education and support mechanisms on the behavioural intentions neglecting the cognitive and affective process leading to the development of such intentions. Though, few scholastic works (Engle et al., 2011; Keat et al., 2011) have contemplated in favour of perceptual drivers having a significant impact on entrepreneurial career decisions, some studies (Gurel, Altinay and Daniele, 2010; Ismail et al., 2009; Schwarz et al., 2009) could not find any significant relationship between the two. Moreover, in contrast to the findings of Gurel et al. (2010); supportive university environment has emerged as the second strongest factor affecting the entrepreneurial orientation of students thereby affecting their decision process to choose an entrepreneurial career. Hence, the results of this empirical analysis validate that universities play a decisive role by providing students with necessary knowledge & skills thus fostering their creativity and instilling confidence to venture into a risky entrepreneurial career than secured salaried employment.

## **6. CONCLUSION**

Through testing a comprehensive model incorporating individual entrepreneurial orientation for predicting entrepreneurial intentions of the university students, the study validates that availability of resources such as; start-up capital, business information, social capital and supportive university context can affect an individual's decision to venture into an otherwise uncertain occupation of entrepreneurship.

A recent study by Bolton and Lane (2012), suggested that some explanatory studies should be carried out in universities to encourage the entrepreneurial spirit of students. Drawing inspiration from above research implication, the present analysis is a first step forward to assess an individual's strategy in the decision-making process for choosing an entrepreneurial career. A better understanding of students' EO shall enable the universities to update their curricula and structure the education & training programmes more effectively to provide students with required entrepreneurial skills & resources to start a new venture. The results imply that the universities might seek to transform into "entrepreneurial ecosystems"

by integration of the academia with other institutions, industries, venture capitalists and businesses to provide training, resources, and support to foster entrepreneurial orientation and favourable intentions towards entrepreneurship. The findings of the study have a likely potential to help university administrators and policymakers, to develop strategies and effective policies that may provide the desired contextual pillars essential for developing favourable orientation in students towards entrepreneurship thereby assisting them to achieve desired career goals and broader objective of nation-building.

Although the present study provides several important findings, some potential limitations are; firstly, the measurement of individual EO only included three dimensions thus leaving scope for future studies to incorporate broader dimensions to develop an evolved measurement tool. Secondly, the study analysed the impact of only a few contextual factors, on individual EO. Future studies may incorporate other factors such as personality, demographics or context to develop a more comprehensive understanding of the entrepreneurial decision-making process. Thirdly, the study being cross-sectional can't depict the direction of causality of the antecedents in predicting individual EO. Though studies in the past validated EO to be strongly associated with performance at the firm level (Rauch et al., 2009), the strength of the relationship between EO and entrepreneurial performance & success at the individual level is yet to be explored. Longitudinal studies are essential to precisely map the effect of EO in performance and success of the aspiring entrepreneurs over time. This study being carried out on students of Indian universities may be generalizable to such university students across other developing countries. Since there is a significant difference in the political, socio-economic and cultural context among these countries, the framework can be probed across these diverse contexts. Moreover, this multidimensional construct can be used for comparative analysis between developing and developed country contexts to check the explanatory power of Individual EO in predicting entrepreneurial intentions.

## 7. REFERENCES

- Acs, Z. J., Arenius, P., Hay, M., & Minniti, M. (2004). Global entrepreneurship monitor. *Executive Report, London Business School, Babson*.
- Autio, E., H. Keeley, R., Klofsten, M., GC Parker, G., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145-160.
- Byrne, B. M. (1996). Structural equation modelling with EQS and EQS/Windows. *Journal of the Royal Statistical Society-Series A Statistics in Society*, 159(2), 343.
- Dawn Langkamp Bolton, Michelle D. Lane, (2012). Individual entrepreneurial orientation: development of a measurement instrument. *Education + Training*, 54(2/3), 219-233, DOI: 10.1108/00400911211210314
- Díaz-Casero, J. C., Ferreira, J. J. M., Hernández Mogollón, R., & Barata Raposo, M. L. (2012). Influence of institutional environment on entrepreneurial intention: a comparative study of two countries university students. *International Entrepreneurship and Management Journal*, 8(1), 55–74.
- Dinis, A., do Paco, A., Ferreira, J., Raposo, M., & Gouveia Rodrigues, R. (2013). Psychological characteristics and entrepreneurial intentions among secondary students. *Education+ Training*, 55(8/9), 763-780.
- Engle, R., Schlaegel, C., & Dimitriadi, N. (2011). The relationship of new business ventures and formal institutions: A multinational study. *International Business: Research, Teaching, and Practice*, 5(2), 2-21.

- Fini, R., Grimaldi, R., Marzocchi, G.L., and Sobrero, M. (2012). The determinants of corporate entrepreneurial intention within small and newly established firms. *Entrepreneurship Theory and Practice*, 36(2), 387-414.
- Franke, N., & Lüthje, C. (2004). Entrepreneurial intentions of business students—A benchmarking study. *International Journal of Innovation and Technology Management*, 1(03), 269-288.
- Gurel, E., Altinay, L., & Daniele, R. (2010). Tourism students' entrepreneurial intentions. *Annals of Tourism Research*, 37(3), 646-669.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective*. Upper Saddle River, NJ: Pearson Education.
- Ho, R. (2006), *Hand book of univariate and multivariate data analysis and interpretation with SPSS*, FL, US: Chapman & Hall, CRC Press, Taylor & Francis Gr.
- Ismail, M., Khalid, S.A., Othman, M., Jusoff, K., Abdul Rahman, N., Mohammed, K.M., & Shekh, R.Z. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, 4(10), 54-60
- Johan, W. and Dean, S. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307-1314.
- Keat, O.Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science*, 2(4), 206–220.
- Kristiansen, S., & Indarti, N. (2004). Entrepreneurial intention among Indonesian and Norwegian students. *Journal of Enterprising Culture*, 12(01), 55-78.
- Liñan, F. and Chen, Y.W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), 593-617.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- Lüthje, C., & Franke, N. (2003). The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, 33(2), 135-147.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Moreno, A. and Casillas, J. (2008), Entrepreneurial orientation and growth of SMEs: a causal model. *Entrepreneurship Theory and Practice*, 32(3), 507-528.
- Nabi, G., & Liñán, F. (2013). Considering business start-up in recession time: The role of risk perception and economic context in shaping the entrepreneurial intent. *International Journal of Entrepreneurial Behavior & Research*, 19(6), 633-655.
- Nunnally, J.C. and Bernstein, I.H. (1994). *Psychometric theory*, 3rd ed., New York, NY: McGraw-Hill.
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: a systematic review of the evidence. *International small business journal*, 25(5), 479-510.
- Pruett, M. (2012). Entrepreneurship education: workshops and entrepreneurial intentions. *Journal of Education for Business*, 87(2), 94-101.
- Pruett, M., Shinnar, R., Toney, B., Llopis, F. and Fox, J. (2009). Explaining entrepreneurial intentions of university students: a cross-cultural study. *International Journal of Entrepreneurial Behavior & Research*, 15 (6), 571-594.
- Rauch, A. and Frese, M. (2007). Let's put the person back into entrepreneurship research: a meta-analysis on the relationship between business owners'

- personality traits, business creation, and success. *European Journal of Work and Organisational Psychology*, 16(4), 353-385.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship theory and practice*, 33(3), 761-787.
- Robinson, P. B., & Sexton, E. A. (1994). The effect of education and experience on self-employment success. *Journal of business Venturing*, 9(2), 141-156.
- Robinson, P. B., Stimpson, D., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, 15(4), 13-31
- Sandhu, S.M., Sidique, F.S. and Riaz, S. (2011). Entrepreneurship barriers and entrepreneurial inclination among Malaysian postgraduate students. *International Journal of Entrepreneurial Behavior & Research*, 17(4), 428-449.
- Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breiteneker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education+ Training*, 51(4), 272-291.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Thompson, J. L. (1999). A strategic perspective of entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 5(6), 279-296.
- Turker, D., & Sonmez Selçuk, S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European industrial training*, 33(2), 142-159.
- Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review *Journal of management*, 36(2), 381-404.

# **Predicting Entrepreneurial Satisfaction: Women Digital Entrepreneurs' Perspective**

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**Keyword: Digital Entrepreneurs, Women, Entrepreneurial Satisfaction, Predictors**

## **Introduction**

The word 'Entrepreneur' draws its origin from the French word '*entreprendre*'. Entrepreneurs are the originators of novel projects who face diverse unpredictability in different forms (Kuratko and Hodgetts (2004)). They are armed with visionary skills and organize desired resources – time, energy, and money along with adopting the right measures to make success inevitable. (Moorman and Halloran, 1993; Meredith, Nelson and Neck, 1982). Entrepreneurship is characterized by Brockhaus (1976) as actions undertaken in connection to the ownership of a firm. Hisrich (2004) states that it is an evolving procedure of wealth formation calling individuals to dedicate their time and devote themselves fully for undertaking risks in different forms like financial, physiological and social leading to monetary and personal accomplishment. Women are also coming to a large extent as entrepreneurs. Simplistically, women who start or adopt a business actively are called women entrepreneurs. They may be further defined as a group of women who initiate, organize and operate a business enterprise. Entrepreneurship progress and revenue generating activities are a potential solution for empowering women that is directed towards economic independence. Bisht & Sharma (1991) argued that **the** entrepreneurship of women is considered to be an well-organized tool to the economic development and empowerment of women. Saurabh (2012) observed that women entrepreneurs met restrains in facets of financial, marketing, family, health and location problems. What women entrepreneurs want for enterprise control is being little trained up, some finance, and co-operation and encouragement within the sphere of business, at all ranges - home, the society and the government as well. As a matter of fact though every entrepreneur wants to be happy, researchers say, in fact, failure rates among start-ups and new ventures can

amount up to sixty percent within the first 5 years (Cooper et al. 1988; Phillips and Kirchoff 1989) and the average income of the self-employed is often well below that of comparable employed individuals (Hamilton 2003). Satisfaction can be seen as a key measure of individual entrepreneurial success. The utility entrepreneurs derive from their start-up venture is an important determinant of venture survival. The degree of entrepreneurial satisfaction is influenced mainly by venture performance, but may also be affected by personal characteristics, motives for start-up and venture characteristics. Existing research on job satisfaction has primarily concentrated on explaining the satisfaction of employees rather than that of entrepreneurs (Cooper and Artz 1995). We contribute to the literature in three ways. But if the venture does not work well, and the entrepreneur still reports satisfaction, what could be the other possible factors that can lead to her satisfaction. Though we begin with revenue generated we gradually move on exploring the psychological factors that could be possible influencing satisfaction from women entrepreneurs. Besides the psychological factors also we have tried to bring in whether quality of life would have any probable impact on intensifying the satisfaction.

With this background, this study empirically investigates the factors that have an effect on entrepreneurial satisfaction.

## Literature Review

**Table 1: Snapshot of Literature Review**

<b>Author and Year</b>	<b>Findings</b>
Say (1971)	A successful entrepreneur must possess outstanding qualities, especially in decision making
McClelland (1961)	An entrepreneur should feel a need for achievement.
Rotter, 1966	Internal locus of control is an important determiner of entrepreneurial satisfaction
Hisrich and Gracher, 1995	Self-confidence, independence
Cox and Jennings, 1995	An entrepreneur also must be able to face any possibilities effectively during the formation of a new venture.
Perren, 1999, 2000; Amit et al., 2000	Explains that entrepreneurial success is tangible elements such as revenue or a firm's growth, personal wealth creation, profitability, sustainability, turnover
Harada (2002)	Challenges older views by stating that some entrepreneurs would prefer to remain in the business despite facing difficulty

	and loss due to their high determination characteristics.
Saurabh (2012)	Women entrepreneurs met restrains in facets of financial, marketing, family, health and location problems
Rehman and Roomi (2012)	Scarcity of adequate time, gender prejudice , social and cultural standards, family tasks and duties are the most considerable challenges women need to accomplish
Zeffane (2015)	It was found that women are less interested to develop into entrepreneurs with less propensity to take risk. Women also lacked in the matter of trust than their male counterparts..
Dawson (2017)	That prior financial optimism has unfavorable bearing on the level of contentment that entrepreneurs have in terms of their pay
Brown 2017	Entrepreneur's optimism Is certainly transmittable ,vibrant and enhance the level of employee state optimism.
Agarwala and Lenka(2015)	Women entrepreneurs need to develop an effective work life balance to avoid role conflict
Kamalabhanand Krishnan (2015)	Entrepreneurial attitudes are associated withconstruct and factors linked with entrepreneurial abilities for ultimate entrepreneurial success and satisfaction.
Lewis 2017	A strong emotional component is present between entrepreneurs and their work

## Conceptual Framework and Hypothesis

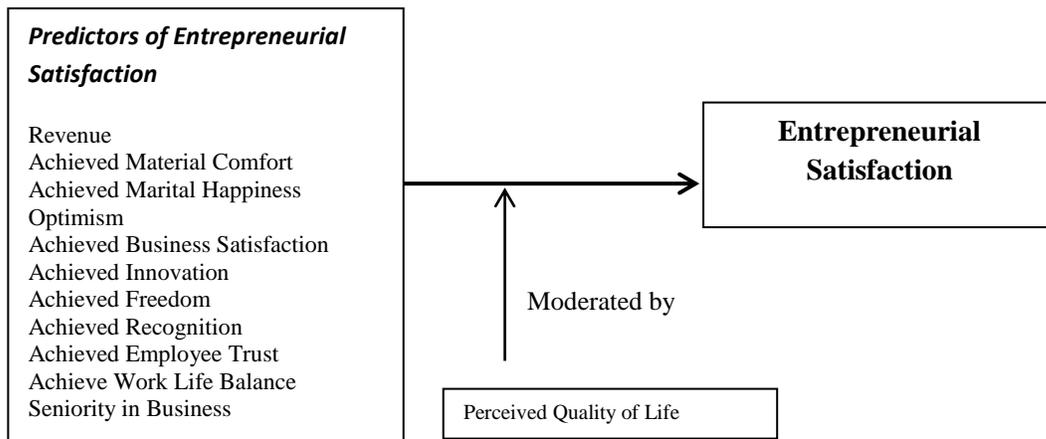
To develop the conceptual framework and develop hypotheses in this study, it is important to understand the theories on which the concept has been built. Looking into the *psychological theories* of entrepreneurship, it can be seen that emphasis is on the person engaging in entrepreneurship; and the psychological or emotional factors that influence entrepreneurial people. The magnitude of appreciation and elucidation in psychological theories is the *person* (Landstrom, 1998). A theory put forward by psychologist David McClelland, a Harvard Emeritus Professor, asserts that that entrepreneurs have a *need for achievement* that drives their activities and centers around some need directed behaviour. Julian Rotter, Professor Emeritus at the University of Connecticut, recommends that *locus of control* as the influencing factor behind entrepreneurial engagement. Rotter's

theory holds that humans with a sturdy internal locus of control agree with their moves can have an impact on the external world and even some other studies indicate that maximum entrepreneurs do possess the internal locus of control trait. A final method, even though unsupported with the aid of studies, indicates personality traits starting from creativity and resilience to optimism impact entrepreneurial behavior. Entrepreneurship receives a lift whilst society has enough supply of people with required psychological traits. The psychological traits encompass need for high achievement, a vision or foresight, capability to stand competition. Those traits are shaped at some point of the person's upbringing which decides on standards of excellence, self-reliance and low father dominance. Even as the trait model specializes in enduring inborn characteristics and locus of control on the person's perceptions about the rewards and punishments in his or her existence, (Pervin, 1980,), need for achievement theory given by the famous theorist McClelland (1961) defined that people have a need to succeed, accomplish, excel or achieve. Entrepreneurs are influenced through this need to acquire and excel. Whilst there may be no studies to establish to support personality trends, there may be researches supporting for the connection between achievement motivation and entrepreneurship (Johnson, 1990). Achievement motivation can be the best convincing psychological aspect associated with new venture introduction (Shaver & Scott, 1991). Underlying the *human capital entrepreneurship* concept are two factors, education and experience (Becker, 1975). The know-how received from schooling and experience represents a useful resource that is heterogeneously allotted throughout people and in impact significantly to the understanding of the differences in opportunity identification and exploitation (Anderson & Miller, 2003, Chandler & Hanks, 1998, Gartner et al, 2005, Shane & Venkataraman, 2000)

## **Research Questions**

- 1) What is the relationship between Psychological Factors and Entrepreneurial Satisfaction among Women Digital Entrepreneurs? (First order)
- 2) What is the relationship between Quality of Life and Entrepreneurial Satisfaction among Women Digital Entrepreneurs? (Second order)
- 3) Does Quality of Life moderate the impact of relationship psychological factors with Entrepreneurial Satisfaction among Women Digital Entrepreneurs? (Second order moderator)

## Conceptual Model



## Construction of Hypotheses

Some entrepreneurs are more satisfied with their ventures than others. In this study we link entrepreneurial satisfaction to performance and psychological factors.

**Table2: Formulated Hypotheses**

S. No.	Hypotheses
H1	Revenue generated in the business has a positive correlation with entrepreneurial satisfaction.
H2	Achieved Material Comfort by the founder has a positive correlation with entrepreneurial satisfaction.
H3	Marital Happiness by the founder has a positive correlation with entrepreneurial satisfaction.
H4	Optimism by the founder has a positive correlation with entrepreneurial

	satisfaction.
H5	Business Satisfaction by the founder has a positive correlation with entrepreneurial satisfaction.
H6	Achieved Innovation by the founder has a positive correlation with entrepreneurial satisfaction.
H7	Achieved Freedom by the founder has a positive correlation with entrepreneurial satisfaction.
H8	Achieved Recognition by the founder has a positive correlation with entrepreneurial satisfaction.
H9	Achieved Employee Trust by the founder has a positive correlation with entrepreneurial satisfaction.
H10	Achieve Work Life Balance by the founder has a positive correlation with entrepreneurial satisfaction.
H11	Seniority in Business by the founder has a positive correlation with entrepreneurial satisfaction.
H12	Perceived Quality of Life moderates the relation between psychological factors and entrepreneurial satisfaction.

## Measures of the Study

For the purpose of the present research, a tailor made questionnaire was developed. After a wide range of literature review, a number of sample questionnaires regarding the variables under study and surveyed. From consideration of those questionnaires, a questionnaire was developed covering- Revenue, Achieved Material Comfort, Achieved Marital Happiness, Optimism, Achieved Business Satisfaction, Achieved Innovation, Achieved Freedom, Achieved Recognition, Achieved Employee Trust, Achieved Work Life Balance and Seniority in Business

The scale was of 55 items, 5 point Likert scale. The reported reliability value of the scale has been found to be 0.82. The scale had included both positive and negative items. A panel of three experts was requested to check the content validity and face validity of the scale. Items that received 85% or more approval were retained for the study. Few items were revised in the light of experts' comments. The final scale consisted of 55 items. Cronbach's alpha of 0.86 indicated high reliability.

There was also a single item 5 point Likert type questionon ; *'Overall how do you rate your current satisfaction with the business?'*

## **Participants and Procedure**

The present sample included 120 women digital entrepreneurs with businesses running in four metropolitan cities in India. The sample of women entrepreneurs was obtained by convenience sampling method from Kolkata, New Delhi, Chennai and Mumbai, India. The sample was selected by personal contacts of the researchers and also employed social networking sites like LinkedIn and Facebook to reach out to digital women entrepreneurs. The prospective participants were contacted by the researcher and approached earlier –informed consent was obtained from all the participants. The criteria for inclusion were women in business for minimum of five years completion from starting up. The business had to be in running state. Out of the 350 participants contacted, 220 responded to the questionnaires (response rate of 62.85 percent). After careful screening, and matching of the subjects on the parameters of the important criteria of the research, 120 completed questionnaires were selected for the purpose of research and analysis.

## **Findings and Discussion**

**Normality Test:**After data collection, cleaning and scrutinizing the data, a normality test has also included additionally within the assumption of the correlational analysis. The data has been examined for normality that allows the researcher to apprehend the pattern of data distribution. The shape of its distribution is required to be normally distributed. The normal distribution makes a probability distribution plot in case it is distributed at a straight diagonal line. After data screening and cleansing had been performed, violation of the assumption had to be checked by way of running the descriptive statistics. The findings from skewness and kurtosis analysis have been attained and this may imply whether or not the statistics is typically disbursed or not. According to Hair et. al. (2006), regular distribution is suitable when the skewness and kurtosis values are in the range of +/-3. Subsequently, based totally on the results and as shown in the table beneath, the data distribution was found to be normally distributed, since the values of skewness and kurtosis have been in the range of +/-3 for every variable.

**Table 3: Normality Analysis**

Variables	Normality Analysis s	
	Skewness	Kurtosis
Revenue	-0334	-0.652
Achieved Material Comfort	-0336	0.-635
Marital Happiness	-.0165	0.561
Optimism	-0.452	0.569
Business Satisfaction	-0325	1.232
Achieved Innovation	-0.365	0.89
Achieved Freedom	0.563	0.630
Achieved Recognition	0.757	0.365
Achieved Employee Trust	0.656	0.465
Achieved Work Life Balance	0.698	0.698
Seniority in Business	0.635	0.368
Perceived Quality of Life	0.564	0.968

**Reliability Test:** In accessing the data from the employed variables in the study, variables summed to determine the entrepreneurial satisfaction factors was required to be tested on reliable scales. Accordingly, the reliability test using Composite Reliability values was performed previous to further analysis. The alpha values for the entire domain have been found to be greater than 0.70, suggesting that the items have fairly high internal consistency.

### **Results of Confirmatory Factor Analysis - Measurement model**

Principal Component Analysis with Varimax Rotation and Kaiser Normalization was conducted to assess the underlying structures for the Entrepreneurial Satisfaction, studied in the research. The normality of the distribution in this study were approximately normally distributed, the skewness values were between -3 and 3. The result indicated there were 11 constructs after running the Factors Analysis. The result was determined based on the initial Eigenvalues. The results for the items and factor loading for the rotated factors with loading less than 0.40 was omitted to improve clarity. The Kaiser Meyer Olkin (KMO) measured should be greater than 0.70, it is inadequate if the value is less than 0.50 (Morgan, Barrett & Leech, 2011). The Bartlett test conducted is significant if the value is less than 0.005. In this study, the finding indicated that all the items measured were highly correlated to provide reasonable bases for factor analysis.

**Table 4: Results of Confirmatory Factor Analysis – Measurement model**

<b>Construct</b>	<b>Items</b>	<b>Factor Loadings</b>	<b>Composite reliability</b>	<b>AVE</b>
Revenue	R1	0.731***	0.86	0.720
	R2	0.786***		
	R3	0.930***		
	R4	0.832***		
	R5	0.939***		
Achieved Material Comfort	AMC1	0.741***	0.75	0.613
	AMC2	0.928***		
	AMC3	0.660***		
	AMC4	0.719***		
	AMC5	0.805***		
Marital Happiness	MH1	0.831***	0.84	0.711
	MH2	0.837***		
	MH3	0.847***		
	MH4	0.767***		
	MH5	0.910***		
Optimism	O1	0.820***	0.86	0.653
	O2	0.923***		
	O3	0.935***		
	O4	0.916***		
	O5	0.692***		
Business Satisfaction	BS1	0.757***	0.74	0.607
	BS2	0.739***		
	BS3	0.858***		

	BS4	0.714***		
	BS5	0.908***		
Achieved Innovation	AI1	0.700***	0.76	0.580
	AI1	0.830***		
	AI1	0.845***		
	AI1	0.885***		
	AI1	0.871***		
Achieved Freedom	AF1	0.844***	0.79	0.658
	AF2	0.648***		
	AF3	0.688***		
	AF4	0.666***		
	AF5	0.651***		
Achieved Recognition	AR1	0.613***	0.85	0.742
	AF2	0.896***		
	AF3	0.921***		
	AF4	0.899***		
	AF5	0.882***		
Achieved Employee Trust	AET1	0.880***	0.74	0.662
	AET2	0.794***		
	AET3	0.808***		
	AET4	0.802***		
	AET5	0.773***		
Achieved Work Life Balance	AWLB1	0.841***	0.73	0.723
	AWLB2	0.899***		
	AWLB3	0.806***		
	AWLB4	0.670***		
	AWLB5	0.648***		
Perceived Quality of Life	PQL1	0.688***	0.72	0.689
	PQL2	0.666***		
	PQL3	0.651***		
	PQL4	0.613***		
	PQL5	0.723***		
	PQL6	0.658***		
	PQL7	0.756***		
<b>Measurement model</b> = model Fit Indices: $\chi^2/df = 2.309$ (Good fit <5); GFI = 0.912, CFI = 0.928, (Good fit>0.9); RMSEA=0.068 (Good fit <0.06); N=720 Note: ***denotes $p < 0.001$ ; Note: AVE =Average Variance Extracted				

## Stepwise Regression Results

### **Regression Analysis**

Stepwise multiple regressions were administered to examine the research questions and hypotheses of the study. First the content validity was checked using measurement model then the relevant statistical measures were employed to test the hypotheses. The first and second order measurement model showed good fit and satisfied the basic conditions for content, convergent and discriminant validity

### **Table 5: Hierarchical structural equation estimates**

<b>Predictors of Entrepreneurial Satisfaction</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Revenue	0.053 <sup>ns</sup>		
Achieved Material Comfort	0.048 <sup>ns</sup>		
Marital Happiness	0.050 <sup>ns</sup>		
Optimism	0.061 <sup>***</sup>		
Business Satisfaction	0.072 <sup>**</sup>		
Achieved Innovation	0.589 <sup>***</sup>		
Achieved Freedom	0.061 <sup>***</sup>		
Achieved Recognition	0.063 <sup>***</sup>		
Achieved Employee Trust	0.064 <sup>***</sup>		
Achieved Work Life Balance	0.064 <sup>***</sup>		
<b><i>R<sup>2</sup> Psychological Factors</i></b>	0.071		
<b><i>R<sup>2</sup> Perceived Quality of Life</i></b>		0.078	
<b><i>Δ R<sup>2</sup></i></b>		0.007	
Achieved Material Comfort X Perceived Quality of Life		0.072	
Marital Happiness X Perceived Quality of Life		0.065	
Optimism X Perceived Quality of Life		0.066	
Business Satisfaction X Perceived Quality of Life		0.075	
Achieved Innovation X Perceived Quality of Life		0.065	
Achieved Freedom X Perceived Quality of Life		0.063	
Achieved Recognition X Perceived Quality of Life		0.068	
Achieved Employee Trust X Perceived Quality of Life		0.068	
Achieved Work Life Balance X Perceived Quality of Life		0.068	
<b><i>R<sup>2</sup> Psychological Factors X Perceived Quality of Life</i></b>			0.089
<b><i>Δ R<sup>2</sup></i></b>			0.011
<i>Model 1 fit: cmin/df = 4.435 (met the condition); CFI = 906 (Good fit), RMSEA</i>			

= 0.069 (Good fit)
Model 2 fit: $cmin/df = 4.435$ (met the condition); CFI = 906 (Good fit), RMSEA = 0.069 (Good fit)
Note: *** denotes significance at 0.001 level ** denotes significance at 0.05 level <sup>ns</sup> denotes estimates not significant at 0.05 level

The above table shows the relationships between the constructs and entrepreneurial satisfaction. The first order relationship between the psychological factors of and entrepreneurial satisfaction has been found to be 0.071\*\*\*. Psychological factors can be seen as a key measure of entrepreneurial satisfaction among women digital entrepreneurs. The degree of entrepreneurial satisfaction is influenced not by revenue generated (0.053<sup>ns</sup>), but mainly affected by psychological factors, which are mostly achievement oriented, like- achieved innovation (0.589\*\*\*), achieved freedom (0.061\*\*\*), achieved recognition (0.063\*\*\*), optimism (0.061\*\*\*), achieved Work Life Balance (0.064\*\*\*) and achieved Employee Trust (0.064\*\*\*). Studies on personal wellbeing increasingly build on the idea of quality of life (QoL). The present research identified that for women digital entrepreneurs, R<sup>2</sup> Perceived quality of life is 0.078\*\*. This indicates that quality of life, has a positive relation with entrepreneurial satisfaction. The research question- '*what is the relationship among quality of life and Entrepreneurial satisfaction amongst women digital entrepreneurs-has been answered as yes*'. Thirdly an attempt is made explore what the interaction effect of psychological variables and quality of life as predictors of entrepreneurial satisfaction. It' has been found that quality of life moderates the relation between psychological factors and entrepreneurial satisfaction (R<sup>2</sup> =0.089), with an increment in  $\Delta R^2$  (0.011).

The article aims to contribute to entrepreneurship theory, by way of exploring the effect of QoL on entrepreneurial satisfaction. It additionally makes a contribution to digital entrepreneurship literature, as deepening the know-how of key psychological factors and issues of entrepreneurial satisfaction of women founders. Especially in small businesses, one key element contributing to these business decisions is the health of the entrepreneur (Love & Crompton, 1999). The emphasis on QOL displays increasing recognition that with little consensus as to how it must be operationalized. The economic achievement of an enterprise is

depending on its paintings- Festervand et al. (1988). Marketers are theoretically taken into consideration to be increase-orientated, innovative, innovative and hazard-taking (Lumpkin & Dess 2001). Enterprise growth selections are regularly encouraged by means of the man or woman belief and evaluation of existence occasions (Ateljevic & Doorne 2000, Peters & Schuckert 2014). Commercial enterprise choices may be expected to be without delay related to the entrepreneurs' wellbeing and surrounding. Show that delight with very own health, economic endowment, familial embeddedness and sound political/financial situations are essential stipulations for firm boom. This confirms what turned into assumed in prior explorative studies (Peters & Schuckert, 2014). whilst developing with an concept, an entrepreneur must think of what he enjoys doing, examine opposition, perform market studies to peer if there may be a call for and parent out the way to make the concept work. This takes talent, initiative and creativity. So in this study, it has been found that when the women entrepreneurs recognize that their talent, initiative and creativity are realized in terms of their business, they derive satisfaction. Psychological well-being has previously been studied as an important career outcome for the self-employed (Andersson 2008). Bonke et al. (2009) had identified in their studies that income and leisure time are the two conventional and main assets of utility in economics, start-up motives are probable to effect entrepreneurial satisfaction. But the present study has observed that revenue generated isn't a significant component in the direction of entrepreneurial satisfaction.

**Table 6: Hypotheses Validation**

<b>S. No.</b>	<b>Hypotheses</b>	<b>Supported/Not Supported</b>
H1	Revenue generated in the business has a positive correlation with entrepreneurial satisfaction.	Not Supported
H2	Achieved Material Comfort by the founder has a positive correlation with entrepreneurial satisfaction.	Not Supported
H3	Marital Happiness by the founder has a positive correlation with entrepreneurial satisfaction.	Not Supported
H4	Optimism by the founder has a positive correlation with entrepreneurial satisfaction.	Supported
H5	Business Satisfaction by the founder has a positive correlation with entrepreneurial satisfaction.	Supported

H6	Achieved Innovation by the founder has a positive correlation with entrepreneurial satisfaction.	Supported
H7	Achieved Freedom by the founder has a positive correlation with entrepreneurial satisfaction.	Supported
H8	Achieved Recognition by the founder has a positive correlation with entrepreneurial satisfaction.	Supported
H9	Achieved Employee Trust by the founder has a positive correlation with entrepreneurial satisfaction.	Not Supported
H10	Achieved Work Life Balance by the founder has a positive correlation with entrepreneurial satisfaction.	Supported
H11	Seniority in Business by the founder has a positive correlation with entrepreneurial satisfaction.	Not supported
H12	Perceived Quality of Life moderates the relation between psychological factors and entrepreneurial satisfaction.	Supported

## Conclusion

To sum up the discussion, the study has objectively identified the factors that contribute to entrepreneurial satisfaction of women digital entrepreneurs. This study identifies the main extracted factors of entrepreneurial satisfaction as perceived by women digital entrepreneurs. Therefore, we believe that this study will make a contribution on entrepreneurship researches, initiate discussions among scholars and stimulate further research on the connection between psychological factors satisfaction and entrepreneurial satisfaction of entrepreneurship. We point out the limitations of our research as well, first, the study deals with one country, that is, the India, we use self-reported information for satisfaction, and this can result in some form of cognitive dissonance.

## References

1. Acs Z (2006) How is entrepreneurship good for economic growth? Innovations 1: 97-107.
2. Andersson, P. (2008). Happiness and health: Well-being among the self-employed. *The Journal of SocioEconomics*, 37, 213–236.
3. Ateljevic, I., & Doorne, S. (2000). ‘Staying within the fence’: Lifestyle entrepreneurship in tourism. *Journal of Sustainable Tourism*, 8(5), 378–392

4. Bisht, N.A., & Sharma, P.K.(1991).Entrepreneurship expectations and experiences. New elhi: Himalaya Publishing House, 17.
5. Bonke, J., Deding, M., &Lausten, M. (2009). Time and money: A simultaneous analysis of men’s and women’s domain satisfactions. *Journal of Happiness Studies*, 10, 113–131.
6. Brockhaus, R.H. (1976). Risk-taking propensity of entrepreneurs. *Proceedings of the Academy of Management Conference*, 457-60.
7. Chris Dawson (2016) ‘Financial Optimism and Entrepreneurial Satisfaction’ *Strategic Entrepreneurship Journal* ,1(1)
8. Chung LH, Gibbons PT (1997) Corporate Entrepreneurship, The Roles of Ideology and Social Capital. *Group & Organization Management* 22: 10-30.
9. Cooper, A. C., &Artz, K. W. (1995). Determinants of satisfaction for entrepreneurs. *Journal of Business Venturing*, 10(6), 439-457.
- 10.Cox, C., & Jennings, R. (1995). The foundation of success: The development and characteristics of British entrepreneurs and intrapreneurs. *Leadership and Organizational Development Journal*, 16(7), 4 – 9
- 11.Festervand, T. A., Lumpkin, J. R., and Tosh, D. S.: “Quality of Life” in the Industrial Site Location Decision. *Journal of Real Estate, Development* 4 (1988): 19–27
- 12.Goldsmith, R.E.& G.R.Foxall. (2003). The measurement of innovativeness . In Shavinina , L.V. (Ed.), *The International Handbook of Innovation*. Elsevier Science, Oxford, UK, 321-328.
- 13.Hamilton, L.C., 2003. *Statistics with Stata*. Duxbury Thomson Learning, Belmont, CA.<sup>[1]</sup><sub>[SEP]</sub>

14. Harada, N. (2002). Who succeeds as an entrepreneur? An analysis of the post-entry performance of new firms in Japan. *Japan and the World Economy*, 44(1), 1 – 13.
15. Holcombe RG (1998) Entrepreneurship and economic growth. Quarterly Journal of Austrian Economic
16. Hurt, H.T., K. Joseph & C.D. Cook. (1977) . Scale for the measurement of innovativeness. *Human Communication Research*, Vol. 4, 58-65.
17. Kuratko, D.F., & Hodgetts, R.M. (2004). *Entrepreneurship: Theory, Process & Practice*, Mason, OH; South-Western Publishers.
18. Lewis (2017) Making meaning as well as money: the experience of young female entrepreneurs □ International Journal of Gender and Entrepreneurship □ Volume 9, Issue 4
19. Latha Krishnan Email author, T. J. Kamalnabhan (2015) ‘Success and Life Satisfaction Among Women Entrepreneurs in Micro enterprises’ Entrepreneurial Ecosystem pp 351-372
20. Love, L. L., & Crompton, J. L. (1999). The role of quality of life in business (re)location decisions. *Journal of Business Research*, 44(3), 211–222. doi: 10.1016/S0148-2963(97)00202-6
21. Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance. *Journal of Business Venturing*, 16(5), 429–451.
22. Marcati, A., G. Guido & A.M. Peluso . (2008). The role of SME entrepreneurs’ innovativeness and personality in the adoption of innovations. *Research Policy*, 37, 1579-1590.
23. McClelland DC (1987) Characteristics of successful entrepreneurs. *The journal of creative behavior* 21: 219-233.
24. Meredith, G. G., Nelson, R.E., & Neck, P.A. (1982). *The Practice of Entrepreneurship*. International Labour Office, Geneva. Meredith

25. Perren, L. (1999). Factors in the growth of micro-enterprises: Developing a framework. *Journal of Small Business and Enterprise Development*, 6(4), 366 – 385.
26. Perren, L. (2000). Factors in the growth of micro-enterprise: Exploring the implications. *Journal of Small Business and Enterprise Development*, 7(1), 58 – 68.
27. Peters, M., & Schuckert, M. (2014). Tourism entrepreneurs' perception of quality of life: An explorative study. *Tourism Analysis*, 19(6), 731–740.
28. Phillips, B. D., & Kirchoff, B. A. (1989). Formation, growth and survival: Small firm dynamics in the US economy. *Small Business Economics*, 1, 65–74.
29. R Brown (2017) The impact of entrepreneurial optimism on Employees , *Global Journal of Entrepreneurship* Volume 1, Number 2
30. Rachid Zeffan' (2015) Trust, personality, risk taking and entrepreneurship: Exploring gender differences among nascent and actual entrepreneurs in the United Arab Emirates' *World Journal of Entrepreneurship, Management and Sustainable Development*, 11(3),
- 31.
32. Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1-28.
33. Saxenian A (2005) From brain drain to brain circulation: Transnational communities and regional upgrading in India and China. *Studies in comparative international development* 40: 35-61.
34. Say, J.B.: A treatise on political economy or the distribution and consumption of wealth. New York: A.M. Kelly Publishers, 1971
35. Schumpeter JA (2013) Capitalism, socialism and democracy: Routledge.

36. Sucheta Agarwal , Usha Lenka (2015) Study on work-life balance of women entrepreneurs – review and research agenda Industrial and Commercial Training 47(7):356-362
37. Sumaira Rehman , Muhammad Azam Roomi Gender and work-life balance: a phenomenological study of women entrepreneurs in Pakistan ; □ Journal of Small Business and Enterprise Development , □ Volume 19, Issue 2
38. Wennekers S, Thurik R (1999) Linking entrepreneurship and economic growth. Small business economics 13: 27-56.
- 39.

# Strategic Flexibility and Innovation of an organisation using Electric circuit framework - SAP-LAP Analysis

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## I. Introduction

There are different categories of organisation and each organisation has challenges related to internal stability and external stability of the organisation, and it is not unusual when stability itself acts as a challenge to the organisation. There is plethora of complex framework that help us diagnose and treat the various challenges. The framework attempts to break the challenges into various components and provide solution on retrospective analysis or remedies. But generally, it is observed that these frameworks might not be generic and provide solutions to a narrow and a niche problem category.

There are various innovation strategies that exist in market and various diversification techniques to promote organic and inorganic growth of organisation. But, the pivotal role played by strategic flexibility of organisation that enable the organisation to develop an aversion shield to all the instability or changes, it helps the organisation to plan and prepare themselves to proactively succeed in future.

To explain all these phenomena and cater to the need to variety of framework and generic framework of SAP-LAP exist that provides a comprehensive solution to diagnose and treat challenges and instability in an organisation.

Surprisingly, the same challenges are faced by the circuit designers. There are combinations of circuit design that already exist in the books of electrical engineer, but which circuit plus what design of the circuit is required to be implemented depend on various factors like battery-voltage source, stability of circuit and application of different circuits according to their utility. There are various categories of circuit ranging from simple series, parallel to a little complex Wheatstone bridge each serving their own utility and purpose. As each management framework has their own pros and cons similarly each electric configuration has their own limitations.

To achieve certain kind of flexibility and structural aptness the designing proficiency plays a pivotal role and that can be contrasted with the internal structure of the organisation that is optimized to deliver a more strategically flexible and robust functioning in an organisation.

It is often observed that during a circuit design framework different type of resistors are used, replaced and repositioned to provide a desirable amount of efficiency from the circuit, likewise there are different products services of an organisation that require innovation to subsist in the market to provide that competitive advantages over the other setups in the same race.

This paper acknowledges various electric circuit design strategy, along with the various framework that exist in the management system of organisation to build an analogy between the two, the paper attempts to develop an electric circuit framework that can be leveraged by the senior executives to understand the structural and functional flexibility of the organisation. Said that this framework seems to be more valid for internal functioning of the organisation it discounts for certain external influence son the organisation.

## II. Methodology Used

### II.I. Analogy approach

Prince 1968 has mentioned the use of analogy approach to understand a current existing framework and develop analogy framework for similar but strange comparisons.

Although there are certain challenges to implement such a analogy as SAP-LAP framework along with other pre-existing techniques explains both internal and external scenario, and it seems challenging to establish interdependence between the two circuits that are dis-jointed, Nonetheless still this research article tries to use the prior domain knowledge of electric circuits to develop a management framework using the various features of prevailing practices of management.

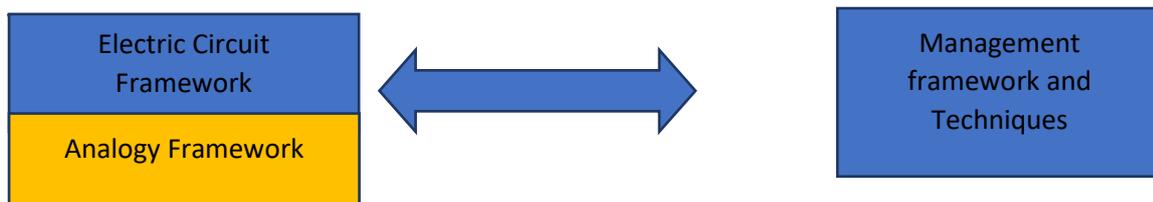


Figure 1 - Analogy between electric circuit and management frameworks

### II.II. SAP-LAP Framework

SAP-LAP analysis is a generic framework that tries to understand the management challenges and problems using three parameters including situation, Actor and Process. Situation refers to as the current situation in each process and the various characters who are responsible to rectify or tackle that situation are called as Actors. The third parameter is the process that is implemented to change the situation intended for a better state. To understand the interplay of these three we can consider actors planning, developing and implementation of different processes in the organisation to improvise or modify the current situation. The framework focuses of interdependence of these three entities and their significance to a given organisation. In concordance with the SAP there is a LAP framework. Learning, Actions and Performance that dwells how these three entities are correlated with entities above described. The framework explains in detail how an actor can learn different new actions that can be used to design new process and in the end to monitor the situation change various performance measure can be used. The framework also throws insights that the amount of freedom of choice is directly proportional to development of a robust and flexible organisation.

There are various use cases where SAP-LAP analysis has been applied in past example is Bhardwaj and Momaya developed framework to understand social entrepreneur organisation. Government organisation has used SAP-LAP to conduct Gap analysis in conventional planning. Various manufacturing process (Mahajan et al 2013) analysed case of supply chain management in corn factory. Due to this all-rounder characteristic of the SAP-LAP, the paper has leveraged this framework with analogy of electric circuit as various simple parameters of electric circuits like resistance, current and voltage interplay and depends on each other. SAP-LAP have been applied to understand the structure of an organisation from an electrical circuit point of view.

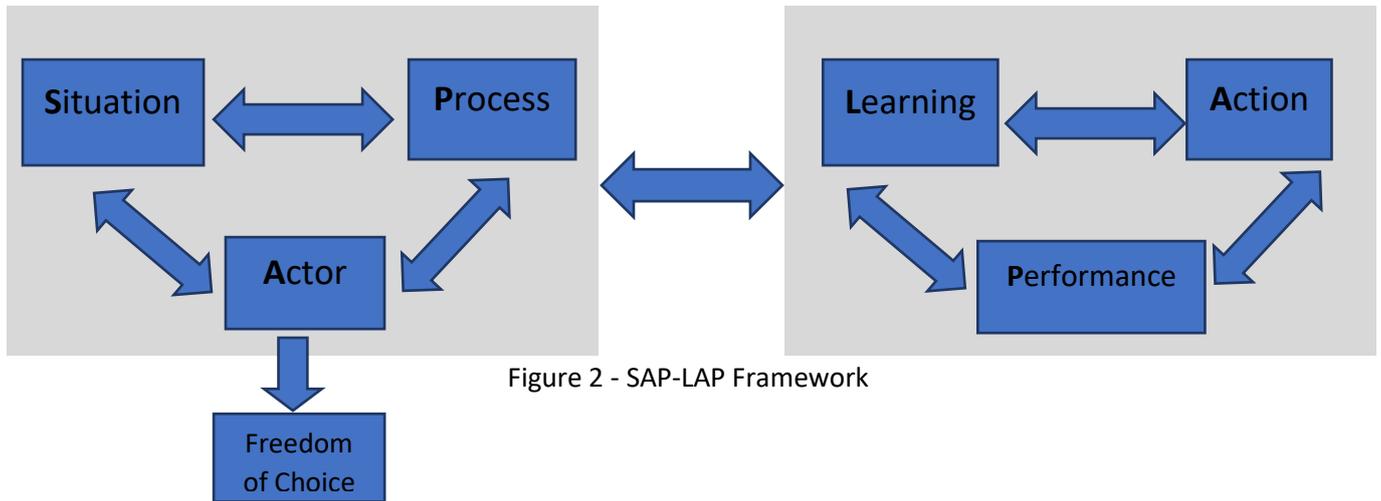


Figure 2 - SAP-LAP Framework

### II.III. Electric Circuit Framework

For the ease of understanding and abstaining from the complexity, the paper develops an electric circuit framework having 3 basic components i.e. Voltage, Current and Resistance. These three components are dependent on each other by a linear formula  $V=IR$  called as the Ohm's Law in physics that deals with the current and voltage relationship in case of ideal conductor. The battery sources create a potential difference across the electric wire and due to that difference, an electromotive force also known as EMF is developed that moves positive charge from higher to lower potential across the circuit giving rise to current. Apart from the Ohm's law the paper also uses the Kirchhoff current law that states the sum of all current flowing across a node is zero and division of current across the different nodes depends on the resistance that is across the branch in which the current is divided. In the current paper the three components are compared with SAP network where the potential difference (V) is said to be situation that lead to flow of current which is said to be process (P) across the resistors (Actors – Product /Services). The analogy is also set in terms of degree of freedom provided to actor and similarly the low resistance resistors that has an ability to provide better power and flow of current is put to contrast in later section of the paper.

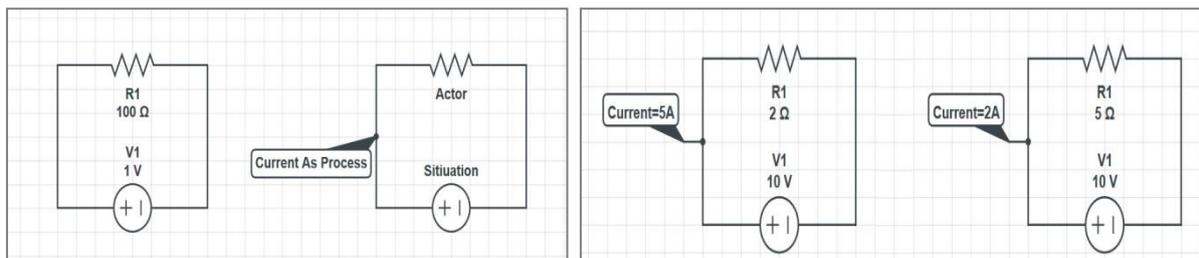


Figure 3 - Effect of Process due to freedom of actor as effect of current due to resistance change

### II.IV. Diversification Techniques

It is important for an organisation to diversify. There are many advantages linked with diversification of organisation. Diversification results in actual increase in sale. But there is not just a single process of diversification. There are various types of diversification that cater to different growth strategy of an organisation. Diversification is classified as concentric or conglomerate when the strategy metric is gauged around introduction of new products/ market in the customer ecosystem. If the organisation being similar supporting products/service then it is termed as concentric diversification. Conglomerate diversification occurs when organisation actually bring in different product and has different target audience or maybe the same target audience but a different intent.

There are various ways in which an organisation grow externally or in an inorganic manner that can be classified into Strategic Alliance, Jointed Venture, Merger and Acquisition. To understand the above concept, we can take example of two organisation (A and B). The case when both the organisation exist as a separate entity just sharing their knowledge and resources this kind of setup is called as Strategic Alliance. The case when A and B both exist and form a third organisation AB and manage their common operations via third organisation, in this case the third organisation AB is said to be a joint venture of A and B. The third case where A and B dissolves themselves losing their personal individuality and formation of an organisation AB happens then this kind of arrangement is termed as Merger. The last case of inorganic diversification occurs when A acquires B in term of resources, capital and assets. In this case B loses its identity and is attained by A in totality this scenario give rise to Acquisition.

Table 1 - Broad classification of diversification techniques

Type of Diversification	Organisation A (Post diversification)	Organisation B (Post Diversification)	Organisation AB (New Entity Post Diversification)	Examples
<b>Merger</b>	Does not Exist	Does not Exist	Exist	Fortis Healthcare India and Fortis Healthcare International
<b>Acquisition</b>	Exist	Does not Exist	Does not Exist	Whatsapp acquiring Facebook
<b>Jointed Venture</b>	Exist	Exist	Exist	Vistara - JV between Tata and (SIA)
<b>Strategic Alliance</b>	Exist	Exist	Does not Exist	Spotify and Uber

## II.V. Innovation – Making an impact with a change

Innovation is a biggest challenge and asset in today's era for an organisation. Many organisation has failed due to their inability to innovate and many have thrived due to the same. Every strategy developer holds a different view about innovation. According to Joseph Schumpeter innovation occurs in one of the five forms.

1. When an existing product/service is replaced by an improvised version of that similar product / service
2. An overall new concept/product is developed creating a new market all together
3. Change in functional, organisational and industrial structure of the firm.
4. Improve or develop new processes for production
5. Improve or develop new framework for supply-source

Although there exist numerous innovation types to understand the different impacts of innovation to the organisation, still there exist a broad classification of innovation when the impact is gauged based on market and technology.

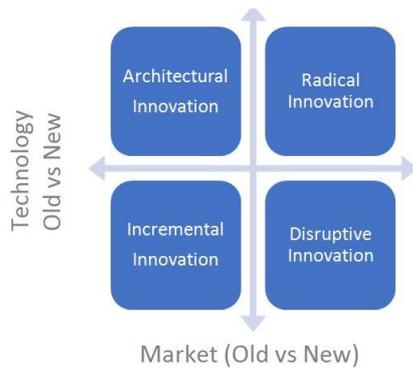


Figure 4 - Understanding Innovation using market and technology timeline

The above figure depicts four categories of innovation. Radical innovation that lies on the top right corner depicts introduction of a whole together new concept that attracts a new technology and new market for the organisation open the route to blue ocean.

Incremental Innovation that exist on bottom left corner is a technique that is used when the organisation sails in the red ocean. The organisation tries to improve their product and services by modification or addition of certain functional/structural features that might distinguish their product in the market from their competitors.

### III. SAP-LAP Electric Framework

Organisation faces lot of regular challenges and remedy design framework for that is SAP-LAP which has been already explained in the previous sections of the paper. As the electric circuit framework has 3 major components (Voltage, Current and Resistor) and an optimal framework requires learning to develop and execute the framework to achieve a desired performance, therefore an analogy can be easily established between electrical circuit and SAP-LAP framework. Here the voltage of circuit can be thought of a situation that has a potential to create difference, a situation that how the market will be with or without that organisation-firm (creating a value) and force that can actually drive a positive charge from positive to negative terminals giving rise to process flow of current that can understood as the process in SAP, in last the major factor that will impact or shape the process flow or current value will be the resistors, that can be contrasted with actors in SAP, a high resistance will resist the current to flow where as a low resistance divide will let the current flow easily comparing it with the actors that determine the process flow direction according to particular situation. Circuit designing has various complexities and likewise the strategic planning, therefore to optimize the performance (Power in case of electric circuit  $P=VI$ ) the designing of various circuit is required to Learn to prepare and implement (Take - Action) a well-defined optimized circuit that can be compared with preparing and implementation of strategic plans as developed by an organisation to optimize their performance.

To cover the other aspect of SAP-LAP we compare the freedom of actor to resistance value of resistors, the higher resistance the less flexibility in the flow of current (execution of process) and the reverse also holds true.

It is advised for an organisation to develop a flexible framework, and on the similar basis it is always advised to an electrical circuit designer to develop a circuit that can detect high or low current flow. There is various design of circuits to protect the circuit like Fuse circuit or Zener diode that act as current and voltage regulator but for the ease of complexity the paper exemplify series and parallel circuit and associate it with real-time organisation and firm.

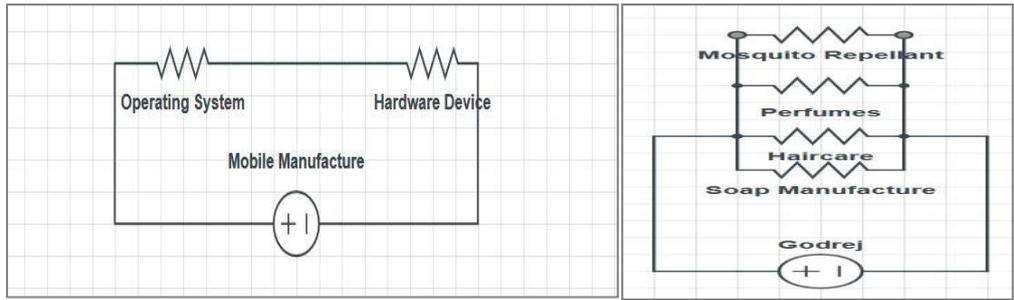


Figure 5 - Circuit depicting independence of various actors

So, if an organisation rely on multiple avenue to earn revenue with less inter-dependence as in case of parallel circuit so even if a resistor (an actor-product-service) fails the current will flow through different path but the circuit will not fail. On the other hand, considering the series circuit if an actor-resistor of the circuit fails the current flow will stop, this would lead to a halt in functioning of circuit. This helps us in understanding dependant products and services can fail the organisation therefore making it more prone and inflexible to changes.

#### IV. Diversification using Electric Circuits

This section of the paper tries to explain different 4 broad classification listed in Table 1 via electric circuit framework using the historical or current analysis.

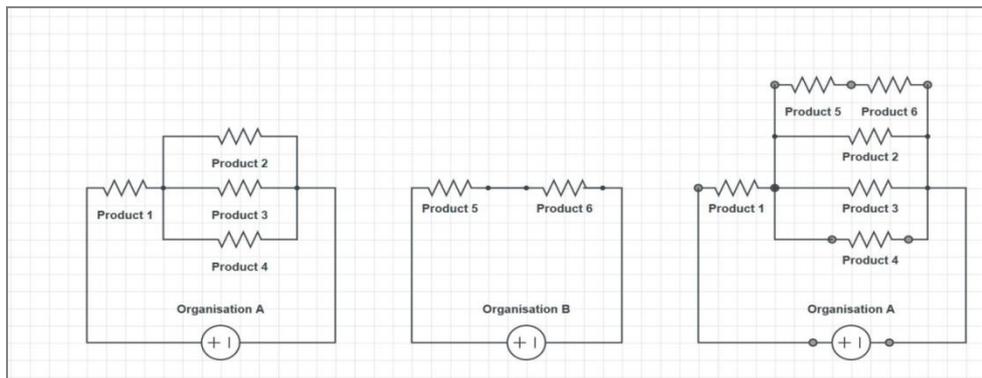


Figure6 - Circuit analysis for Acquisition

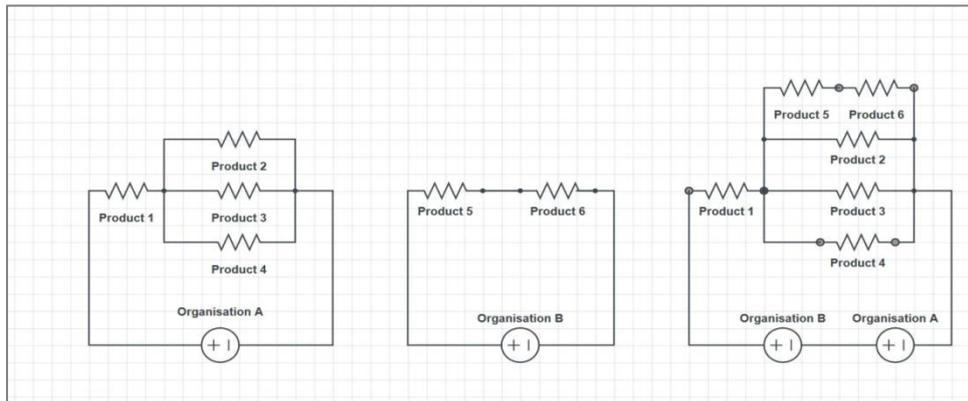


Figure 7- Circuit Analysis of Merger

The above circuits depicts organisation A and Organisation B. It has been depicted that when an merger happens as shown in figure 7 all the actors(resistors) are transferred to circuit of acquiring company from acquired company and only a single business entity of organisation exist .Whereas

Figure 8 depicts merger where the two entities form a single circuit. Figure 9 tries to explain the strategic alliance where the two organisations exist separately but resources and knowledge is transferred. Lastly figure 10 explains jointed venture where some voltage from both the organisation is utilised to form a third baby entity.

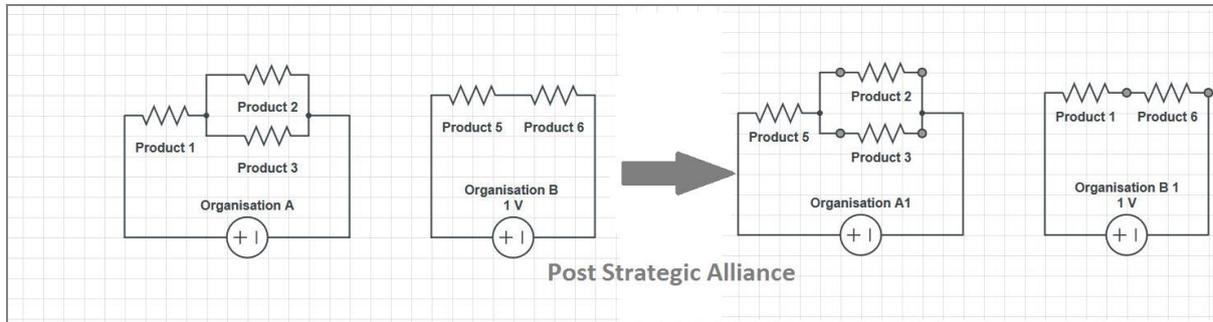


Figure 8- Circuit Analysis of Strategic Alliance

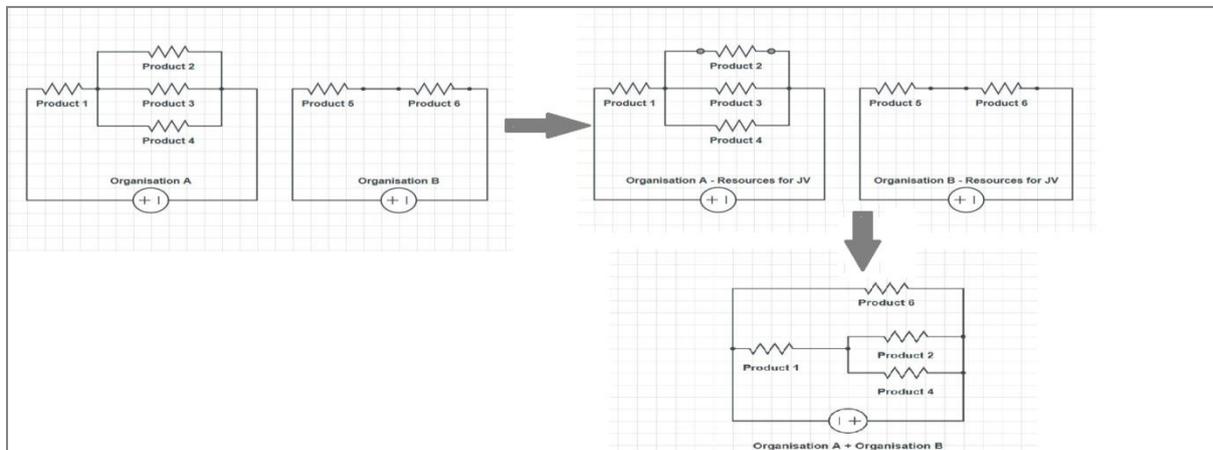


Figure 9- Circuit Analysis for Jointed venture

## V. Innovation and Circuit Types

This section tries to understand the impact of different innovation and various methodology that can be used to understand and visualize innovation using electric circuit framework.

### V.I. Radical Innovation

When a new product is introduced by an organisation to cater a totally different new market, it can be contrasted to add an overall new resistor to circuit to play a completely different role in the circuit but that in overall will improve power of the circuit.

### V.II. Disruptive Innovation

Introduction of a new product in the market that replaces the existing products in that exist in the market then the product is a disruptive innovation. Similarly replacing a higher resistance with a low resistance resistor that can increase freedom of current with more P can be termed as Disruptive Innovation

### V.III. Incremental Innovation

When the product/service existing in the market is constantly improved then the product is said to be incrementally innovated. This can be compared to variable resistor in an electric circuit whose value can be decreased to increase the power of the circuit which can in turn result in increased conductance.

### V.IV. Architectural Innovation

When a ceiling fan manufacturer uses the same technology (motor, blades) with a little modification to develop a portable fan then although the technology remains constant but the market the product is catering changes, and a new market is created with an existing technology such kind of setup is architectural innovation. Similarly replacing or changing the position of existing resistor to a different branch of circuit the current flow can be altered and process can be given a different path.

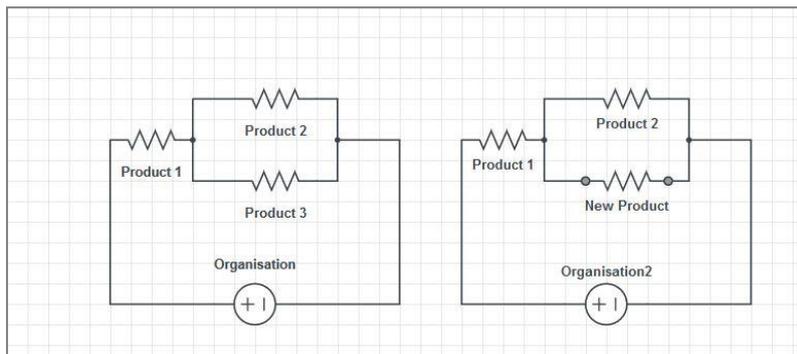


Figure 10 - Disruptive innovation

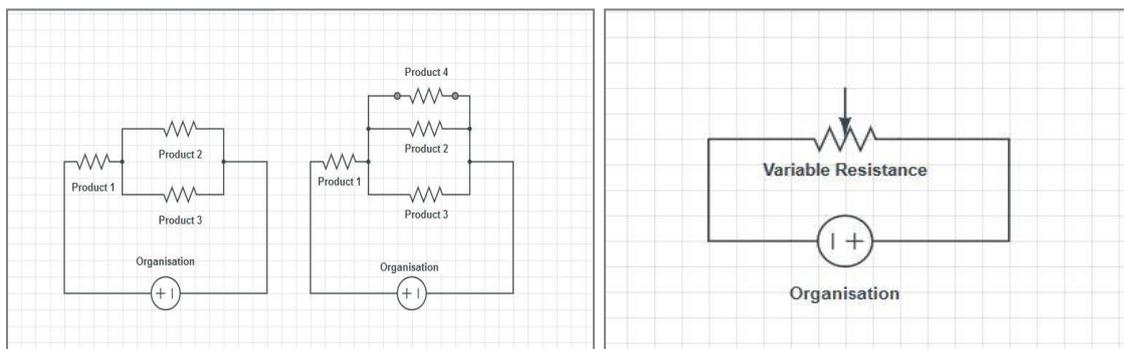


Figure 11 - Radical and Incremental Innovation

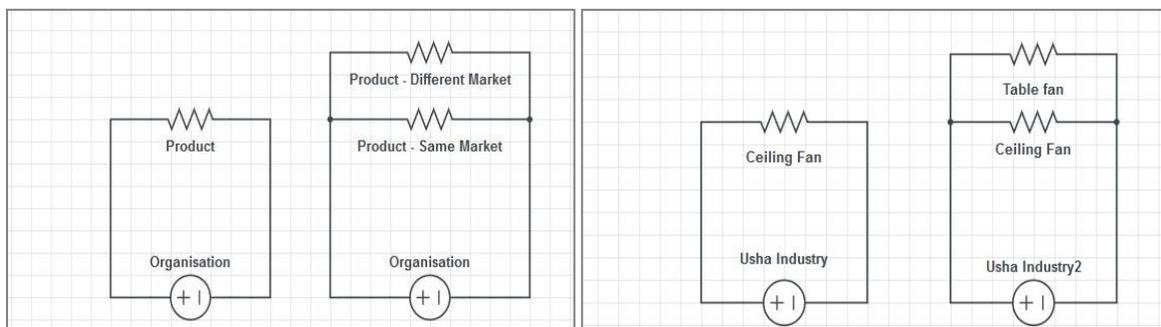


Figure 12 - Example of Architectural Innovation

## VI Building the framework for any organisation

**Step 1:** Identify the broad entities of the organisation

**Step 2:** Determine the Interdependency of entities

**Step 3:** Then determine the flexibility and stability of that entity to allot it a suitable resistance value. Higher resistance for lower flexible entity and lower resistance for flexible and stable entity

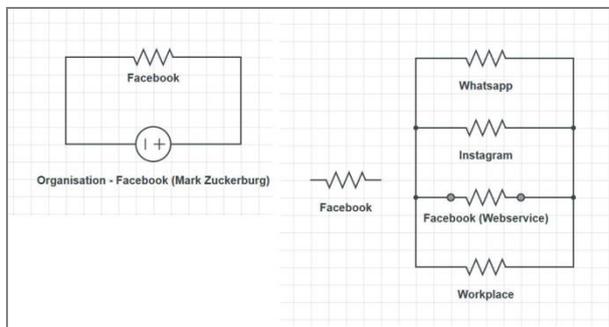
**Step 4:** Then develop the outer circuit framework keeping the dependant entity in parallel and independent entity in series

**Step 5:** Develop a dwell deeper circuit for each entity by treating that as an equivalent broader entity repeating step 1 to step 4

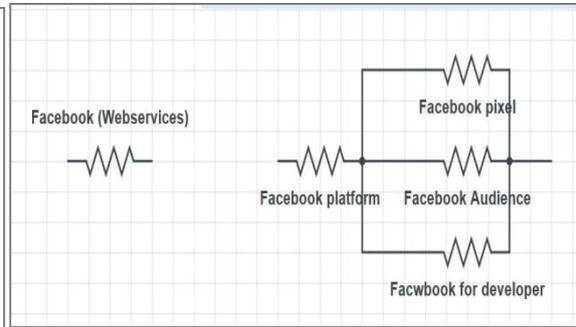
**Step6:** Continue until each equivalent is not further breakable into other small entity

**Analysis Methodology-** Identify the entities that is dependent on other entities. Then categorize the entities as risk or non-risk targets. This analysis helps to understand which group of entity are to be prioritized

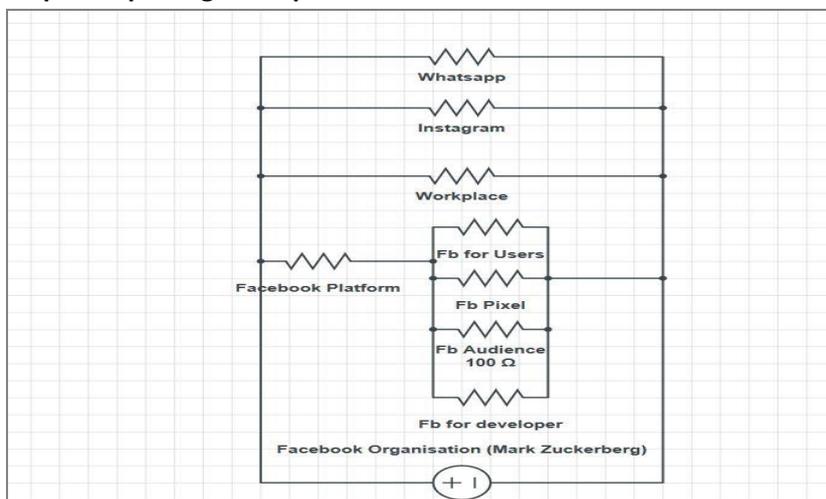
**Step 1 - Identify the broader components**



**Step-2 Breaking a bigger resistor into equivalent**



**Step -3 Replacing the equivalents with actual circuit and move on to other component equivalent**



**VII. Conclusion**

In this paper similarities are established between the structure and operational electric circuit with different management frameworks that exist internally in an organisation. This paper tries to understand SAP-LAP and develop an application based circuit analysis leveraging the basic concepts of Situation actor and process. The framework designed tries to cover the innovation and diversification aspects of managements by understanding the entity positioning and interplay of various components of organisation in order to attain strategic flexibility. The last section of the

paper develops an algorithm to develop a electric circuit for the organisation and analyse various constraints of an organisation that act as potential barrier to flexibility.

## VIII. Reference

1. Bio Inspired Managerial Insights for a Flexible and Efficient Organization: A SAP–LAP Analysis  
Alpana Agarwal • Prem Vrat
2. Suri, P. K., & Sushil. (2012). Planning and implementation of e-governance projects: a SAP–LAP based gap analysis. *Electronic Government International Journal*, 9(2), 178–199.
3. Sushil. (2000a). SAP–LAP models of inquiry. *Management Decision*,38(5), 347–353.
4. Sushil. (2000b). Situation-actor-process options: mapping and enhancing flexibility. *Systems Research and Behavioral Science*, 17, 301–309.
5. Sushil. (2001). SAP–LAP framework. *Global Journal of Flexible Systems Management*, 2(1), 51–59.
6. Sushil. (2009). SAP-LAP linkages - a generic interpretive framework for analyzing managerial contexts, *Global Journal of Flexible Systems Management*, 10(2), 11–20.
7. Mahajan, R., Garg, S., & Sharma, P. B. (2013). Frozen corn manufacturing and its supply chain: case study using SAP–LAP approach. *Global Journal of Flexible Systems Management*,14(3), 167–177.

## "Telemedicine: The Indian perspective"

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### Background

Telemedicine per se refers to sharing of healthcare information through the use of technology and support healthcare when distance separates the doctor and patients. The World Health Organization (WHO) defines Telemedicine as, "The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the interchange of valid evidence for diagnosis, treatment and prevention of disease and injuries, research and evaluation and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities."

The invent of telemedicine started way back in 1960's where The National Aeronautics and Space Administration (NASA) played an important part where the subjects physiological parameters were transmitted from both the spacecraft and the space suits during missions.

In countries like India, where there is a huge gap in provision of medical facilitates/care, telemedicine friendly infrastructure can help minimize the gap. With the help of telemedicine medical care can reach far off places, hence timely prevention, diagnosis and treatment can help reduce disease burden as a whole

India is a huge country with a population of 1.32 billion occupying an area of 3 million sq. kilometre. No as such national health insurance policy is available. Government has a three tier healthcare system.

In India 75% population reside in rural areas, and 75% of doctors are in urban setting implying there is a huge gap in access to basic healthcare facilities in rural area. Government spends 1.2% of GDP on healthcare in India out of which a very few reaches the rural population. The rural patient spend most of the out-of-pocket expenditure in travelling to nearby hospitals for treatment.

A recent study conducted by the Indian Institute of Public Opinion found that “89% of rural Indian patients have to travel about 8 km to access basic medical treatment, and the rest have to travel even farther”

## History of Telemedicine

Invent of telemedicine's dates back to 1940's and it started with the transformation in telecommunication. Telemedicine was firstly used during civil wars where radiographic images of patients were transferred using telephone lines.

One of the initial undertakings in telemedicine, Space Technology Applied to Rural Papago Advanced Health Care (STARPAHC) conveyed restorative care to the Papago Indian Reservation in Arizona. It kept running from 1972-1975 and was brought about by the NASA. Its objectives were to give medicinal services to space travelers in space and to give general restorative care to the Papago Reservation. In 1971, 26 destinations in Alaska were picked by the National Library of Medicine's Lister Hill National Center for Biomedical Communication to check whether dependable correspondence would enhance town human services. It utilized ATS-1, the first in NASA's arrangement of Applied Technology Satellites propelled in 1966. The basic role was to research the utilization of satellite video meeting to enhance the nature of country human services in Alaska. Since 1977, the Telemedicine Center at the Memorial University of Newfoundland has moved in the direction of creating intelligent sound systems for instructive projects and the transmission of medicinal information. The North-West Telemedicine Project was set up in 1984 in Australia to pilot-test an administration satellite correspondences organize (the Q-Network). The venture objectives were to give social insurance to individuals in five remote towns south of the Gulf of Carpentaria. In 1989, NASA directed the primary worldwide telemedicine program, Space Bridge to Armenia/Ufa. Under the sponsorship of the US/USSR Joint Working Group on Space Biology, telemedicine conferences were led utilizing one-way video, voice and copy advances between a medical centre in Yerevan, Armenia and four centres in the US

The government of India recognized the potential of telemedicine in early 2000's. The telemedicine initiatives were funded by Government of India, Department of information and technology, Ministry of Communications and Information Technology and the Indian Space Research Organization (ISRO), various state governments, and several premier technical and medical institutions all over the country.

Telemedicine basically consolidates best in class gadgets, ICT and related applications in the field of human services conveyance and furthermore encourages in giving instruction to patients and medicinal services experts. Telemedicine applications can be ordered into two essential types. First, store-and-forward or asynchronous type, and second, real-time or synchronous type. In the previous there is trade of pre-recorded information between at least two people at various circumstances/places, though in the last there is a constant trade of data by techniques, for example, in videoconferencing. These two fundamental ways to deal with telemedicine can be connected to a wide exhibit of clinical administrations, including infection analysis, triage, administration and follow up of maladies. The ICT apparatuses utilized as a part of telemedicine incorporate low tech devices, for

example, phones, fax machines, camcorders and screens, and innovative devices, for example, propelled PCs, advanced symbolism exchange, broadband web associations and satellite help

## Objective

The primary purpose of this qualitative research paper is to present the current state of telemedicine in India. Along with:

- To understand the need, benefits of telemedicine on the Indian soil and the need gap in the healthcare system that can be bridged with telemedicine
- To also appreciate the challenges that might pose as road block in the process of incorporating telemedicine in the bigger healthcare system
- And going forward new technologies that are becoming a part of Telehealth in India

## Methodology

This is a non-systematic retrospective literature review that captures current knowledge from 30 different research paper/articles and telemedicine journals published from 2001 to 2017.

To collect information of various government initiatives, policies and programs, author utilized many methods and tapped multiple sources such as GOI, corporate medical institute's websites and scientific publications on PubMed ([www.pubmed.com](http://www.pubmed.com))

The information collected have been compiled and the synthesis is presented here

## Overview

Telemedicine can be best assumed in terms of the facilities provided and the tools used to provide those services:

- Store and Forward (Asynchronous): Medical data can be transmitted to seek expert opinion where expert doctor need not to be present at the same time.
- Real Time (Synchronous): Live interaction between the patient and doctor using phone/video conferences.
- Remote Monitoring: Chronic diseases or specific conditions can be remotely monitored using technology devices

The main purpose and aim of telemedicine is to cross the geographical barrier to reach out to the masses and bridge the gap between the medical unmet need. The benefits of telemedicine is

- Timely and improved access to medical care
- Elimination of barriers such as distance

- Patient gets specialized medical care and support without having to travel long distance
- Lessen the burden or potentially cost of patient transfers.
- Reduce pointless travel for healthcare professionals.
- Upgrading the learning of rural doctors through tele-education.
- Developing virtual networks that interfaces and offers information

### **Most widely discussed digital technologies in telemedicine's:**

- 1. Telecare**
- 2. Tele healthcare**
- 3. Video consultation**
- 4. eHealth/mhealth**
- 5. Wearables Sensors**

### **Currents Scenarios in India**

With wide spread availability of internet, medical services have adopted new technologies to meet the need of the patients located at far of places.

The Government of India, Department of Information and technology along with support through projects and systems, organizations like ISRO, reputed academic medical institutions like SGPGI, AIIMS, PGIMER, AIMS, SRMC and corporate hospitals have put the base for the telemedicine era in India

Private Telemedicine centres such as Apollo Tele Health Services, Narayana Health Telemedicine Centres, Aravind Eye Care and telemedicine centres of Medanta are also investing hugely in telemedicine landscape.

Telemedicine centres run by NGO's contribute the most to the Indian telemedicine market with market share of 56.1%.

World Health Partners is the largest NGO in India that has 1100 telemedicine centers operational in India.

Major Health Care organization involved in Telemedicine and their initiatives:

#### **1. Indian Space Research Organization**

ISRO has long invested in the societal benefit and have hugely invested in space technology in telemedicine for the advantage of community.

ISRO tele-medicine programme/initiative started in 2001 and since then has been connecting rural and remote areas along with medical institutes. According to its website ISRO Telemedicine network shielded states/regions

including “Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands, Lakshadweep Islands, North Eastern States and other mainland states” and numerous tribal districts of “Kerala, Karnataka, Chhattisgarh, Punjab, West Bengal, Orissa, Andhra Pradesh, Maharashtra, Jharkhand and Rajasthan” Currently the ISRO network covers about 385 hospitals with 60 specialty hospitals linked to 306 remote/rural/district/medical college hospitals and 18 Mobile Telemedicine divisions. The Mobile Telemedicine units cover diverse areas of Ophthalmology, Cardiology, Radiology, Diabetology, Mammography, General medicine, Women and Child healthcare

ISRO provides Telemedicine systems software, hardware and communication equipment as well as satellite bandwidth, state governments and the speciality hospitals have to allocate funds for their part of infrastructure, manpower and facility support

It website has mentioned about recent activities under “Telemedicine Programme involved migration and operationalisation of the nodes which were affected due to non-availability of EDUSAT (GSAT-3). Most of 190 nodes operating on EDUSAT were migrated to operational GSAT-12 satellite. Around 139 nodes are now operational on INSAT-3A and the remaining nodes on INSAT-3C and INSAT-4A satellites. ISRO is in the process of bringing in annual maintenance support for the Telemedicine systems to ensure continuity of service”

## **2. AIIMS**

The AIIMS, New Delhi has Comprehensive facilities for teaching, research and patient care, to serve as a nucleus for nurturing excellence in all aspect of health care. The department of Telemedicine Facility is dedicated to provide all aspect of Telemedicine services to the Doctors and all other paramedical staff of these Institutions and in-house Telemedicine link with NDDTC – Ghaziabad, Uttar Pradesh & Comprehensive Rural Health Services Project at Ballabgarh in Haryana. In addition, as a premier institution, we are providing telemedicine services like Tele-CMEs, Tele-Consultation (Online & Offline), Telephonic Consultation, Tele-Conferences, Tele-Live surgery, Tele-Evidences etc ...to the various medical colleges and hospital all over India and the services extends up to the international levels.

## **3. NEF telemedicine programs for North Eastern States**

For north eastern states a task known as ISRO-NEC telemedicine venture has been planned in July 2004 utilizing satellite correspondence through Very Small Aperture Terminal (VSAT) to commission 72 telemedicine hubs in every one of the regions of all the north eastern states including Sikkim. The state insightful separation of the nos. of telemedicine focus is: Arunachal Pradesh-8, Assam-

23, Manipur-9, Mizoram-7, Meghalaya-9, Nagaland-8, Sikkim-4 and Tripura-4. The noteworthy destinations of the undertaking is to interface the locale level doctor's facilities to the strength/super claim to fame clinics of the district and also outside the area for better social insurance at least cost utilizing present day innovation. The significant partners of the venture are ISRO, North Eastern Council (NEC) and state administrations of the locale. NESAC is organizing the task from ISRO side in establishment and dispatching of the framework, preparing, checking, and investigating and till date a sum of 25 telemedicine centres has been established and remaining 47 are in pipeline. Another telemedicine venture known as Army Telemedicine Network for NER is likewise operational in the north eastern states in a joint effort with Indian Army shape March 2008. Under this system an aggregate of 6 telemedicine centres has been authorized in different armed force clinics in the locale.

#### **4. Apollo Hospitals**

In the course of the most recent 17 years, trying to give consultative administrations in detached and remote rustic zones by using distinctive advancements to encourage instructive and authoritative exercises from a separate, various telemedicine ventures have been propelled and shown in various parts. Telemedicine can improve both access and nature of administration.

An extremely effective model in the telemedicine area is that of Apollo Telemedicine Networking Establishment. In 1999, to enter into the field of telemedicine, the Apollo Telemedicine networking Establishment (ATNF) was set up by Apollo amass as an enlisted not-for-profit driven association. The establishment spends significant time in giving remote discussion and second feeling to the two patients and specialists, for whom because of separation and spiralling costs, access to quality medicinal services is troublesome. Telecamps empower an authority to see a few patients in a steady progression. The Apollo amass began a telemedicine venture in Aaragonda keeping in mind the end goal to expand openness to Apollo's tertiary look after country regions. The reason for the venture was to spare time and cut expenses for conveying wellbeing administrations for people living in remote towns. The telemedicine idea made a difference the Aaragonda doctor's facility to deal with crisis cases in remote regions with help of advanced medicinal mastery from the Telemedicine forte focuses.

Of lately Apollo has worked rigorously toward proving world class tele health facilities and was in news for its achievements

Recently the

The Apollo Telemedicine Networking Foundation, Chennai was respected with the "Extraordinary ICT-Innovation Award" by HIMSS Asia Pacific for its "I-SEE-U - Virtual Visits to ICU, improving Patient Care" activity

Apollo TeleHealth Services, a division of Apollo Hospitals signed a MoU with Innova Space, a Global Health Organization

## 5. Ministry of health and family welfare/ Department of information and technology

### A. Online Services:

- a. National Health portal: which help create awareness among citizen on health and health related issues provide healthy tips, Government programmes & services in Health Sector, National Health Portal (NHP) provides information to citizens and stakeholders in different languages
- b. Online Registration System (ORS): Launched in 2015, this initiative was introduced to easy the overall medical process by providing online access to making appointments, payment of fee, veining diagnostic reports among other
- c. “Mera Aspataal” (Patient Feedback) Application: to empower the patients to participate in the improvement of healthcare, and application is in place to collect the feedback on patient satisfaction captured using tools such as SMS, outbound dialling, mobile apps. This is to help government take appropriate steps in addressing the concerns of the patients

### B. Mobile Application

- a. Vaccine Tracker (Indradhanush Immunization) : Launched in 2016 on google play, helps parents keep a track on child’s immunization schedule
- b. India Fights Dengue: launch in 2016, helps user to check symptoms and get details on nearest hospital
- c. NHP Swasth Bharat:(information dissemination on Disease, Lifestyle, First Aid) which was launch in April, 2016

Along with these various other government healthcare initiatives are running in parallel to provide patients/citizen with expertize care.

### Challenges of incorporating telemedicine in healthcare system

**Cost Containment:** Cost of giving human services to population of India is a gigantic undertaking and presenting ICT would require additional forthright speculation. Henceforth, there is a need to deal with the cost such that general cost of social insurance goes down. On the off chance that a greater offer is given to ICT spending in general medicinal services spending plan, this could be accomplished. It is additionally required to take a gander at creating volume recipients for expenses to be supported.

**Data Exchange:** Health data trade should be requested and driven with appropriate access and control instrument set up. Test is to inspire and empower key partners like patient, restorative specialist organization, insurance agencies and government to pull and additionally push right sort of data from the framework.

**Selection and Resistance:** In India and over the globe there is an issue of hesitance with respect to quiet and additionally specialists in receiving mHealth. There is a need to acquire the correct sort of innovation in the correct way so patients too specialists feel good in utilizing them. This could function as an extreme trial of innovation, as organizations need to get ready best mechanical frameworks as well as ensure that they are straightforward and utilize. It is likewise required to run different mindfulness programs for advantages of mHealth.

**Staffing at various levels:** mHealth isn't just about having innovation set up, it ought to likewise have an identifiable, congenial and all around qualified human interface to cooperate with. Getting the correct sort of individuals to utilize these innovations with a specific end goal to give appropriate medicinal services administrations is imperative. Henceforth, there is a need to enlist right sort of individuals and prepare them legitimately with the goal that they are very much prepared to do the errand of giving human services in remote regions.

**Assessment:** Evaluation of the procedures should be reasonable and done by an autonomous outsider onlooker. There is a need benchmark to think about against them. These could be taken from best practices from neighbourhood ventures or from worldwide cases, for example, Sweden, Singapore, and so on. An autonomous body could be made for this reason which gives rating and in addition direction on the best way to set down tried and true system for mHealth.

**Power Sharing:** The whole arrangement of human services ought to be with the end goal that it can be driven from both local and state government. Power, obligation, responsibility, rewards and dangers must be all around characterized ahead of time to maintain a strategic distance from any irreconcilable situation.

**Overseeing Information:** All the data that has been gathered ought to be media rich (containing video, picture, content, and so on.). This data ought to be legitimately documented, open, retrievable, secure and comprehensible from remote area utilizing diverse innovation stages. One patient-one record should be executed, to maintain a strategic distance from duplication of data. Inventive and practical wellbeing informatics arrangements should be made for the reason.

**Instruction:** mHealth isn't just about giving medicinal services benefit when somebody is unwell, yet it ought to likewise be utilized to elevate preventive social insurance to enhance the way of life and decrease the cost in the medium to long haul. This will likewise help in enhancing and empowering higher efficiency. Be that as it may, accomplishing this requires carrying individuals into the framework and teaching them about the diverse preventive measures to maintain a strategic distance from ailment flare-ups like Swine-influenza or other regular ailment

## **New technologies gaining prominence in tele health**

Some of the technologies that are gaining fame in the Indian health care industry are mentioned below:

### **Big data analytics**

Big data is gradually entering the Indian health care domain. Many international health care players are now realizing the value of combining consumer insights, internal company information to inform and optimize their product offerings, and are so increasing funds in the necessary tools.

### **Electronic medical records (EMR)**

EMRs are being adopted by many health care providers. This digitization has set the way for advanced futuristic IT systems, such as cloud computing and health information systems to increase distant availability to patient data. This should help improve health outcomes and reduce medical errors.

### **Going forward**

The National Digital Health Authority of India (NDHAI) is in the process of setting up and has been clearly defined as an action item in the National Health Policy 2017. The MoHFW has already notified the Standards to be used for exchange of health information. The second edition of the standards was notified in December 2016. Further, an Integrated Health Information Platform (IHIP) is being set up for exchange of health information in an interoperable manner.

## **Conclusion:**

Access to broadband internet connectivity in rural areas is steadily increasing and the adoption and penetration of internet has shown tremendous growth. The developments in medical knowledge and Information and Communication Technology (ICT) provides wide prospects for improved health care. The Internet is playing a fundamental role in providing a cost-effective healthcare to an extensive dispersed population.

Continued efforts from the Government and private sector help create consistency in healthcare accessibility. To capitalize on technology reserves, rural hospitals need an

integrated IT network that helps diverse entities to collaborate and communicate effectively.

The government, NGOs and private corporations have tried to overcome the technology barricade and provide reasonable and focussed health care via Telemedicine.

The efforts in which the stakeholders are investing will go a long way in providing the citizens of India a robust and specialized healthcare in the future to come. And would provide the basis for a strong healthcare system.

## References:

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2782224/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3634179/>
3. <http://journals.plos.org/plosmedicine/article/file?id=10.1371/journal.pmed.0030082&type=printable>
4. [http://journals.sfu.ca/apan/index.php/apan/article/viewFile/54/pdf\\_54](http://journals.sfu.ca/apan/index.php/apan/article/viewFile/54/pdf_54)
5. <https://pdfs.semanticscholar.org/1503/f3ca6457d6e8e566b514d600c08a02b170c5.pdf>
6. <https://www.healtd.com/blog/Telemedicine-in-India>
7. <http://www.ijcm.org.in/article.asp?issn=0970-0218;year=2008;volume=33;issue=1;spage=3;epage=8;aulast=Dasgupta>
8. <http://www.jpgmonline.com/article.asp?issn=0022-3859;year=2005;volume=51;issue=4;spage=308;epage=311;aulast=Sood>
9. <https://tspace.library.utoronto.ca/bitstream/1807/6887/1/jp05109.pdf>
10. <https://www.omicsonline.org/open-access/evolving-role-of-telemedicine-in-health-care-delivery-in-india-2167-1079-1000260.pdf>
11. <https://health.economicstimes.indiatimes.com/news/industry/india-is-recognising-telemedicine-as-an-integral-part-of-the-healthcare-delivery-system-prof-k-ganapathy/55528151>
12. <http://ehealth.eletsonline.com/2011/10/challenges-for-telemedicine-in-india/>
13. <http://telemindia.org/>
14. <http://www.tsi.org.in/>
15. <https://pdfs.semanticscholar.org/1503/f3ca6457d6e8e566b514d600c08a02b170c5.pdf>
16. <https://www.ncbi.nlm.nih.gov/pubmed/19659413>
17. [https://www.researchgate.net/publication/26721540\\_Telemedicine\\_in\\_India\\_Current\\_Scenario\\_and\\_the\\_Future](https://www.researchgate.net/publication/26721540_Telemedicine_in_India_Current_Scenario_and_the_Future)
18. [https://www.cisco.com/c/en\\_in/about/thought-leadership/future-healthcare.html](https://www.cisco.com/c/en_in/about/thought-leadership/future-healthcare.html)
19. [https://www.csc.gov.in/index.php?option=com\\_content&view=article&id=226&Itemid=398](https://www.csc.gov.in/index.php?option=com_content&view=article&id=226&Itemid=398)
20. <https://www.isro.gov.in/applications/tele-medicine>
21. <https://medium.com/@iihmrdelhi/telemedicine-the-current-scenario-in-india-bdf668beacea>
22. <https://vgsomnews.wordpress.com/2015/02/02/current-scenario-and-need-for-telemedicine-in-india/>
23. [http://www.thepharmajournal.com/vol2Issue4/Issue\\_june\\_2013/1.1.pdf](http://www.thepharmajournal.com/vol2Issue4/Issue_june_2013/1.1.pdf)
24. [https://www.isfteh.org/files/media/Dr.\\_Ganapathy\\_telemedicine\\_Apollo\\_contribution\\_an\\_overview.pdf](https://www.isfteh.org/files/media/Dr._Ganapathy_telemedicine_Apollo_contribution_an_overview.pdf)
25. <https://ieeexplore.ieee.org/document/7399313/>
26. <http://bwdisrupt.businessworld.in/article/Future-of-Health-Tech-Industry-India-In-2050/16-08-2017-124130/>
27. [http://njcmindia.org/uploads/6-4\\_633-638.pdf](http://njcmindia.org/uploads/6-4_633-638.pdf)
28. <http://playbackgroup.com/Telemed.pdf>
29. [http://tmrc-nritld.sbm.ac.ir/uploads/IEEE\\_07399313.pdf](http://tmrc-nritld.sbm.ac.ir/uploads/IEEE_07399313.pdf)
30. <https://gita.org.in/.../indian-healthcare-on-the-cusp-of-a-digital-transformation.pdf>
31. [https://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/8335/12146015\\_PHR.pdf](https://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/8335/12146015_PHR.pdf)
32. <http://www.digitaljournal.com/pr/3556664>

33. <http://www.ijmrhs.com/medical-research/telemedicine-and-ehr-integrated-approach-for-an-effective-egovernance-healthcare-framework.pdf>
34. [http://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/8335/12146015\\_PHR.pdf?sequence=1&isAllowed=y](http://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/8335/12146015_PHR.pdf?sequence=1&isAllowed=y)
35. <https://www.hindawi.com/journals/ijfm/2011/683267/ref/>
36. [medind.nic.in/icb/t10/i1/icbt10i1p73.pdf](http://medind.nic.in/icb/t10/i1/icbt10i1p73.pdf)

# Household Income and School Transitions : Does Gender Matter? Evidence from Indonesia

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## Abstract

This paper investigates the role of household income and gender against the school transition in Indonesia. The data used are from Indonesian Family Life Survey. The results of fixed effect logit show that no evidence of transitory income affected school transition at basic and senior secondary education level. Compared to boys, girls have a higher probability of attending school at junior secondary than senior secondary education. Furthermore, girls tend to be used as one of the coping strategies when the household is faced with borrowing constraints and credit market imperfections. It is not separated from the presence of gender disparity between boys and girls. Government policies that can be done to increase the transition schools are giving scholarship and policies that prioritize girls to be given wider access to education so that gender bias in education can be minimized. This study contributes an empirical measurement and identification of transitory income.

**Keyword:** Household Income, Gender, School Transition, Fixed Effect Logit, Junior Secondary Education (SMP), Senior Secondary Education (SMA).

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## INTRODUCTION

School transition is important as a benchmark for education progress in many developing countries, including Indonesia (World Bank, 2006). Meanwhile, the school transition has been identified as a crucial turning point in school progress in Indonesia. Human capital investment in education is one essential component for the economic and social development of a country as education is one of the vital strategies to overcome poverty in most developing countries. If there is a decrease in the quality of human capital, it will be likely to have both direct and indirect consequences to the level of social welfare, poverty and economic development of a country. One of the problems of the decline in human capital investment in developing countries, including Indonesia, is the vulnerability of various risks associated with the shocks leading to high levels of volatility in income resulting in low levels of school enrolment, school transition and high level of dropout.

Generally, household options regarding education investment in addressing negative income shock can be divided into two. First, when households are faced with negative shocks, then the parents will encourage their children to be involved directly in activities that can generate income for the family making time allocated for education relatively small (Jacoby & Skoufias, 1997). In this case, if the time allocation can be done optimally, it can reduce the level of school attendance without increasing dropout rate. Second, the presence of negative shocks will have an impact on the level of participation in education, either temporarily or permanently forcing parents not to send their children to school (Sawada, 2003).

Some of the events in Indonesia with risks associated to negative income shocks on human capital investment are El Nino disaster, the Indonesian mid-1997 economic crisis, the death or the prolonged illness of the household head or household members, the loss of household business due to natural disaster, the loss of jobs and the decline of household incomes caused by natural phenomena such effects of weather, locust, etc. Furthermore, another issue of concern in many developing countries associated with negative income shocks is the widening gender disparities among boys and girls to school participation rates, including school transition. Finally, another critical issue is the presence of resource competition among siblings

in the household when it comes to borrowing constraints condition and credit market imperfections.

Several studies on the effect of negative shocks to investment in human capital, especially in the field of education, involves a variety of different empirical results. Sawada (2003) showed that permanent and transitory incomes affected schooling decision process for school entrants and dropouts in Pakistan. Subsequently, schooling response to transitory income is consistently larger for daughters than sons; followed by resource competition. Chevalier (2013) showed that permanent income had a significant effect on children schooling in the UK, with stronger effects on sons than daughters. Several empirical studies in Indonesia, among others, performed by Thomas et al. (2004) identified that during the economic crisis in Indonesia, the participation rate of young children's education is relatively low if it had older siblings. Cameron and Worswick (2001) showed that the coping strategy taken by farming households during income shocks was to reduce children education expenditure, especially girls of school age.

Many empirical studies show different results about the effect of income on the school attendance. McKenzie (2003) showed that the rate of school attendance was increasing during the crisis in Mexico. King (2009) received results indicating that the per-capita education expenditures declined in Indonesia following the crisis in the late 1990s, but the dropout rate did not increase. Meanwhile, the rate of high school graduation and participation rose during the Great Depression in the United States. (Goldin, 1999; Black and Kenneth, 2006). Several studies showed contradictory findings of the impact of negative income shocks to the level of child's education, with one side having a negative effect, but in some cases, also positive effect. In addition, there is still the debate on the issue of gender inequality in school transition, therefore, this study aims to analyze the role of income, gender against the school's transition in Indonesia.

This study contributes an empirical measurement and identification of transitory income. The previous study used rainfall deviation as a transitory variable. Meanwhile, transitory income shocks measurements in this study include the death of the head of household or household members, crop loss, prolonged illness of the household head or household members that require hospitalization or continuous need of medical care, loss of business and household sectors (due to fires, earthquakes and other disasters), unemployed household head or business failure, and the decline in household income due to falling prices or quantity of goods produced.

## **RESEARCH METHODOLOGY**

Estimation models in this research were conducted in two phases. In the first phase, income was divided into two components: permanent and transitory income. In the second phase, it is done to estimate the binary variable regressions as the dependent variable with permanent and transitory income as independent variables. Theoretically, a household's income at time  $t$  can be decomposed into permanent income and transitory income as:  $Y_t \equiv Y_t^P + Y_t^T$ , where  $E(Y^T) = 0$ . In identifying the income, this writing employ Paxson (1992).

$$Y_{ht} = \beta_h + X_{ht}^P \beta_1 + X_{ht}^T \beta_2 + \beta_t + u_{ht} \quad (5)$$

$\beta_h$  is household fixed effects and  $X_{ht}^P \beta_1$  denote the components of permanent income of physical and human asset variables. For example, demographic structure of the household, the household characteristics by level of education, occupation, number of household members, assets of households, the asset value of work in agriculture and not the agricultural sector which is owned by the household, the household use of electricity, households with televisions, household owning its own home, the household with its own toilet, poultry value and the value of land managed by the household. In addition,  $X_{ht}^T \beta_2$  represents transitory income and  $\beta_t$  are the time

specific fixed effects treated as another component of the transitory income, since these capture effects of aggregate shocks. Meanwhile, the residual is unobserved components of permanent income and transitory income. Next, second step uses a model with a binary dependent variable is the school transition. The model is a discrete response model with household fixed effects, assuming that  $F(\cdot)$  is logistic distribution function estimated by conditional logit.

Conditional logit models have several advantages; among others, it can control the unobserved heterogeneity that is fixed over time or time-invariant with a dependent variable that is binary. Furthermore, to determine the exact model Hausman testing was done (Bergstrom et al., 2003). The next stage is identifying the existence of imperfect credit markets and borrowing constraint using Wald Test (Sawada, 2003). The data used are from the 1997 and 2000 Indonesian Family Life Survey to capture the occurrence of several events in Indonesia with the risk associated with income shocks against investment in education, especially school transition.

Various components are included in the permanent income (YP) among others, the death or sickness of a household member, non-agricultural business, education of head of household, number of household members, number of household members squares, the total rental / leasing income or profit-sharing of non agricultural business (nonfarm business) for 12 months, household assets, total revenue from the rental / leasing or profit sharing households in the form of agricultural land and cattle over 12 months, the employment status of the head of the household, the area or location of households in rural areas, the use of electricity by households and homeownership status and toilets owned by households.

Transitory income ( $Y^T$ ) is divided into several components, among others, crop loss, disease suffered by head or household members who require hospitalization or continuous need for medical care, the decline in household income or business sector as a result of fires and earthquakes and other disasters, unemployment of the head of the household or failure of a business, the decline in household income due to the decline in the price or quantity of goods produced, non-agricultural business interaction with lower household income or business as a result of fires, earthquakes and other disasters, the interactions between crop loss with land values and the 2000 dummy variable to capture the effect of aggregate shocks. Meanwhile, the information regarding the transition from primary to the junior secondary education and from junior to senior secondary education. This is done by examining at the students' who graduated from primary education and continuing or in grade 1 or 7 in the junior secondary education. The same is done to look at the school transition from junior to senior secondary education.

Descriptive statistics in Table 1 shows that the biggest economic shocks during the previous five years were crop loss, which reached 13.7 percent. Meanwhile, the average of the lowest economic shock due to decreased household income or business sector caused by fires, earthquakes, and other disasters was 2.0 percent. The majority of the household head's education is generally a primary school (SD), which reached 54.9 percent with an average family size of between 5 and 6 people, and household with non-agricultural business amounted to 44.5 percent of total income received by the 21.6 percent. Meanwhile, the total household income from agriculture, especially land reached 76 percent, while sourced from livestock on average by 9 percent.

**Table 1**  
**Summary Statistics of Key Variables**

Variables	Mean	Standard Deviation
<b><u>Transitory Shock Variables (Y<sup>T</sup>)</u></b>		
Crop loss (yes =1)	0.137	0.344
Sickness (yes =1)	0.129	0.335
Disasters (yes =1)	0.020	0.140
Unemployment (yes =1)	0.042	0.201
Price fall (yes =1)	0.076	0.265
The Interaction between nonfarm business and disasters	0.010	0.101
The Interaction between crop loss and farm land	0.181	1.538
<b><u>Permanent Shock Variables (Y<sup>P</sup>)</u></b>		
Death (yes =1)	0.098	0.297
Education of household head		
No school (yes =1)*	0.112	0.315
Primary (yes =1)	0.549	0.498
Junior secondary education (yes =1)	0.128	0.334
Senior secondary education (yes =1)	0.151	0.358
University (yes =1)	0.059	0.235
Household size	5.426	1.897
Household size squared	33.042	24.283
Nonfarm business entirely owned by the household (yes =1)	0.445	0.497
Nonfarm business (log)	0.216	1.703
Household Assets (log)	0.989	3.527
Farm land (log)	0.760	3.096
Livestock (log)	0.088	1.065

Sources: IFLS2 and IFLS3

\* The reference category

## RESULTS AND DISCUSSION

### Variables and Estimation Results of Income Regression

The estimates of various components of transitory income to household income in Table 2 indicates that the shock caused by the decline in household income or business sector due to fires, earthquakes and other disasters have negative effect on household Income amounting to 0.1434 households and was statistically significant at level 5 percent, with the greatest influence in rural areas. This finding is consistent with previous studies in Indonesia which show that household income shock or business sector due to fires, earthquakes, and other disasters negatively affect the welfare of households, especially in rural areas than urban areas (Gignoux and Menéndez, 2012). This condition is largely due to domestic life in the countryside which is inseparable from the unpredictable events leading to adverse consequences. One example is the high volatility of income heavily dependent on the agricultural sector which is vulnerable to climate change or weather. Also, households in rural areas rely heavily on individual businesses and family agricultural business to sustain the economy of the household (Newhouse, 2005).

The interaction between a nonfarm business owned by the household with lower household income or business sector due to fires, earthquakes, and other disasters have a positive effect amounting to 0.2587 against the household income and are statistically significant at the 5 percent level. Furthermore, the interaction of a positive effect is apparent especially in rural areas compared to urban areas. Thus, households with no business in agriculture are relatively capable and experienced in anticipation of such shocks than those who have a business in the field of agriculture. These results are consistent with previous studies in rural areas of Africa

which show that the boost factor such as shock household, seasonal factors in agriculture and surplus labor force in rural areas are the deciding factor of households in rural areas to conduct non-agricultural business (Nagler & Naude, 2014).

Interactions between crop loss and the value of farm land negatively affect the value of agricultural land, especially in urban areas. This result is consistent with previous research that showed the interactions between crop loss and the value of farm land negatively affects household income level (Cameron and Worwick, 2001). Other transitory income components that affect the household income was the period in 2000. Meanwhile, other temporary income components that are crop loss, sickness, and income decline due to falling prices, sick head of the household or its members did not show a statistically significant effect on the level of household income. This reflects that during the period 1997 and 2000, households tend to anticipate the various types of shocks.

Meanwhile, permanent income component showed that the shock of the death of the head of household or household members positively effect household income, but did not show statistical significance. Furthermore, the number of household members negatively affects household income, both in rural and in urban areas. The estimation results indicate that the decline in household income from the number of household members is generally more prevalent in rural areas than urban areas. These findings indicate that the greater the number of household members, the bigger the burden of households due to higher levels of consumption and reduced household income. This result is consistent with previous studies showing that the greater the number of household members, the lower the level of household income (Newhouse, 2005).

The nonfarm business owner had a positive effect on the income level of households, both in rural and urban areas. The estimation results indicate that households with nonfarm businesses have a positive influence on household income, both in rural and urban areas. This finding confirms that nonfarm businesses have an essential role in contributing to household income. These results are consistent with studies in rural Africa which show that the role and contribution of non-agricultural companies, especially in rural areas, is quite significant and impact labor and income growth in rural areas (Haggblade, Hazell, & Brown, 1989).

The total revenue from the rental/leasing or profit sharing that comes from nonfarm business for 12 months showed a positive effect on household income. Estimates indicate that the total income from the rental/leasing or profit sharing of non-agricultural businesses in urban areas has greater influence than the countryside. The total income derived from agricultural lands for 12 months has a positive effect. This confirms that the total income of agricultural land during the 12-month positively affect household income, both in rural and urban areas. Furthermore, the total income derived from livestock, poultry, and fish kept by the households positively affect household income. These results are consistent with previous studies in Indonesia which state that the total income of livestock, poultry, and fish, positively affect household income (Newhouse, 2005).

**Table 2**  
**Estimation of Income Equation**  
**Dependent variable: Log Per Capita Household Income**

Independent variables	Full Sample (1)	Rural (2)	Urban (3)
<b><u>Transitory Shock Variables (Y<sup>T</sup>)</u></b>			
Crop loss (yes=1)	0.0069 [0.0184]	0.0024 [0.0216]	-0.0278 [0.0377]
Sickness (yes= 1)	0.0059 [0.0219]	0.0099 [0.0366]	-0.017 [0.0242]
Disasters (yes=1)	-0.1434** [0.0625]	-0.1902** [0.0885]	-0.0486 [0.0960]
Price fall (yes = 1)	0.0128 [0.0243]	0.0178 [0.0310]	0.0376 [0.0329]
Unemployment (yes= 1)	-0.0143 [0.0343]	-0.0439 [0.0501]	0.0038 [0.0414]
Crop loss * Farm land	-0.001 [0.0056]	0.0055 [0.0073]	-0.0140* [0.0075]
Nonfarm business entirely owned by the household * Disasters	0.2587*** [0.0777]	0.3957*** [0.1326]	0.1479 [0.1092]
Year dummy (2000=1)	0.0296*** [0.0112]	0.0336** [0.0168]	0.0194 [0.0142]
<b><u>Permanent Shock Variables (Y<sup>P</sup>)</u></b>			
Death (yes=1)	-0.0075 [0.0199]	0.0210 [0.0299]	-0.0413 [0.0286]
Household size	-0.1371*** [0.0088]	-0.1610*** [0.0125]	-0.1251*** [0.0096]
Household size squared	0.0007*** [0.0001]	0.0009*** [0.0001]	0.0006*** [0.0001]
Nonfarm business entirely owned by the household (yes=1)	0.0899*** [0.0173]	0.1093*** [0.0286]	0.0772*** [0.0217]
Nonfarm business (log)	0.0105** [0.0042]	0.0116 [0.0089]	0.0093** [0.0038]
Household assets (log)	0.0004 [0.0020]	-0.0036 [0.0045]	0.0014 [0.0021]
Farm land (log)	0.0100*** [0.0033]	0.0086* [0.0046]	0.0109** [0.0043]
Livestock (log)	0.0125** [0.0056]	0.0099 [0.0063]	0.0197*** [0.0071]
Constant	7.8575*** [0.2646]	8.3582*** [0.3733]	7.6657*** [0.3452]
R <sup>2</sup>	0.6968	0.703	0.7129
N	16020	8689	7331
F	114.8465	70.4437	67.3528

Note : Robust standard errors in parentheses. Estimation includes household fixed effects, head employee (unpaid family worker, government worker and private worker), education of household head (primary, junior secondary education, senior secondary education and university), household have a television (yes=1), home ownership status (self-owned =1), household head has its own toilet (yes =1 ), household utilize electricity (yes =1)

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

### School Transition Model

In determining the right model for school transition, the Hausman test is done. The test results of Hausman against school transition in Table 3 show unobserved heterogeneity contained in the model. Thus, if the estimation is done using the logit, it is not appropriate because it would produce a biased, inefficient and inconsistent result. Therefore, the right model estimates are conditional logit or fixed effect logit. Also, the results of other Hausman test shows that the fixed effect logit models are more precise than the random effect logit models to estimate the school transition. In identifying the existence of perfect credit markets and borrowing

constraints, the Wald test is done. The Wald test showed that the school transition occurs lending constraints and imperfect market presence.

**Table 3**  
**Estimations of School Transition**

Independent variables	Dependent Variable : School Transition, yes =1, 0 = no					
	Transition from Primary to Junior Secondary Education			Transition from Junior to Senior Secondary Education		
	Logit	RE Logit	FE Logit	Logit	RE Logit	FE Logit
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Income Variables</b>						
Transitory Income	3.2888*** [0.9181]	3.3580** [1.6946]	1.071 [2.0045]	3.2699*** [0.9113]	3.6158** [1.6428]	1.4033 [1.9211]
Permanent income	0.0372* [0.0216]	0.2133*** [0.0469]	0.3602*** [0.0945]	0.0364* [0.0214]	0.2052*** [0.0452]	0.3208*** [0.0913]
Residual Income	0.0674 [0.0833]	0.1317 [0.1361]	0.0471 [0.1613]	0.0545 [0.0831]	0.0981 [0.1318]	0.0073 [0.1625]
<b>Gender Variable</b>						
Sex (girls=1)	-0.0176 [0.0470]	0.1396 [0.0875]	0.2303** [0.1036]	0.0129 [0.0466]	0.1735** [0.0848]	0.2524** [0.1009]
<b>Number of Siblings</b>						
Number of younger sibling	-0.1567*** [0.0344]	-0.2184*** [0.0710]	0.0451 [0.1022]	-0.1777*** [0.0336]	-0.2410*** [0.0682]	0.0018 [0.0983]
Number of older sibling	-0.0303 [0.0338]	-0.0375 [0.0686]	0.1393 [0.1097]	-0.0306 [0.0335]	-0.0459 [0.0664]	0.0858 [0.1066]
<b>Control Variables</b>						
Number of children working	-0.4729*** [0.0295]	-0.6887*** [0.0624]	-0.3096*** [0.0802]	-0.4778*** [0.0294]	-0.6870*** [0.0603]	-0.3206*** [0.0773]
Father's education (year)	0.0724*** [0.0069]	0.1030*** [0.0150]	0.0183 [0.0227]	0.0702*** [0.0068]	0.0962*** [0.0143]	0.0190 [0.0215]
Mother's education (year)	0.1297*** [0.0080]	0.2552*** [0.0183]	0.2241*** [0.0280]	0.1270*** [0.0079]	0.2446*** [0.0175]	0.2142*** [0.0265]
Constant	-9.6433*** [2.5723]	-10.5233** [4.7517]		-7.0235*** [2.5514]	-6.8024 [4.6050]	
Total number of observation	16020	16020	7572	16020	16020	7656
Prob>Wald Statistic	0.0004***	0.0000***	0.0006***	0.0004***	0.0000***	0.0017***
Hausman $\chi^2$ : Logit vs FE Logit			0.0000***			0.0000***
Hausman $\chi^2$ : RE Logit vs FE Logit			0.0013***			0.0000***

Note : Standard errors in parentheses. Estimation includes household fixed effects, child age, rural dummy, year dummy (2000=1)

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

School transition is important as the level of progress in education in Indonesia. Estimates in Table 3 show that permanent income has a positive effect on the probability of a child to attend school from the primary (SD) to junior secondary education (SMP) of 0.3602 and are statistically significant at the 1 percent level. This means that an early permanent income shock will have a larger effect upon parental investment (and therefore child outcomes) than one realized later in the child's lifetime and the effect of permanent household income shocks is significant and decreases in older childhood, as predicted by the permanent income hypothesis (PIH) (Chevalier et al, 2013; Tominey, 2010). The same thing happened in secondary education, where permanent income has a positive effect on the transition rate from junior to senior secondary education. This indicates that the permanent household income is vital to the probability of a child to attend school or school transition than transitory income.

Girls have a positive effect on the probability of attending school at junior secondary education (SMP) and senior secondary education (SMA). Estimates show that girls experienced an increase in continuing education, especially at senior secondary education level. It is not separated from the presence of gender disparity in proceeding from primary to junior secondary education between boys and girls which is greater than the transition rate from junior to senior secondary education. This finding is consistent with studies in Indonesia, which states that girls have a low probability to continue their education at junior secondary education than boys (Suryadarma, Sumarto & Suryahadi, 2006). The number of children working in a household has a negative effect on the probability of children in school, both to junior or high secondary education. This condition indicates that the child's school transition rate will decline in line with the parent's decision to involve their children to work. These findings indicate that children who spent more time to work, including helping parents to raise household income, will have little chance to get an education, so it is likely to be lower in school. The mother's education has a positive influence on the probability of transition from primary to junior secondary education, even to senior secondary education. Meanwhile, the father's education positively affects the level of transition or to continue school, but did not show a statistically significant mark. This indicates that the role of the mother's education is important to a child's education transition process. Based on estimates indicate that the mother has the bargaining power position than the father in the decision of children to schools in the basic education level. This finding supports studies conducted in Indonesia, where the mother's education is more dominant in deciding their children to school at the primary level.

**Table 4**  
**Estimations of School Transition With Gender Interaction**

Independent variables	Dependent Variable : School Transition, yes =1, 0 = no	
	Transition from Primary to Junior Secondary Education	Transition from Junior to Senior Secondary Education
	FE Logit	FE Logit
	(1)	(2)
Transitory Income * Sex (girls=1)	-0.2213 [1.1413]	-1.0196 [1.1073]
Permanent income * Sex (girls=1)	0.1963* [0.1078]	0.1947* [0.1052]
Residual Income * Sex (girls=1)	0.2313 [0.3888]	0.2071 [0.3819]
Transitory Income	1.2597 [2.0628]	1.9065 [1.9739]
Permanent income	0.2849*** [0.1057]	0.2468** [0.1014]
Residual Income	-0.0078 [0.2031]	-0.0430 [0.2028]
Total number of observation	7572	7656
Prob>Wald Statistic	0.0004***	0.0009***

Note : Standard errors in parentheses. Estimation includes household fixed effects, child age, rural dummy, year dummy (2000=1), sex (girls=1), number of younger sibling, number of older sibling, number of children working, father's education (year), mother's education (year)

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Meanwhile, in Table 4 show that in (1) and (2), permanent income has a positive effect and statistically significant at the 10 percent level. This indicates that as permanent income increases, the probability of girls continuing education will increase and vice versa. These findings indicate that when household income is faced with shocks constraint conditions of loans and credit market imperfections, girls tend to be used as a coping strategy to support private consumption in doing consumption smoothing, especially transition from primary to

junior secondary education. This is consistent with earlier studies showing that in the event of shocks, households try to reduce the expenditure of the children's education, especially girls to make consumption smoothing (Cameron & Worswick, 2001). This implies a low probability of girls with school enrollment compared to boys. These results are in line with Dreze & Sen (2011) which showed that households generally prioritize the education of boys than girls in difficult conditions or situations.

### CONCLUSION AND POLICY IMPLICATION

There are several findings from this research that can be inferred. First, on an ongoing basis, permanent income households have long-term consequences of the decision-making process in the school transition from primary to junior secondary education (SD to SMP) and from junior to senior secondary education (SMP to SMA). Second, girls have a positive effect on the probability of attending school at junior secondary education (SMP) and senior secondary education (SMA). Furthermore, when household income is faced with shocks constraint conditions of loans and credit market imperfections, girls tend to be used as a coping strategy to support private consumption in doing consumption smoothing.

Government policies that can be done to increase the transition schools are giving scholarship program for basic and senior secondary education, particularly from households lacking or not able to pay for school supplies so that students do not drop out of school due to economic difficulties. Thus, students have more opportunities to stay in school and continue their education to the next level. Policies that prioritize girls to be given wider access to education so that gender bias in education can be minimized. However, government efforts can be achieved if there is a change of household perception about the role and position of girls in the family and society because of socio-cultural and economic factors. Thus, there is also a need for public policies through government transfer programs to enhance the role of women empowerment and to participate in school decision-making in the household or family. Finally, the limitations of this study are the variety of economic shocks reported or self-reported as transitory components. The weakness of the use of self-reported economic shocks as transitory component is the emergence of its own reporting bias. Thus, further studies are expected to take into account information from rainfall as transitory components for more exogenous economic shocks than the self-reported.

### REFERENCES

- Alderman, H.A et al. (1997). "The Income Gap in Cognitive Skills in Rural Pakistan". *Economic Development and Cultural Change* 46 (1997): 97-122.
- Bergstrom, et al (2003). "Use of Chamberlain Fixed Effects Approach To Estimate Willingness-To-pay For Little Tennessee River Basin Management Alternatives". Selected Paper, *Southern Agricultural Economics Association Meeting*,
- Black, S.E., & Kenneth L. S. (2006). "Long-Term Trends in Schooling: The Rise and Decline of Public Education in the United States." *Handbook of the Education of Economics, Volume 1*, Eric Hanushek and Fins Welch, eds., Elsevier.
- Cameron, L & Worswick, L (2001). "*Education Expenditure Responses to Crop Loss in Indonesia: A Gender Bias*". University of Chicago.
- Chamberlain, G. (1980): "Analysis of Covariance with Qualitative Data," *Review of Economic Studies*, 47(1), 225-238.

- Chevalier, A et al (2013). “The Impact of Parental Income and Education on the Schooling of Their Children”. *IZA Journal of Labor Economics. Springer Open Journal*.
- Dreze, J & Sen, A. (2011). “Hunger and Public Action. *WIDER Studies in Development Economics*”. Oxford: Oxford University Press.
- Gignoux, J., & Menéndez, M. (2012). “*Critical Periods and The Long-Run Effects of Income Shocks on Education: Evidence From Indonesia*”. Paris School of Economics 48, boulevard Jourdan 75015 Paris, France
- Goldin, C (1999). “Egalitarianism and the Returns to Education during the Great Transformation of American Education.” *Journal of Political Economy*, 107(6): S65-S94
- Haggblade, S., Hazell, P., & Brown, J. (1989). Farm-Non-Farm Linkages in Rural Sub-Saharan Africa. *World Development*, 17 (8):1173–1201.
- Jacoby, H., & Skoufias, E. (1997). “Risk, Financial Markets, and Human Capital In A Developing Country”. *Review of Economic Studies* LXIV, 311 – 335
- King, E. (2009). “*The Global Economic Crisis, Education, and Development Partnerships* “. Keynote Presentation at the HDN-WBI Course on Innovations in Partnerships, September 21, 2009, Washington DC.
- Levhari, D., & Weiss, Y. (1974). “The Effect of Risk on the Investment in Human Capital” *American Economic Review* 64, 950-963
- McKenzie, D.J. (2003). “How do Households Cope With Aggregate Shocks? Evidence From the Mexican Peso Crisis”. *World Development*, Vol. 31, No. 7, pp. 1179-1199
- Newhouse, D. (2005), “The Persistence of Income Shocks: Evidence from Rural Indonesia”, *Review of Development Economics*, 9(3), 415-433
- Paxson, C. H. (1992) “Using Weather Variability to Response of Savings to Transitory Income in Thailand. *American Economic Review*, Vol 82 No.1 (Mar. 1992).
- Sawada, Y. (2003). “Income Risks, Gender and Human Capital Investment in a Developing Country”, *CIRJE Working Paper F-98*
- Suryadarma, D., Sumarto, S., & Suryahadi, A (2006). ”*Causes of Low Secondary School Enrollment in Indonesia*”. Jakarta: SMERU
- Thomas et al. (2004). “Education in a Crisis.” *Journal of Development Economics* 74(1)
- Tominey, E. (2010). “*The Timing of Parental Income on Child Outcomes: The Role of Permanent and Transitory Shocks*”. Centre for the Economics of Education London School of Economics. Houghton Street. London WC2A 2AE
- World Bank. (2006). “*World Development Report 2007: Development and Next Generation*”. The World Bank, Washington DC

# **Purchase Intention Umrah Travel in Indonesia Through E-Commerce**

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## **ABSTRACT**

In 2016, Global Muslim estimated spend in halal travel at USD 169 billion. The top market in Muslim Tourism is Saudi Arabia, which related with Umrah & Hajj. In the same year, Indonesia is 3<sup>rd</sup> top countries with the biggest amount of umrah pilgrims.

This study focus in Umrah Travel business in Indonesia through e-commerce since there are huge fraud phenomenon related to Umrah Travel in recent years. The objectives of this study is to identify factors that influenced purchase intention of Umrah Travel in Indonesia through e-commerce. Analyze data from literature study, quantitative survey, and observation applied in this study in order to provide the targeted result.

Preliminary of the study is, variables that effecting purchase intention Umrah Travel through e-commerce are brand equity, online trust, perceived convenience, payment system, and website quality. This study result could be guideline for e-commerce that particularly run in Umrah Travel business field.

*Key words : Umrah & Hajj Travel, Islamic Business, Halal Travel, E-commerce*

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## **1. Introduction**

According to Pew Research Center (2017), in 2015, Muslim be the second largest religious group (24.1%) after Christian (31.2%). Muslim population keep growth in the global world in line with increasing Muslim market products and services market potency. According to Pew Research Center in The Changing Global Religious Landscape (published 2017), median of Muslim ages is 24 years old, which is young active market that familiar with information technologies.

In line with Muslim populations that increase constantly, halal products and services more needed to fulfill the faith and needs Muslim itself. Halal ecosystem be lifestyle and popular among global world. Halal industry is just not provide basic needs, but also lifestyle and facilitate Muslim to be more modern and follow trend, like in fashion; cosmetics; and travel.

According to Thomson Reuter's State of the Global Islamic Economy 2017/2018, 57 Muslim majority OIC countries economy expected to grow by 6.2% between 2016 – 2022, faster than G7 and global economy. By 2016, OIC countries represented 15.3% (USD 18.3 trillion) of the global economy. Halal Industry (food, finance, mode and fashion, cosmetics and pharmaceuticals, and travel) has positive sentiment at 77% of interactions among industry and millennial consumers.

From the same research, Indonesia is one of the top 15 countries in Global Islamic Economy Indicator (GIEI). Indonesia has good ranking in Islamic Finance cluster (ranking 10<sup>th</sup>), in halal travel cluster (ranking 4<sup>th</sup>), and Halal Pharmaceuticals and Cosmetics cluster (ranking 8<sup>th</sup>). Although still small percentage compare with global business, digital technology business also starting to appears in Indonesia.

In halal travel cluster, umrah and hajj travel be potential travel. According to Hajj & Umrah Government of Saudi Arabia, umrah visa that launched for Indonesia in 2016 is 699.600, increasing about 7% from 2015. This amount is ranked 3<sup>rd</sup> among other countries in the world. State of the Global Islamic Economy 2017 report that Saudi Arabia reach USD 20.4 billion and by 2016 that Islamic country gain top market in Muslim tourism which Saudi Arabia is related to Umrah and Hajj.

Indonesia citizens have huge interest to go umrah since for hajj they have to wait about 5 – 10 years to flight due limited quota. This issue be expected as one reasons why umrah has good increasing enthusiast in Indonesia. As fascinating commodity business, Umrah and hajj travels in Indonesia have wide different price and target market to penetrate heterogeneous social and economic class in Indonesia.

## **2. Problem Statement**

Huge business potential in umrah and hajj travel / Umrah and Hajj Organizer Company/Perusahaan Penyelenggara Ibadah Umroh (PPIU), attracted people to dive in this business. Unfortunately, not all of Umrah Travel run the business with appropriate ethic business. Some of them make fraud scheme in order to take money from consumer, with suspected Ponzi scheme.

There are three most phenomenon fraud related to PPIU : First Travel Case that held by PT First Anugerah Karya Wisata with disadvantages USD 62. 8 million (the victims are 63,310 people); Abu Tours & Travel case held by PT. Amanah bersama Ummat with disadvantages USD 125 million (victims are 86,720 people); and SBL case help by PT. Solusi Balad Lumampah with disadvantages USD 20.1 million (12,845 victims). Based on survey with 345 respondent in Indonesia, 72.6% respondent answer that they hesitate because of this phenomenon. This condition could be facilitated by e-commerce who particularly run in Umrah Travel business.

## **3. Research Objectives and Hypotheses**

The main objectives of this study are below :

1. Examine the direct effect of Online Trust, Brand Equity, Perceived Convenience, Customer Benefit, Website Quality, Website Information, Security, and Payment System on purchase intention of Travel Umrah services through e-commerce.

2. Identify factor among online trust, brand equity, perceived convenience, customer benefit, website quality, website information, security, and payment system that significant give direct effect to purchase intention Umrah Travel service through e-commerce.

Based on the literature, following hypotheses is proposed :

- H1 : Online trust will be positively related to purchase intention Travel Umrah services through e-commerce.
- H2 : brand equity will be positively related to purchase intention Travel Umrah services through e-commerce.
- H3 : perceived convenience will be positively related to purchase intention Travel Umrah services through e-commerce.
- H4 : customer benefit will be positively related to purchase intention Travel Umrah services through e-commerce.
- H5 : website quality will be positively related to purchase intention Travel Umrah services through e-commerce.
- H6 : website information will be positively related to purchase intention Travel Umrah services through e-commerce.
- H7 : security will be positively related to purchase intention Travel Umrah services through e-commerce.
- H8 : payment system will be positively related to purchase intention Travel Umrah services through e-commerce.

#### **4. Literature Review**

This paper used variables Online Trust, Quality of Website, Product Knowledge, Goal Oriented Search Mode, and Costumer Attitude to identify which factors affect to Purchase Intention.

##### ***4.1. Purchase Intention***

Purchase Intention is a one of component of consumer behavior on how people intends to buy a specific brand both products or services (Ling; Chai; Piew, 2010). Dodds et al (1991) describe purchase intention is measure probability consumer to purchase a products or services, the level of purchase intention is equal with consumer willingness to buy products or services provided. Purchase intention can be define as a sense and consideration to purchase a product or service and expect that it could satisfy the needs or desire.

Purchasing decision making process happen when customers have needs to be fulfill; looking for relevant information related to products or services benefit, quality, and sacrifice that should be pay for it; comparing all the products or services available that could be alternatives to fulfill their needs; purchasing and consuming; then evaluating products or services that used (Du Plessis & Rousseau, 2007).

#### **4.2. Online Trust**

Trust is one of factors that important instrument in actual purchase (Alekan et.al., 2012). Trust is element that could reducing transaction cost, time for searching information, and uncertainty levels in relationship between producer and consumer (Navarro; Rodriguez Artola; Moliner, 2011). Trust is positive expectation to something such as product, organization, institution, role, and etc that encourage them to convince and feels secure (Ling, Chai, Piew, 2010, p.4).

In transaction, the level of trust equal with purchase intention (Gefen and Straub, 2004). Azmy and Furinto (2008) argue that even though trust does not give direct impact to the service quality, but trust could be accept as benefit that build long term relationship between producer and consumer. In past literatures, online trust is important factor that effect purchase intention.

#### **4.3. Brand Equity**

Keller (1993) defined brand equity is effect of brand knowledge on consumer response to marketing activity related to that brand. He explained when a brand name is familiar for customer and associated to favorable, strong, and unique brand in customer memory, then customer-based brand equity occurs. Mishra and Datta (2011) identify that brand assets like brand name, awareness, and personality give effect to brand preference and purchase intention on customer.

Brand equity is consumer brand knowledge and value of the brand among other brand related in marketplace (Pullig, 2008). Aaker (1991) describe brand equity as a set of its assets and liabilities connected to a brand, its identity that define by name and symbol that give effect to the value of product or service in customer's minds.

#### **4.4. Perceived of Convenience**

Perceived convenience of shopping is ability to shop anytime without visiting the real offline store (Forsythe, et al., 2006). Convenience is measured by duration time consumed to purchase, location to shop, and process of purchasing; convenience also could be in the form of time, effort, and stress (Tanadi, Samadi, Gharleghi, 2015). Online shopping gives more convenient compare with traditional or conventional shopping (Koufaris, 2002).

Online shopping allowed consumers to browse and compare the products or services proved by online store without spend much time, different time zone, and traffic jam (Juniwati, 2014). When we do online shopping and find it is easy to find products or services, timeless to purchase, the products could delivered as fast as we want, that is considered as time and effort convenience (Tanadi, Samadi, Gharleghi, 2015).

#### **4.5. Customer Benefits**

Purchase intention probability will increase when customers gain more benefits than amount they should pay (Dickson and Sawyer, 1990). Dodds and Monroe (1985) identify that consumer will evaluate what they get and what they give when buy products or services in order to measure the benefit that they gain. The common benefit for customer is saving money in purchasing process by loyalty program, rewards program, discount, and many more. Lee and

Chen-Yu (2018) identify that price discounts provide a monetary gain and encourage consumer to purchase the products or services provided.

#### ***4.6. Website Quality***

Nowadays website be virtual place where people could shop they needs, both products or services called e-commerce. E-commerce as web shopping help people to access information about product or service that they looking for with less cost, less time, and effort. People also could compare products or services alternatives from different online store provide the products/services that they need (Ling; Chai; Piew, 2010).

For company, website as e-commerce help them to be medium to attract and maintain potential customers (Ling; Chai; Piew, 2010) in less costs and time. Their information could access easily by consumer and transaction could be easier and save. Based on observation, interaction between website admin and customer also increase the interest of customer.

#### ***4.7. Website Information***

Shih (2004) define website in general is considered as information system that give information to users. Website with user friendly interface, meaningful and useful information that easy to access, will increasing customer perception of usefulness (Dachyar, Banjarnahor, 2017). Based on observation, consumer will give attention to website that give useful information related with products or services on sale.

Information content is important element to lead customer to purchase intention and searching often be the first step for customer in purchase process (Thongpapanl; Ashraf, 2011). Thongpapanl and Ashraf (2011) also explained that information content in website such as related to services offered, order status, corporate policies, or public relation, the availability information on website is important and critical for consumer.

#### ***4.8. Security***

Security and privacy concern become important issue for online retailers in order to maintain customer and to reach their trust (Matic; Vojvodic, 2014). Less security means it more risk in online transaction, such as revealing personal information and possibility of credit card scamming (Matic; Vojvodic, 2014). Miyazaki and Fernandes (2001) explained that internet privacy and security are necessary issue both for new and experienced internet technology user.

#### ***4.9. Payment System***

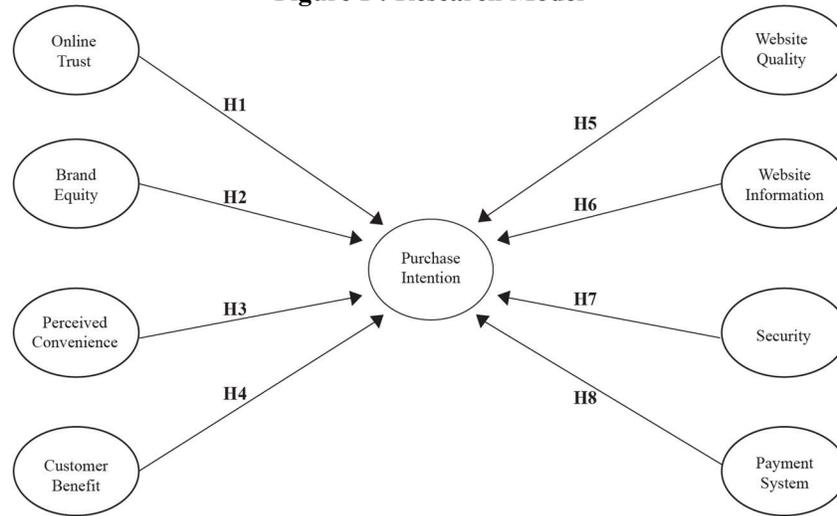
One of important thing in online purchasing is convenience in payment method, which need security and trust. In order to build trust in payment process, e-payment should be effective with safety protection, privacy, and trust-mark of the site for users (Suwunniponth, 2016). She also explained that growth of online business has increasing online payment system as well.

### **5. Methodology**

Past validated instruments that used in this study as independent variables are online trust (OT), brand equity (BE), perceived of convenience (PC), customer benefit (CB), website quality (WQ), website information (WI), security (S), and payment system (PS). Purchase intention

(PI) used for dependent variable. Quantitative research used in this study by primary data collection via online questionnaire in order to test the hypotheses.

**Figure 1 : Research Model**



This study used random sampling method and collect 275 responses that familiar with e-commerce. The respondents consisted of 110 men and 165 women with 41.6% of them are 25-30 years old; 35.3% are 20-25 years old; 18.9% are 30-40 years old; and the rest is more than 40 years old. 79.4% of respondents are never use Umrah Travel service before, 20.6% respondents used Umrah Travel service in the past. 73% respondents hesitant with fraud phenomenon related to Umrah Travel, and 81.5% respondents think they are need third party to ensure money that they invest for Umrah.

## 6. Result

### 6.1. Measurement

The instruments were assessed by exploratory factor analysis use SmartPLS 2. Ghozali (2008) explained in processing data in PLS, needed 2 step : measurement model tools and structural analysis model. Measurement model tools consists of validity and reliability of the study instruments (outer model). Those test do by convergent validity, average extracted (AVE), discriminant validity, and composite reliability (Ghozali, 2008).

**Table 1 : Questionnaire**

<b>Online Trust (OT)</b>	
OT1 : I have positive experience in online purchasing	Jamaludin (2013)
OT 2: I feel secure to purchase in e-commerce	Jamaludin (2013)
OT3: I trust in Umrah Travel purchasing through e-commerce	Jamaludin (2013)
<b>Brand Equity</b>	
BE1: A familiar E-commerce name intend me to purchasing Umrah Travel through e-commerce.	Hasan (2015)
BE2: Logo and nice view of e-commerce influence me to purchase Umrah Travel through e-commerce	Observing
BE3: Website reputation influence me to purchase Umrah Travel through e-commerce	Hasan (2015)
BE4: Entertainer or religious leader as ambassador influence me to purchase Umrah Travel through e-commerce	Observing
<b>Perceived of Convenience</b>	
PC1 : Purchase Umrah Travel through e-commerce save my time	Wen, 2012
PC2 : Purchase Umrah Travel through e-commerce save my effort	Wen, 2012
PC3 : Purchase Umrah Travel through e-commerce is more comfort for me	Wen, 2012
PC4 : Information related to umrah packages provides by many companies help to save my time	Hasan (2015)
<b>Customer Benefits</b>	
CB1 : The cheaper price influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)

CB 2: Discount and souvenirs influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
CB 3: Fast purchasing process and avoid traffics influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
<b>Website Quality</b>	
WC1:Simple and user friendly website influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
WC2:Interaction ability with e-commerce admin influence me to purchase Umrah Travel through e-commerce	Datta; Sajnani; Thomas, 2018
WC3:Fast and simple purchasing process influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
<b>Website Information</b>	
WI1:Content and update news relaed to umrah and hajj influence me to purchase Umrah Travel through e-commerce	Observation from existing e-commerce
WI2:Rating and recommendation related to provider Umrah services influence me to purchase Umrah Travel through e-commerce	Observation from existing e-commerce
WI3:Searching mode direct to umrah package that I need influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
<b>Security</b>	
S1 : I trust an Travel Umrah e-commerce if I am sure my account and transaction are	Safa, Solms (2015)
S2 : I trust an Travel Umrah if my personal information is secure	Safa, Solms (2015)
S3 : I trust an Travel Umrah if it has affiliated with government department	Safa, Solms (2015)
<b>Payment System</b>	
PS1 : Easy payment influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
PS2 : Refund guarantee if my purchase not processed influence me to purchase Umrah Travel through e-commerce	Safa, Solms (2015)
<b>Purchase Intention</b>	
PI1 : I will consider to purchase Umrah Travel through e-commerce	(Jamaludin, 2013)
PI2 : I like to purchase Umrah Travel through e-commerce	(Jamaludin, 2013)
PI3: I intend to purchase Umrah Travel through e-commerce	(Jamaludin, 2013)

**Table 2 : Convergent Validity**

Variable	Indicator	Outer loadings	Result
Brand Equity	BE1	0.8266	valid
	BE2	0.8462	valid
	BE3	0.8139	valid
	BE4	0.5162	valid
Costumer Benefit	CB1	0.9009	valid
	CB2	0.9035	valid
	CB3	0.8832	valid
Online Trust	OT1	0.7351	valid
	OT2	0.7991	valid
	OT3	0.7675	valid
Perceived Convenience	PC1	0.89	valid
	PC2	0.8898	valid
	PC3	0.8075	valid
	PC4	0.6835	valid

Variable	Indicator	Outer loadings	Result
Purchase Intention	PI1	0.8106	Valid
	PI2	0.8827	Valid
	PI3	0.8987	Valid
Payment System	PS1	0.9275	Valid
	PS2	0.8939	Valid
Security	S1	0.9371	Valid
	S2	0.9469	Valid
	S3	0.8238	Valid
Website Information	WI1	0.8627	Valid
	WI2	0.8666	Valid
	WI3	0.902	Valid
Website Quality	WQ1	0.9102	Valid
	WQ2	0.9317	Valid
	WQ3	0.9436	Valid

Convergent validity is to measure correlation between indicators with latent variable. Convergent validity could be checked in outer loading of SmartPLS. According to Ghazali (2008), correlation is valid if the value  $>0.5$ . The result could see above, which give validation to instrument of each latent variable (the value more than 0.5).

**Table 2 : Composite Reliability**

Variable	Composite Reliability	Result
BE	0.8436	Reliable
CB	0.9243	Reliable
OT	0.8065	Reliable
PC	0.8919	Reliable
PI	0.8989	Reliable
PS	0.9069	Reliable
S	0.9315	Reliable
WI	0.9092	Reliable
WQ	0.9495	Reliable

**Table 3 : Cronbach Alpha**

Variable	Cronbach Alpha	Result
BE	0.7535	Reliable
CB	0.8778	Reliable
OT	0.6749	Reliable
PC	0.8363	Reliable
PI	0.8306	Reliable
PS	0.7963	Reliable
S	0.8888	Reliable
WI	0.8513	Reliable
WQ	0.9202	Reliable

Instruments reliability of this study tested use composite reliability and cronbach's Alpha. Construct declared as reliable if the composite reliability's value and cronbach alpha > 0.70 (Ghozali, 2008 : 43). Different with Ghozali (2008), Yamin and Kurniawan (2009) state that requirement for composite reliability and cronbach alpha are when the value > 0.5. This study use Yamin and Kurniawan (2009) state with minimum value to be consistent instrument is > 0.5.

**Table 4 : R-Square**

Variable	R-Square
Purchase Intention	0.641

R-Square identify level of influences the variables discussed to purchase intention. The result show that variables discussed in this study effect 64% for purchase intention, that is mean there are 36% other variables outside this structural model of study influenced respondents to intend in purchasing Umrah Travel through e-commerce.

## 6.2. Hypotheses Test

The hypotheses tested using path coefficient and T-Statistic. There are eight hypotheses that should be validated in this study. The result of hypotheses test identified below. From the result of hypotheses, we could see that in this study supported hypotheses are H1, H3, H4, H5, and H8. Meanwhile H2, H6, and H7 are not supported since the t-statistics are under 1.67.

**Table 5 : hypotheses test use path coefficient and T-Statistic**

Code	Hypotheses	Path Coefficient	T-Statistics	Result
H1	OT -> PI	0.2048	5.7081**	Supported
H2	BE -> PI	0.1075	2.6636**	Supported
H3	PC -> PI	0.3362	6.362**	Supported
Code	Hypotheses	Path Coefficient	T-Statistics	Result
H4	CB -> PI	0.0445	1.1147	Not Supported
H5	WQ -> PI	0.1305	2.0363*	Supported
H6	WI -> PI	-0.0231	0.6394	Not Supported
H7	S -> PI	0.0381	1.1207	Not Supported
H8	PS -> PI	0.1617	2.7612**	Supported

Notes : \*\*Correlation with level of significant > 2.3; \*correlation with level of significant>1.67

## **7. Discussion and Conclusion**

Perceive Convenience is significant positively related to purchase intention in Umrah Travel through e-commerce (H3) can explained with conveniences provided by online purchasing which need time less, effort-less, less stress, and consumer can purchase anytime and from anywhere without visit the real offline store. Consumer also can compare services offered in the e-commerce easily and determined package that suitable with their need. With mostly respondents are millennial, it may give effect their behavior to digital technology.

The next significant variable that positively related is online trust (H1). For partly people, Umrah is not cheap service with range of money that should be invested for this service is around USD 1,428.6 – USD 2,857 (by 2018). With this range, consumers are more beware to spend the money especially after fraud phenomenon related to Umrah Travel in Indonesia, it may be explanation why online trust give significant effect to purchase intention Umrah Travel through e-commerce.

Payment system (H8) also give good effect to purchase intentions. We investigated that insecurity lead people to assurance their fund. Besides that, convenience of payment system also related to perceived convenience in order to reduce the effort and time to purchase.

Brand equity as past literature (Keller, 2003; Mishra & Datta, 2011) prove that familiar name and good reputation of brand will positively related to purchase intention (H2). By name and reputation, customer could assess the favor, strength, uniqueness, trust, and quality of the provider. Website Quality (H6) also has positive effect to purchase intentions, it help consumer to fulfill their need in reduce time and effort to purchase.

Security (H7), Website Information (H6), and Customer Benefit (H4), are not supported the hypotheses. Those result different with past literature, but it could be different in every country; background of respondent, and business field that be object in the study. Even though respondents give positive answer to website information 61% and security (66.6%), it is not enough to give significant positive effect to Umrah Travel through e-commerce purchase intentions in this study.

We investigate that in customer benefit, respondent not always think about money or gift as benefit, but more like value and trust. Even though in this study security variable does not give direct significant effect to purchase intention, but we observe the data with connect security to trust variable. There are significant T-statistic value between them, it is about 6.3. As the result, trust directly lead consumer to purchase intention.

## **8. Limitations and Future Research**

This study respondents are Indonesian mostly 20-40 years old, the result of same method and variable in different demography could bring the different result. This study did before Umrah Travel e-commerce is not popular yet in Indonesia, although there are view high quality Umrah Travel e-commerce run in Indonesia. For future studies, we recommend to make variable instruments more specific and in depth observation in order to know customer preferences better.

## REFERENCES

- Thomson Reuters (2017), *State of The Global Islamic Economy Report 2017/18*.
- Aaker, D. A. (1991), *Managing brand equity*, Free Press: New York, NY.
- Alekam, Jamal Mohammed Esmail et.al (2012), *The Influence of Trust, Advertising, Family on Intention and Actual Purchase of Local Brand in Yamen*. American Journal of Economics June 2012 Special Issue : 64-68
- Al-Salamin, Hussain (2016), *The Impact of Pricing on Consumer Buying Behavior in Saudi Arabia : Al Hassa Case Study*. European Journal of Business and Management Vol.8, No.12.
- Azizi, Shahriar; Kapak, Shahram Jamali (2013), *Factors Affecting Overall Brand Equity : The Case of Shahrvand Chain Store*. Management & Marketing Vol. XI, issue 1/2013.
- Keller, K.L. (1998), *Strategic Brand Management: Building, Measuring and Managing Brand Equity*. Prentice Hall: New Jersey.
- Dachyar, M.; Banjarnahor, Liska (2017), *Factors Influencing Purchase Intention Towards Consumer-to-Consumer E-Commerce*. Intangible Capital IC, 2017-13(5) : 946-968.
- Datta, Bivek; Sajjani, Manohar; Thomas, Joby (2018), *Travellers Attitude Towards Online Purchase of Travel Products : An Empirical Study of Online Travel Portals*. GeoJournal of Tourism and Geosites Year XI, no.1, vol.21, p.133-142.
- Demirgiines, anu Kulter (2015), *Relative Importance of Perceived Value, Satisfaction and Perceived Risk on Willingness to Pay More*. International Review of Management and Marketing 2015, 5(4), 211-220.
- Hasan, Haslinda (2015), *Factors That Influence Online Purchase Intention of Online Brand*.
- Jamaludin, Azahari; Ahmad, Fais (2013), *Investigating the Relationship Between Trust and Intention to Purchase Online*. Business and Management Horizons Vol.1, no.1 2013.
- Ling, Kwek Choon; Chai, Lau Teck; Piew, Tan Hoi (2010), *The Effects of Shopping Orientations, Online Trust and Prior Online Purchase Experience Toward Customers's Online Purchase Intention*. International Business Research Vol. 3 no.3 July 2010.
- Lopez-Navarro, Miguel Angel; Rodriguez-Artola Rosa Maria; Moliner, Miguel Angel (2011), *Dimensions and Antecedents of Long-Term Orientation in Firm-Supplier Relationships*.
- Matic, Matea; Vojvodic, Katija (2014), *Customer – Perceived Insecurity of Online Shopping Environment*. International Review of Management and Marketing Vol. 4, No.1, pp.59-65.
- Oosthuizen, Ms.D.; Spowart J.(2014), *The Relationship Between Perceived Price and Consumers' Purchase Intentions of Private Label Wine Brands*. African Journal of Hospitality, Tourism and Leisure Vo. 4(2).
- Pew Research Center | Forum on Religion & Public Life (2011), *The Future of the Global Muslim Population: Projections for 2010-2030*.
- Pullig, Chris, Ph.D. (2008), *What is Brand Equity and What Does the Branding Concept Mean to You?*. Keller Center Research Report, Baylor University : Texas.
- Safa, Nader S.; Solms, Rossouw von (2015), *Customers Repurchase Intention Formation in E-Commerce*. South African Journal of Information Management 18 (1), a712.
- Suwunniponth, Wanida (2016), *Customers' Intention to Use Electronic Payment System for Purchasing*. World Academy of Science, Engineering and Technology International Journal of Economics and Management Engineering Vol:10, No:12, 2016.
- Tanadi, Trisna; Samadi, Behrang; Gharlegghi, Behrooz (2015), *The Impact of Perceived Risks and Perceived Benefits to Improve an Online Intention among Generation-Y in Malaysia*. Asian Social Science; Vol. 11, No. 26; 2015. Canadian Center of Science and Education.
- Thongpapanl, Narongsak; Ashraf, Abdul Rehman (2011), *Enhancing Online Performance Through Website Content and Personalization*. Journal of Computer Information System.
- Wen, Ivan (2012), *An Empirical Study of an Online Travel Purchase Intention Model*. Journal of Travel & Tourism Marketing January 2012. Routledge : London.

# Developing Lean Systems in Electronic Automotive Parts Manufacturing Industry: A System Dynamics Approach

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## **Abstract:**

An Electronic Automotive parts manufacturing company produces different types of components that are stored in different buffers, one of the standard control method is using the Kanban method, where the currently produced type is switched only when one buffer is about to get the idol. Using Kanban system also known as using the pull system, where inventories are used to control the production whenever continuous flow or the FIFO is not possible. Some processes will be far away from the distribution site and shipping one piece at a time is time-consuming and not realistic. Some processes will have the long lead time or cannot be related to the next process directly. Hence a system with pull concept has to take care of the continuous flow concept in the production industry. The alternative method for this would be the Heijunka approach or the production leveling approach which concentrates on neutralizing the demand variation. It helps in distributing the volume and mix of orders over a subsequent time frame and balancing the production process. Production leveling is the adjusting of production schedule to meet unexpected changes in the customer demand. Heijunka concept helps in a perfect foundation of pull systems with minimal inventory levels.

## **Introduction:**

Productivity plays a very important role in the success of a company or an industry. Implementing suitable improvement techniques will ensure optimized production with low

inventory holding cost and space utilization. Usually, in any company, the material flow will be through push system. Implementing a pull system will help us reduce the unnecessary stock. Production of big lot sizes, the material will be pushed through production. Unexpected demands will always cause problems in the entire value chain. There should be good communication between the departments to have a fluent flow of information and ease the work. If the communication isn't good enough then there will be no quick response to changes in the demand which causes fluctuations in the production leading to over production or backlogs. Due to all these problems, there came a concept of Heijunka which was introduced by the Toyota Production System (TPS). Heijunka is mainly a Japanese word for leveling the production or distributing the volume evenly. This concept can reduce the maximum wastes or the non-value added processes generated during the production. The main principle of lean manufacturing concentrates on determining the value of each specific product with respect to the customers need. Distributing the production of various products evenly over a period of time. Instead of producing the same type of products in the same batch, a smaller batch of different products can be produced alternatively. The more the mix is leveled, the more will be the ability of a company to respond to the customers' various requirements. Achieving a leveled production could reduce lead times. This would affect the production rate of the products and achieve an early production cycle. Due to scheduled productivity, the products to be manufactured and the number of units to be manufactured would be known well in advance and hence the company could produce the products according to the schedule which is prefixed. The schedule usually will be given on a daily basis or a weekly basis. This is set according to the company's requirements, which is decided in the Heijunka meet. Due to the leveling, there would be enough Inventory turns and also reduces overtime and freight costs. That is, the inbound and outbound logistics can also be controlled through leveled production. The more the level of the mix, more consistent can be the customer service. Utilization of assets and capital would be higher and there would be sustained continuous improvement due to leveled production achieved through lean manufacturing. Implementing Heijunka would help the company to achieve "Every Part Every Interval". To achieve this, a system dynamics tool can be used which mainly concentrates on solving complex problems with a focus on analysis and design.

## **Literature Review:**

Production leveling is the lean methodology utilized to kill over-production. Leveled production accomplishes the ability to adjust and synchronization of all production operations after some time in a way that decisively and adaptable matches client interest for the system's products. Other name for Production levelling is production smoothing or the heijunka, it is a strategy for decreasing the Unevenness which thusly reduces waste. It was fundamental to the advancement of efficiency in the production in the Toyota Production System and lean manufacturing. At the point when executed accurately, heijunka gives consistency by levelling demand, adaptability (flexibility) by diminishing changeover time and dependability (stability) by averaging production volume and sort over the long time. This research recommends that the Lean evaluation devices empower a general review of the execution of lean practices, and can recognize lean enhancements. In this research, system dynamics is utilized as a lean evaluation device to survey and enhance lean execution for a print bundling fabricating framework (Konstantinos and Oleghe, 2016). The research conducted was examined on System Dynamics Modeling in production network administration and concentrates on stock choice and approach improvement, time pressure, request enhancement, inventory network plan and mix, and international supply chain management (Bernhard and Omogbai, 2000). This research showed by acquainting a system dynamics model which catch the diverse segments of the production system. The stock elements of the modeled system are inspected against various generation situations under stochastic request. The paper proposes some particular administration strategies for fruitful lean application inside the extent of the displayed manufacturing system. (Ahmed, 2010). From the research work that is being carried out, the findings are, to implement Heijunka, there are various steps involved along with other combinations of key lean principles to stabilize a value chain. Value stream mapping (VSM) is an adjacent concept that is implemented for the success of Heijunka. The workflow is smoothed and optimized for eliminating unnecessary movement of operators in the shop floor through value stream mapping. Then the value stream design is done (VSD), by which the future demand is predicted and accordingly the shop floor is designed with the required machineries' at required place keeping the operators movement in mind. After the VSM and VSD is done then comes the Heijunka implementation, where the Heijunka board is considered to manage the day to day production and the Heijunka box with the overflow board for knowing the excess production and warning the supervisors about the production plan. The Kanban cards are used for managing the flow of FG from the production end to the warehouse. Like-

wise, by inculcating all the above methods, a successful Heijunka flow system can be implemented.

### **Methodology:**

System Dynamics tool is used as the methodology for analysis of previous, current and future situations of production levels. A base model is identified and the necessary changes can be made to the same model or a new model can be developed. In this research, a base model is being identified and is being related with the present study and a corresponding new model is being constructed in the following manner. Identifying the problems where we should work on is the initial step in the system dynamics modeling. Then defining the scope of the project is done and is as important as that of identifying the problems. A theoretical model that is related to the work is built. Once the theoretical model is built, Identifying the Independent and dependent variables involved must be done which further helps in constructing a conceptual model which becomes the next step. Data pertaining to the study is a collection and is analyzed. Finally, the Simulation of the model developed is done followed by model verification and validation of the results.

The following steps are being adopted (Sterman, 2000),

1. Define the problem to be solved;
2. Identify the Dependent and Independent variables and their relationships;
3. Select the suitable software to model;
4. Construct the stock and flow diagram;
5. Formulate the model;
6. Simulate the model;
7. Verify the model; and
8. Validate the model.

The Electronic Automotive Parts Manufacturing Company is being considered in this research. Here, the Initial production capacity of MDPS components per day is 2500 per variant (CBS, 2016). Based on the number of components available in the inventory, further products are being manufactured and are sent to the backend for final assembly. Once the final assembly is done, it is sent to the warehouse for packaging and shipment.

The inventory is a storage unit for each product. Based on the stock available in the inventory the products are being pulled and is sent to the next station. There is a minimum stock to be held at inventory failing which should be brought to notice to the supervisors or the production head. Z window is being implemented to know the inflow and outflow of the magazines in the inventory. This is maintained through tokens where once the magazine is pulled out from the chute, a token is removed from the Z window and once the magazine is kept in the chute a token is added to the Z window. An upper and lower limit is fixed which tells us the minimum and maximum stock to be maintained in the inventory.

### **Results & Discussion:**

Various graphs that are influencing the stock variables are also plotted along with the graphs for the stock variables. The other variables having very high effect apart from the stock variables are also plotted. To achieve best results in Heijunka implementation, the major role is played by the inventories and the ability of the company to fulfill the desired demand of the customer at any given point of time.

Reducing backlog would help the company eliminate the unnecessary stock in the warehouse. But in this case, there are two warehouses which we are calling local body and foreign body, i.e., FG location 1 and FG location 2.

Backlog at location 1 has a direct effect on the customer order rate at location 1 and customer pull rate at location 2 and previous orders to reach the end customers would take a lot of time before the next order is received, and not knowing which product to produce prior to the order received, and the product stock is unavailable on the basis of order received, the backlog piles up at location 1. Because of the shipment rate from warehouse location 1 and the average time for orders, the backlog at location 2 will be influenced definitely. Because of the impact of transit time on different parameters, for example, order fulfillment rate and backlog at location 2, there is a noteworthy impact on the inventory location 2. In this diagram, it is obviously observed that, if the average time for orders increments and goes past 60hours the chart begins expanding once more. Subsequently, we can construe that the average time for orders ought not go past 60 hours. The growth in the production for a certain period of time, precisely for 8 weeks after the implementation and it is also seen that after 28 weeks, the production levels come down and there would be minimum production in the plant. Allowing which would cause less unnecessary stocks to pile up. This is a natural phenomenon where the orders keep

increasing. Hence the expected orders graph keeps increasing. The aim was to achieve the Heijunka concept at location 1 and hence the FG location 1 graph serves the purpose and defines the required result with absolute results. There is a gradual increase in the graph which indicates that the stocks in the warehouse is increasing with respect to time. This increase remains only till the stocks are shipped to the warehouse at location 2. Once the shipment is carried out, the graph drops down and the stocks in the inventory go down making place for new stocks to take over the place. This shows that in the future the process continues without any disturbance. Hence could be told that demand is met by the company at every point of time after 9<sup>th</sup> week of implementation of Heijunka. There is no much inventory adjustment required after the implementation of Heijunka.

## REFERENCES

- Ali, R. M., & Deif, A. M. (2014). Dynamic lean assessment for takt time implementation. *Procedia CIRP*, 17, 577-581.
- Angerhofer, B. J., & Angelides, M. C. (2000). System dynamics modelling in supply chain management: research review. In *Simulation conference, 2000. proceedings. winter* (Vol. 1, pp. 342-351). IEEE.
- Aslam, T. (2013). *Analysis of manufacturing supply chains using system dynamics and multi-objective optimization* (Doctoral dissertation, University of Skövde).
- Bednár, R. (2012). Individualisation of lean concept in companies dealing with mass production. *Research papers faculty of materials science and technology Trnava Slovak University of Technology in Bratislava*.
- Bhat, R. R., & Shetty, R. R. (2013). Investigation of lean tools to enhance productivity in manufacturing sector. *Int J Adv Eng Sci*, 3, 116-120.
- De Araujo, L. F., & De Queiroz, A. A. (2009, September). A conceptual model for production leveling (heijunka) implementation in batch production systems. In *IFIP International*

*Conference on Advances in Production Management Systems* (pp. 81-88). Springer Berlin Heidelberg.

Deif, A. (2010, April). Computer simulation to manage lean manufacturing systems. In *Computer Engineering and Technology (ICCET), 2010 2nd International Conference on* (Vol. 6, pp. V6-677). IEEE.

ElMaraghy, H., & Deif, A. M. (2014). Dynamic modelling of impact of lean policies on production levelling feasibility. *CIRP Annals-Manufacturing Technology*, 63(1), 389-392.

Fainaze, H., & Rodrigues, L. L. A Study on the Influence of Review Period Interval in Closed Loop Supply Chains (CLSC) Using System Dynamics.

Fong, N. B., Shewchuk, J. P., & Sturges, R. H. (2004, January). Classical control theory analysis of a lean manufacturing system. In *IIE Annual Conference. Proceedings* (p. 1). Institute of Industrial and Systems Engineers (IISE).

Furmans, K. (2005, May). Models of heijunka-levelled kanban-systems. In *5th International Conference on Analysis of Manufacturing Systems-Production and Management* (pp. 243-248).

Gui, S., Zhu, Q., & Lu, L. (2005). Area logistics system based on system dynamics model. *Tsinghua Science & Technology*, 10(2), 265-269.

Hüttmeir, A., De Treville, S., Van Ackere, A., Monnier, L., & Prenninger, J. (2009). Trading off between heijunka and just-in-sequence. *International Journal of Production Economics*, 118(2), 501-507.

Hüttmeir, A., De Treville, S., Van Ackere, A., Monnier, L., & Prenninger, J. (2009). Trading off between heijunka and just-in-sequence. *International Journal of Production Economics*, 118(2), 501-507.

Kibira, D., Jain, S., & Mclean, C. (2009, July). A system dynamics modeling framework for

- sustainable manufacturing. In *Proceedings of the 27th annual system dynamics society conference* (Vol. 301).
- Kouri, I. A., Salmimaa, T. J., & Vilpola, I. H. (2008). The principles and planning process of an electronic kanban system. In *Novel algorithms and techniques in telecommunications, automation and industrial electronics* (pp. 99-104). Springer Netherlands.
- Kumar Chakraborty, R., & Kumar Paul, S. (2011). Study and implementation of lean manufacturing in a garment manufacturing company: Bangladesh perspective. *Journal of Optimization in Industrial Engineering*, 11-22.
- Mutingi, M., Mbohwa, C., & Mhlanga, S. (2013, August). A Dynamic Simulation of a Lean and Agile Manufacturing System. In *COMA'13*.
- Omogbai, O., & Salonitis, K. (2016). A lean assessment tool based on systems dynamics. *Procedia CIRP*, 50, 106-111.
- Piewthongngam, K., Vijitnopparat, P., Pathumnakul, S., Chumpatong, S., & Duangjinda, M. (2014). System dynamics modelling of an integrated pig production supply chain. *Biosystems Engineering*, 127, 24-40.
- Poles, R. (2013). System Dynamics modelling of a production and inventory system for remanufacturing to evaluate system improvement strategies. *International Journal of Production Economics*, 144(1), 189-199.
- Qu, T., Chen, Y., Wang, Z. Z., Luo, H., & Huang, G. Q. System Dynamics Analysis for RFID-enabled Manufacturing Systems.
- Reyner, A., & Fleming, K. (2004). Heijunka Product & Production Leveling. *Presentation at MIT Leaders*.
- Runkler, T. A. (2011, July). Controlling discrete manufacturing processes using Kanban and Heijunka approaches. In *Industrial Informatics (INDIN), 2011 9th IEEE International Conference on* (pp. 181-186). IEEE.

Tinoco, J. C. (2004). *Implementation of lean manufacturing* (Doctoral dissertation, University of Wisconsin-Stout).

# A Case Study on Godrej Consumer Products Limited: The Sustained Strategy

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## I. Introduction

The following case study on Godrej Consumer Products Limited (GCPL) has been written as a part of business case study in IIT Delhi Executive Management Program. The case analyses the best practices adopted by one of the oldest business houses of India, discussing about its organizational structure and pillars of strength, family business composition and its products with difference, innovations, social responsibility and the study of sustainability to success.

The study is the result of secondary research conducted by our group based on the websites of Godrej group. Apart from that we have also covered general news articles, research studies and analyst reports available in public domain.

GCPL is a subsidiary of Godrej group and has a turnover of INR 96 Billion with market capitalization of USD 10 Billion and 48% of the revenue coming from international business.

## II. History- Godrej Group

In 1897, Ardeshir Godrej set up a lock company after reading the newspaper about increasing misdeeds, crime and burglary citywide in co-operation with his brother Pirojsha Godrej. Godrej Group's tale started during the "Swadeshi Movement" which aimed to promote the essence of nationalism by using all locally made or procured items. It is also referred as the real 'Make in India' movement during the British Governance.

In 1918, Godrej started making soaps which were without fat and made up of vegetable oils. In the era of 1922, these products were endorsed by Indian freedom fighters like Annie Besant, Rabindranath Tagore & Mahatma Gandhi as these products scoring not only *Swadeshi* but also *Ahimsa*. In 1922, they designed furniture building almirah and it quickly widespread and became a trend to gift newly bride a "Godrej Almirah" during that time of days.

Afterwards, the Bombay Government auctioned Vikhroli village to Pirojsha Godrej, turned out to be the most valuable 3500 acre real estate asset for the company having estimated worth of USD 12 billion and is the best residential area for the employees of the Godrej.

In 1951, for India's first elections, they built 1.7 million ballot boxes, created milestone for the company. In 2014, India's mission to Mars; Godrej partnered with the ISRO on notably first mission to Mars for providing infrastructure to the Mangalyaan.

### III. Family Business

Godrej's transformation from locks, furniture to conglomerate from the time of British Rule to today's world of globalization, is accruing of ingenuity and attentiveness of its chairman Adi Godrej. Coming from third generation of the family, he modernized the management and incorporated the new businesses and appointing the non-family members as CEO. GCPL's journey can broadly furcated into three phases:

- 1.1 **Birth Phase-** In December 2000, Board of Directors of Godrej Soaps Limited decided to demerge it into two firms- Godrej Industries (Chemicals) and Godrej Consumer Products Limited. The fair objective of GCPL's birth is to give focus on FMCG sector and to enhance shareholder value. The initial capital of GCPL was USD 3.5 million. GCPL's operations commenced on April 1, 2001. Afterwards, GCPL switched its button for acquisitions thereby enlarging its boundaries and accelerate the growth.
- 1.2 **Growth Phase-** GCPL was the leader in hair care market and with the entrance of foreign giants like L'Oreal turned their eye towards Indian market with the aim to make it one of their hubs but it didn't hindered GCPL but benefitted to grow as the economy got open. L'Oreal was a luxurious brand whereas GCPL products had a mass-appeal, with focus on larger segment of the market. During its initial days, 90% of the market was covered by GCPL while 10% left was catered by other luxurious brand having separate customer zones.
- 1.3 **Stable Phase-** Survival of the GCPL was not in question during its inception but success was. Currently, the overall performance of the GCPL is healthy. The forte products- hair care, toiletries and personal wash are the fountainheads of cash. The graph is constantly upward in terms of revenue and by 4Q FY 2017 reports; net profit increased by 21% to USD 3.75 billion with customer reach in 80 countries now.

### IV. Conglomerate

Godrej Group is broadly divided into 2 separate entities working independently which are Godrej Industries Ltd and Godrej & Boyce. Godrej Consumer Products Limited (GCPL) works under Godrej Industries Ltd. There are three major categories through which they operate which are: Hair Care, Home Care and Personal Care. GCPL covers the region under Asia, Africa, Latin America, and Europe with out and out 80 countries worldwide. The products under each category are Hair Care in which they have Godrej Expert Hair Crème color, BBlunt which is in collaboration with Adhuna Akhtar (popular hair stylist) plus hair products include shampoos, masques, gels and other styling and grooming products. Another category is Renew which is a top fashion line hair colors made exclusively for Indian hair tones, skin tones and hair. And fourth one is Godrej Nupur which is a natural henna product for hair care. In home care section their products are: hit, air, Good Knight, Ezee, Air Freshener Stella. And in Personal care section their products list includes Soaps like Godrej No.1, Cinthol, Protect hand wash, Mitu Baby.

## V. Acquisitions

GCPL has acquired many companies in order to enter in the international market. Following is the timeline of major acquisitions done by GCPL in order to extend its reach:

- In the year 2003 they acquired “Shogun Diapers – Brand Snuggy” with their trademark and copyright for the brand. In year 2005 they acquire “Keyline Brands Ltd.UK”.
- In year 2007 with 100% ownership of “Godrej Global Mideast FZE, Sharjah” and in the year 2008 they acquired “South Africa Hair Brand Kinky”.
- After a gap of 5 years which might be due to slowdown in the global market, they re-initiate acquiring various companies across the globe. The list includes “Bhabani Blunt Hair Dressing” with 30% stake in year 2013, “Darling Nigeria” with acquisition of remaining 49% in year 2014, “South Africa’s Frika Hair (Pty) Limited” with 100% acquisitions in year 2015 and “US based Strength of Nature LLC” in year 2016.

## VI. Young Leadership

In year 2017, Adi Godrej appointed Nisaba Godrej, his youngest daughter, as executive chairperson of GCPL. Nisaba who joined as shareholder initially, within 10 years she pushed the agenda for “Project Leapfrog” comprising innovations and consolidation of the acquired companies. Nisaba with business acumen inherited from Adi Godrej, created the strategy of innovation via investment in its R&D with each year coming out with new product and breaking records of previous year’s revenue mark, proved that innovations are the **backbone** of GCPL that leads to the inevitable growth. Nisaba is transforming the GCPL into younger organization by changing the average age of the employee to 35-36 years against 40 years and the senior leaders to 45 from 48-49 years.

GCPL is not limited to its family members when it comes to leadership. Vivek Gambhir, MD and CEO and non-family member gives the green signal to GCPL’s democracy, work culture and performance based result oriented environment. The evaluation of accountability is on equal scale for family members and others.

GCPL have 3\*3 strategies in terms of talent acquisition with 3 targets of- excellent career, rewards and ethical work thereby 3 continuing values, philosophy and competency model; taking full responsibility of employee welfare.

## VII. Subsidiaries

There are four subsidiaries of GCPL naming Essence Consumer Care Products Pvt. Ltd., Naturesse Consumer Care Products Pvt. Ltd., Godrej Hygiene Products Ltd., Godrej Netherlands B.V.

## VIII. Competition & Competitive Strategy

GCPL has been always a source of standard benchmarks for their competitors. GCPL that is also known as the family business, has never truly faced any competition as they are able to implement their competitive strategy so efficiently that competitors are far behind the actual grip GCPL holds in the market. Subtly, the competitive strategy model the firm leverages is remained outside the sight of their normal competitors.

When GCPL was established in year 2001, the company leveraged the tag of their mother company to establish the market. The thing more interesting was the methodology they adopted to tackle their competitors. For gauging the nature of target audience- they utilized a special market mix methodology where they focused specially on marketing and advertisements to get a boost start of their new little brand. As they entered into market their product development was based on the **feedback loop mechanism**. The organization never hesitated in removing or improving their product based on consumer feedback. Lots of products were launched and lots of products were tailored according to the customer needs, whereas the competitors were only busy in selling a single niche product. Godrej has expanded their web in soap category, hair color, shaving cream, bathing powder and liquid detergents.

They played a tactical role of master of none but jack of all to generate revenue from every category, Godrej never targeted the top spot yet they retained among top 5 spot in all competitive categories and used them as a source to earn revenue. The analogy could be related to cricketer Sir Ian Botham (England) who made standard benchmark for best all-rounder rather than being too narrow focusing on a particular skill i.e. batting or bowling.

This was one of the competitive strategies; the **market penetration** was other. With the launch of variety of products ranging from economical to luxury class variety as seen in hair colors - BBlunt (Luxury hair segment) and Godrej expert (Economical brand) they made a role of catering to both rich and middle class categories whereas competitors like L'Oreal always targeted the luxury hair segment, were never able to achieve grip as strong as Godrej.

The third dimension added by GCPL was their **competitive prices** which were always better than the competitors. They always reduced their profit margin on one category section and on the same time expanded their profit margins by developing a more number of sections for their profit target achievement.

And this is not all; the pivotal factor that the company was able to identify in the Indian target base was **trust**. Within 7 years of establishment Godrej was able to achieve the most trusted brand in Asia and won platinum prize in safe hair dye category. Soon after there were series of awards that were entitled to GCPL which made the customer believe in them and tighten their grip as customer care brand.

The story could have stopped but the company never assumed them in a role of stagnation. There were various **merger and acquisition** and lot of **business partnership** that GCPL is into for widening their grasp not only in domestic market but in international market too.

The approach applied for the domestic market was quite effective and what more effective was to tackle the domestic competition- **they entered into the international market** which helped them in deeper market penetration. There have been no failed acquisition which GCPL has done till date as the market research team of GCPL has always been pro-active in finding the right opportunity and hit the right spot at the right time.

## **IX. Innovations at GCPL**

The innovation strategy is to target financially weaker section of the customers and came up with scheme of cheaper & effective insecticides. In addition to this, GCPL understood the need of changing behavior of the customers by the time which is propelled by urbanization.

### **IX.I. Fortune at the bottom the pyramid – The discovery of chotuKool**

Godrej was the leading brand in terms of refrigerator market. It was the first Indian firm that manufactured refrigerator in India. After many years of dominance and presence in this sector, there was a realization of low market penetration which was about 20 percent and the most contributing factor being the low spending habitat of Indian Buyers Ecosystem. As the result they tried to capture the bottom of the pyramid by introducing chotuKool which is till date, one of the ground-breaking innovations by parent Godrej and covered the rural section by storm.

It was an architectural innovative product that was a mini version of refrigerator which was compact and light portable. This small refrigerator had a battery that can run up to three hours without charging and keep the item cool and intact. It lacked compressor and used a patented chip technology for cooling. After the successful launch of chotuKool (2011), it priced at the rate of about INR 3250, GCPL decided to replace all his old distributors. The main factors that lead to the call was the product nature, as the main objective was not just to reach the existing base of customers but to increase the web of the customers and deepen their market penetration. The launch of chotuKool was for every person who could not afford a big refrigerator. To target the highly unorganized rural market in India they replaced all the existing distributors to new distributors that have deeper penetration in rural market of India.

The Godrej group seems to expand channels of distribution of chootuKool as it has been supported by many NGOs and is now a product easily available on e-commerce websites likewise Flipkart, Reliance Digital Store apart from their official website.

### **IX.II Goodknight Advanced Card - Low cost paper based mosquito repellent**

Goodknight was an existing brand of Godrej and it existed much before GCPL came into picture. Goodknight was a very popular and established brand in the market, being the first to introduce smoke free electric repellent (1984). From silver mat to mosquito coil, they had all products in the market. With the razor blade model in place for the entire existing product in 2013, GCPL realized that still most of the Indian population had no access to mosquito repellants and people suffered from many chronic diseases like Dengue and Malaria. To tackle the higher rates of mosquito repellent and lower purchasing power of customers, GCPL and Goodknight launched another innovative product- Mosquito Repellent Fast Card. This card was an easy, safe, efficient

and economic solution to people who could not afford expensive machines as mosquito repellent. The fast card was a paper based mixed with “allethrin” that get burned within 3 minutes and effective up to 3 hours. GCPL invests heavily in product innovations and these fast cards can be accessible to those who could not buy the other four products in a row- mats, coils, liquid vaporizer and aerosols. The main advantage over other products was that it could be considered as safe for even closed windows. The prime objective of this card was to repel the mosquitoes unlike the other techniques that suffocated the mosquitoes. Also, it has a very nice fragrance and was price INR 1 for each card. The Goodknight Fast card was not just a product but it was an awareness campaign.

Fast card targeted the existing customer but on the other hand it has a deeper motive. Its aim was to reach the people and target base which required it the most. In the same year to tackle the launch of Godrej fast card, the leading competitor All Out also launched a similar Fast card. Apart from very basic difference Goodknight had a better edge because of prior launch and presence in market. The fast card user feedback was considered to be better than All Out yet both the cards became equally popular. In 2016, they came up with fabric based roll on mosquito repellent especially for children- which is as per claims 100% natural and give protection for about 8 hours. It can be directly applied on the clothes and provides outdoor safety like Odomos with less fear of skin allergies. It has gained popularity among the elite customer base of GCPL.

### **IX.III. Godrej Expert Crème: *Dekh Bhall Rich crème ki***

Hair color was one of the oldest domain in which Godrej has its presence. It was 1974 when Godrej developed its first liquid hair coloring solution that sold in bottles. The product was a runaway success at that time. With the emergence of ammonia free powder based hair color Godrej also launched various products in this domain. GCPL launched BBlunt(2015), Kesh Kala oil. The product strategy of GCPL also focuses on both ends of the pyramid. The hair coloring products form a strong market as it is considered as the antidote to ageing. GCPL has done a lot of acquisition across the world hence there are many products that are derived from other nations and have re-invented and launched in Indian market. Godrej Expert Rich Crème that made by bringing hair color to the sachet was derived from Argentina and re-formulated in India. The pricing of the product was very competitive with INR 30 (0.5 \$) per sachet and INR 59(0.8 \$) for a whole kit including brushes and bowl. The product featured five variants of coloring options- black, natural brown, dark brown, black brown and burgundy. This product was launched in concordance of 3\*3 strategy of GCPL.

Sunil Kataria, EVP in marketing from GCPL emphasized that GCPL can't rely on the previous success to make a sustained growth. It is always important to innovate and bring new products in market to cater to the needs of public. Expert Rich Crème was not only emphasized on the coloring and affordable solution but also about the nutritional value of the product as it was a non-ammonia, rich in aloe protein solution, leaving hair strong and healthy. This helped in creating a positive mindset in people about using a color product that can add nutritional value to hair.

Although there are certain stiff competitors of Godrej Expert Rich Crème like Garnier, Indica Hair Dye, Super Vasmol, L'Oreal but still Godrej Expert Rich crème has attained the top spot in

hair coloring solutions. The pivotal factors could be the competitive pricing and delivery in all formats. Godrej Expert targets both the genders whereas other product like L'Oreal and Garnier have solutions more centric towards middle aged women.

## **X. OneRural Strategy - Capturing Rural Market**

Villages contribute to 35% of sales of the consumer packaged goods industry and have grown at a faster clip than urban sales for the past two years, according to a January 2017 report by Nielsen, an insights and information provider.

The target with OneRural is to have rural account for 35% of overall revenues in the coming years. The growth will come from a new set of rural consumers called the progressive rural customers, who behave like urban consumers but reside in the top 35,000 villages.

Additionally, GCPL look out for the launching of specific products for the rural market and also increasing its service frequency—the number of visits to take orders from retailers across the top 10,000 villages to once a month.

Consumption in the rural belt is not uniform. Over 70% of rural packaged consumer goods consumption happens in just 10 states and 66% of soft drink sales in rural India comes from just 19,000 villages, said a December report by Nielsen.

For Hindustan Unilever Ltd (HUL) and Dabur India Ltd, rural markets account for nearly 50% of overall revenues, says Naveen Trivedi, lead analyst, Trust Financial Consultancy Services Pvt. Ltd; a brokerage firm while noting that companies like GCPL and Marico Ltd. have scope to improve their revenue contribution from the interiors.

The company faced slow down in the past years which they now coping up via product innovations and spending wholesome amount on R&D. Indoor market of Godrej is approximately 30 percent bigger than the outdoor market. The new challenge is to make both markets at equivalent. All in all GCPL spend 0.30 to 1% of its sales turnover on its R&D division.

## **XI. Conclusion**

The above discussed strategies and innovation are clear evidences which showcase and prove that Godrej and GCPL is thriving for a longer period of time in the market. The organization has gained experience to capture the to and fro of the market dynamics. GCPL has developed a deep web of services and product across different market providing them a shield to any sort of market change. The above paper tries to explain the ameliorating affect of investing in innovations, diversification and competitive strategy which assisted GCPL to become a robust and a flexible firm. The parent company Godrej has sustained for over a century and GCPL itself have been improvising to avert all the potential pitfalls forms the core of the sustained strategy.

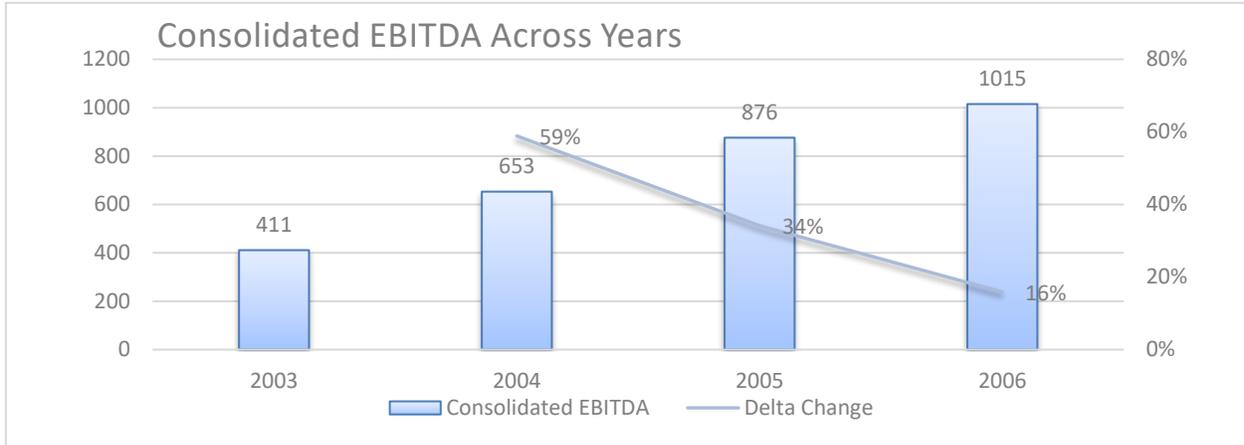
## **XII. References**

- [1] GCPL Website- <http://www.godrejcp.com/>
- [2] ICRA Limited
- [3] June 2017 Investor Report
- [4] <http://www.firstpost.com/india/sponsored-how-godrej-helped-india-in-its-fight-for-freedom-1663841.html>
- [5] <http://www.businessworld.in/article/When-Foresight-Is-Key/05-02-2018-139617/>
- [6] <http://www.thehindubusinessline.com/companies/GCPL-expands-rural-footprint-with-wholesaler-programme/article20671288.ece>
- [7] <http://www.theweek.in/news/biz-tech/with-nisaba-godrej-at-its-helm-gcpl-looks-for-further-growth.html>
- [8] <http://www.godrejcp.com/media/news/2174-gcpl-to-hive-off-india-unit-aims-to-double-local-sales-in-5.aspx>
- [9] <https://www.livemint.com/Companies/tBQf6AT4V61hvhugegIy2O/Godrej-bets-on-new-launches-product-innovation-to-beat-slow.html>
- [10] <https://www.bloombergquint.com/business/2016/10/03/nisaba-godrej-is-betting-on-product-innovation-to-drive-growth>
- [11] <https://www.thehindubusinessline.com/2000/12/09/stories/14091806.htm>
- [12] <https://economictimes.indiatimes.com/wipro-expected-to-lag-its-top-tier-peers-in-terms-of-growth-in-business-volumes-and-profit/articleshow/15353898.cms>
- [13] <https://economictimes.indiatimes.com/news/company/corporate-trends/nisaba-godrej-elevated-as-godrej-consumers-chairman/articleshow/58591426.cms>
- [14] <http://www.goodknight.in/products/outdoor/fabric-roll-on-bubblegum/>
- [15] <https://economictimes.indiatimes.com/slideshows/management-leaders/40-under-forty-celebrating-young-leaders/nisaba-godrej-38/slideshow/54539287.cms>
- [16] [https://www.peoplesmatters.in/article/employer-branding/best-employer-2-0-godrej-consumer-products-limited-4499?utm\\_source=peoplesmatters&utm\\_medium=interstitial&utm\\_campaign=learnings-of-the-day](https://www.peoplesmatters.in/article/employer-branding/best-employer-2-0-godrej-consumer-products-limited-4499?utm_source=peoplesmatters&utm_medium=interstitial&utm_campaign=learnings-of-the-day)

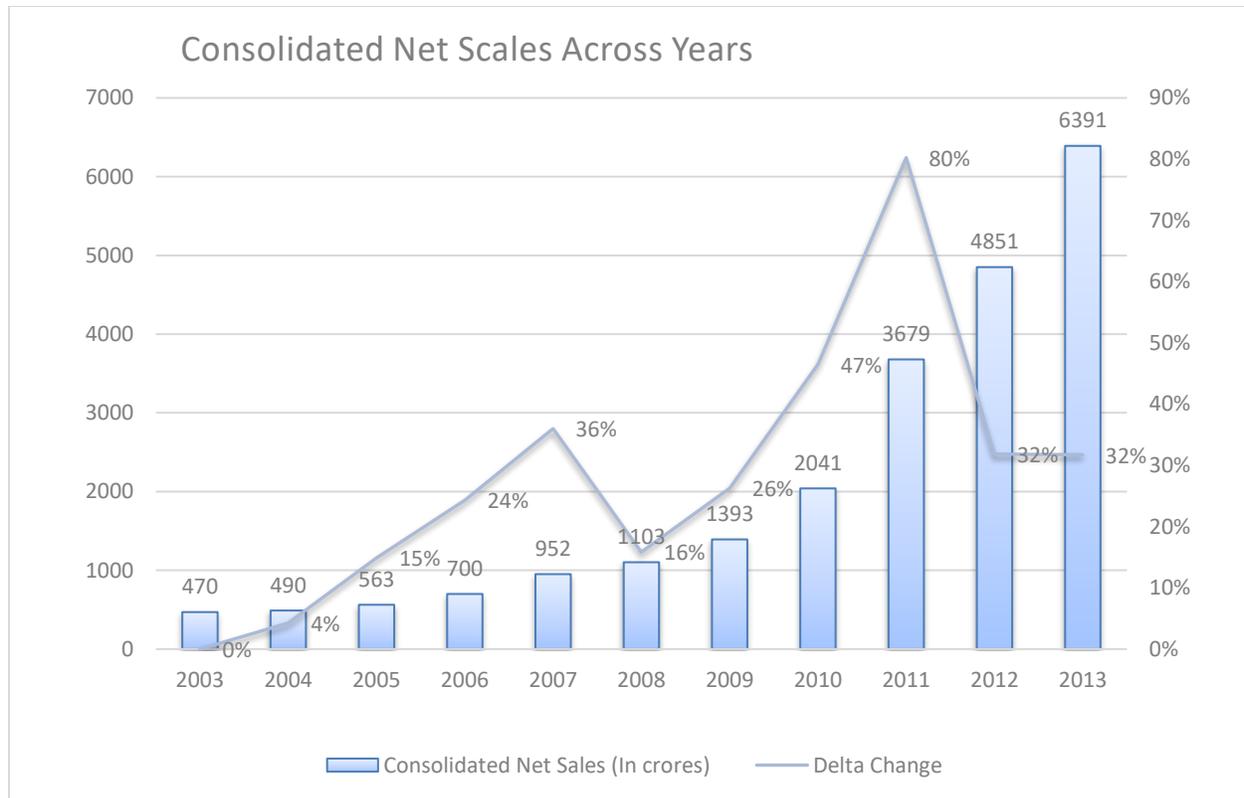
**XIII. Exhibits:**

GCPL statistics in terms of business growth:

Sources - Company Website



**Exhibit I**



**Exhibit II**

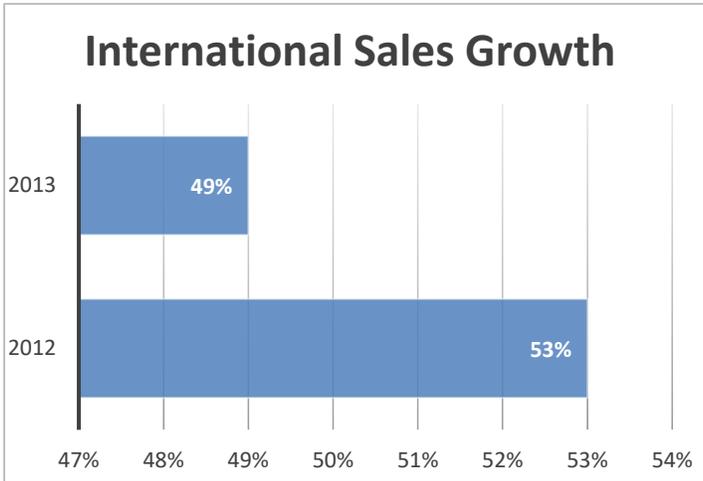


Exhibit III

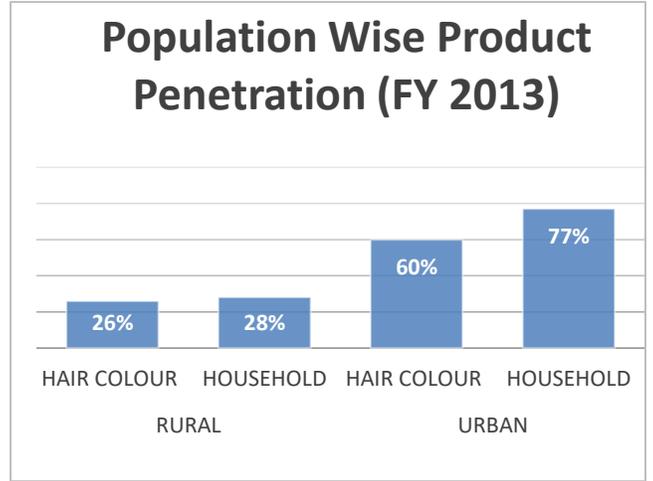


Exhibit IV

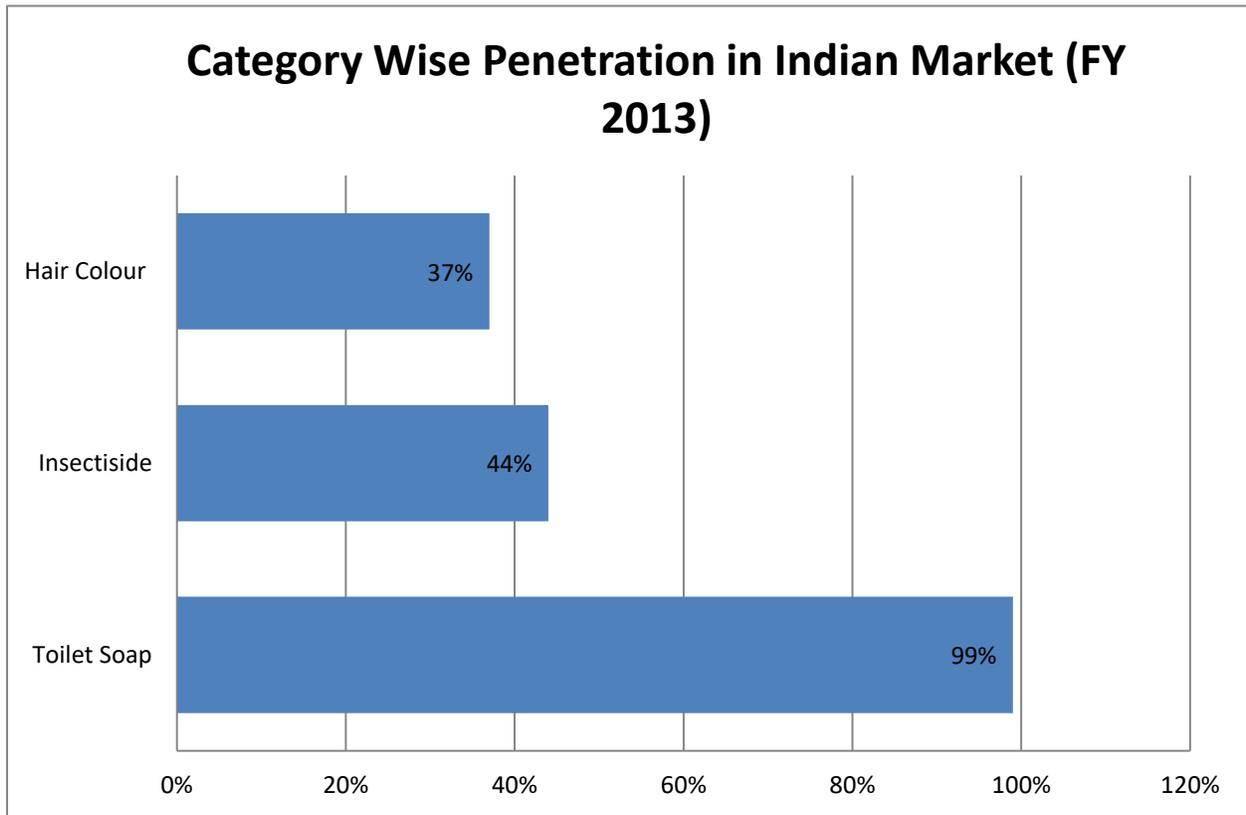


Exhibit V

**Designing Hybrid Flexible Systems for Generation X: The Millennials**  
**(Developing ARC framework for 2S: Scaling and Sustenance)**

**Setting the Context:**

In today's fast moving pace where with each day the things are transforming and we are on a path where conflicts run rampant and out of control. "How to sort this out?", becomes a usual question in each small and big board room meetings. The strategic intent of every company be it small, big, a startup, a multinational, domestic leader, international leader is the growth and to sustain the competitive advantage in this fast running business world. The only constant for growth is the incremental innovation in product, process and people. The journey of becoming big is constant, each entrepreneurial dream starts from cipher, and raises to 1, further from 1 to 10 and then 10 and beyond.

The Journey of Cipher to One, is knowing the self and the challenges you or the company is serving, which is also a state of self strategic intent. Further from One to 10, is about the setting space for your people and providing them the best of launch pad, 10 and beyond is scaling with a dream of making it big and successful. The most common thing in this whole entrepreneurial journey is the Strategic Intent, given that the traditional strategy is challenging and the real driver of strategic direction is structural coupling, a process that drives evolutionary progress through strategic relationship, how do we build a strategic approach that helps us first understand those powerful evolutionary drives and let us try to foster them rather working against them or ignoring them. With a dream and an idea, organization takes birth which sub sequentially start its journey from 0 to 1, 1 to 10, and beyond. Taking People, Process and Product at the core the substantial value add to the peak in initial years, with the passage of time it moves towards a strategic framework development.

Let us see the other side of the coin, in the middle of the constant flow of an entrepreneurial journey the strategy as a core starts taking it shape but due to certain and uncertain attributes like external environment, internal environment, people management etc. these strategies will not be that much effective after some time. More sadly around 90% of strategies are not implemented, the veteran systems professor Russ Ackoff reports a similar finding. Even the most successful organizations are subject to failure. Of the original S&P 500, the list of the top 500 companies in the US, over 85% had failed in the 40-year history of the index up to 2006. The next thing which prompted is the diversional nature of road map between organization framework and strategic framework. As the organization keeps on changing with the change in environment change, how come the sustenance of organizations are possible without changing the strategic framework for themselves, then what is driving them?

The strategic framework intended to be a globe where 3P, product, process and people must be aligned so to foster the innovation which will lead the organizations to scale as well as to sustain. As Maturana said, there is a challenge between process and outcome and competition is an occasional outcome of evolution, it is not the process driving it.

*The relationship is explained in a very beautiful way by Gregory Bateson, the horse didn't evolve, the field grass didn't evolve, it is the relationship that evolved.*

One has to understand the dynamic system usage if the systems which were developed to map the strategic intent were aligned to today's Gen-X or not, as it is not only about the people but as well as to the relationship where Product is the green grass, people being the horse and strategy as the relationship which has to be evolved to stimulate the innovation which is the only constant for growth of any organization. Hence this structural yoke where People Are Millennials: Gen-X, product is the entrepreneurial idea and process is the strategic framework they are working on, and resulting into the innovation, sustenance and scaling.

The stage is set to understand these dimensions' map over early strategy frameworks and further to understand the challenges around the same, more over to focus on developing the hybrid framework system with respect to scaling and sustenance. As more energy is invested in cumulating each existing relationship, whether important or urgent, and they can be difficult or impossible to get out of. The cycle of this journey is relentless, and whilst the steps may be so small that they go unnoticed, the net effect is enormous. Our strategic direction is driven much more than we consciously drive it. The question every time we ask our selves is, 'are we doing this in a mindful way?'. The outcome will take us where it's already headed unless we devise a strategy to alter the nature of the mix.

## **Idea to Strategy: Embarking the entrepreneurial Journey**

‘Strategy/ Strategic’ is a massively overused term in the business, and most of the time it gets used for the sorts of things that really have nothing to do with the strategy at all. This reflects much of the confusion and absence of real content in the field of the strategy. For us, there are decisions that are strategic, and these are not necessarily the most important decisions taken in the organisation and they are probably not the most long-term decisions. However, if you get them wrong, they may be terminal, in which case your strategic decisions might be as long term as it gets for your organisation, but if you get them right, there should be decisions that are more long term than that strategic ones.

As Von Clausewitz put it, “the continuation of political intercourse with the addition of other means”, the strategy as a concept came from context of military actions for political ends. The broader intent was setups starting from Doctrine/ Policy, further to capability/ infrastructure, then to building grand strategy, to Strategy, further to planning and last to tactics. It is tempting to assume that these six levels fit together in a nice neat hierarchy, but the reality in business context is less clean than that. The major fact on this differential version is the nature of all these characteristics running on different cycle time, they sometimes affect one another in surprising ways.

Traditional business strategy tends to focus on majorly 3 areas: first, “who do we want to be?”, second directly going to the planning, the third coming directly out of it is a plan. England and then Britain had the same foreign policy doctrine for around 600 years, which was to prevent any power gaining hegemony in Europe. In business context the policy is, “Who are we as a company, what business are we in, what will we be known for?”. If you look at Rolls Royce, founded in 1906, their policy position has centred on engines. The dimensions grew and faded, but the focus on building the excellent engines continued. For IBM, founded in 1911, the shift from a manufacturer of computers towards information services and consulting is a doctoral shift.

In a practical sense, formulations about capabilities are semi-strategic as they both constrain and enable particular strategic options and shut down others. Even simple decisions about equipment can last a long time. The Indian Railway is currently using multiple railway lines in front line track service that are approximately 100 years old. In business or entrepreneurial setup at start itself, the corresponding decisions about investment in capability, technology and organization choices include deciding things like programing language in software or buy/ make decision in manufacturing. These decisions can be irreversible or generational to reverse, moving from JAVA language to a well developed Rubi On Rails framework. The major reason of this irreversibility is the fact of these technologies as the base for the product and a lot of resources in both financial and human implicated to the same. Taylorism is 100 years old and though widely discredited is still very common in practice. The Deming based continuous improvement/ lean approach is over 60 years old and is still seen as radically new in some quarters. Changes in thought process infrastructure are generational and it is suggested to pick up any theory with care!

With advancements in entrepreneurial setup the thought of *now-go-and-do-this* is setup much prevalent, so it sits somewhere between policy and strategy. The overall strategy in business context includes things like deciding which sectors to operate in, changing sectors, choosing and building strategic alliances, build vs. buy policies. It is better being a weak player in a buoyant sector and can be much more lucrative and viable than being the strongest player in a weak sector. In focused strategic intent is to achieve and to secure a position of advantage. It involves a pragmatic shift in value proposition, where and how we deploy our resources, operational challenges, type of innovations and the like. This also includes the decisions pertained to both external and internal environments like selecting the market segments, suppliers, competition, allies and so on.

To complete the thirst of strategy any entrepreneurial roadmap needs a plan, a plan is a detailed description of who need to be where, when, doing what and with what resources at their disposal. In business context it is the Strategic Planning, which help us to develop a linear description of how we get from where we are to the objective. It includes all the set of operational planning, to the fact of deciding the alignment of internal resources to deliver a business objective. The last track on this road map is the choice on how to do it, there can be multiple ways of deployment of resources or we can say a set of general business operations from sales, production to delivery or to development and feedback.

In entrepreneurial setup there is no particular plan which marks a guarantee to success, the charm and the chasm goes hand in hand with functional frameworks. In any process or organization, the particular which an organization lack is Time, with advancement the 3P of this system is getting more crucial and complex with sub factorial particulars of need, desire, recognition and achievement. The shift of scaling and sustenance is now becoming a need as well as necessity in todays competitive world, it would be interesting to see how it can be achieved with a major set, which we say as Gen X.

### Understanding the Intent of Gen X: The Millennials in Business Setting:

There are multiple ways of defining this depending on your thinking style or the way you want to formulate your strategy. Millennials are always kept on the both the sides of the coin, the way they work, the adaption and the formulation is distinctively different, with advancement in time we can clearly see a new emergent class of Gen X which is more fast and adaptable to change at a different pace. This dimension can be seen on 3 different scales, self/ individual, team and organisation in business paradigm. The core of this individual is based of 5 major factors: Like, Options, Risk, Value, and Stimulation. Each of these hold a different preposition and weighing them with respect to each other will never suffice the nature of its dependencies. A well balanced factored factors may lead to a good planned recipe. Let us look at those and how these contribute to entrepreneurial setup.

There has been a tactic assumption in our theory that needs elaboration, namely that millennials, if given a chance to do so, will relate to each other in a way that creates resonance. The thought process of every millennial while starting any organization on its way to entrepreneurial journey is the feeling of, “*what is this going to feel like?*” Does the system demand that we shift from being a bureaucratic organization into an entrepreneurial one or, does it involve having to cope with the slow pace of a bureaucratic partner if you are entrepreneurial? The nature of aggression, community diversion, control culture, demand is such a way giving a consensus on internal biasness leads to diversion of individual to masses from a strategic intent and hence the failure of the system.

This is a psychological fact; it is physiologically impossible for human beings to take a decision without engaging the emotion. We make judgments about the past or present, but all decisions are about the future. The systems and the framework may include the elemental part of this like, hence giving a directional version to millennials to suspect the decision making with effect to the sustained force of strategy road map. Heinz von Foerster’s law of decision making states, “Act so as to increase the number of choices”. Understanding this in business setup, we will discover why a systematic startup changes to formulate as a contractual job or a part time task to syringe the last drop in the desert. Sometimes it will be because a chosen relationship will be so all-consuming we have no time or energy left to even think about exploring internal alternatives. There is no right answer to this intent that for some people, total dedication to a single task at a time can be a winning position, for others, this is literally a dead end. The modified framework may focus on all other things being equal, act so as to increase the number of options.

In an entrepreneurial system, when we talk about risk the portion of failure also cumulate to the system, but further the inherent risk is also the part of the system. Some systems work quite predictable cycles, so whether the longevity is short or long, you know when change will be coming. The IT sector is famously prone to massive shifts in the technological base, other sectors are much less predictable, breakthroughs in pharmaceuticals is hard to predict due to its intrinsic nature. The shift of this factor is taking a better shape now, because of this reason more and more people are encouraged to start something of own and hence we can see a rise in the number of startups.

Value itself is like a big list of value types to assess, but practically, in most situations, organizations are able to recognize the types of value that they need overall. Coming to the value map of an individual the subsequent system is effective towards the quantity individual need, for instance there is a huge debate on performance measuring strategies and incentivizing around the same. A thought process prevails around a set where the companies’ overall growth should be mapped for incentivizing the individual, the other school of thought is individual performance only to be taken as consideration as it will directly or indirectly lead to the overall momentum of the organization. Too much capacity can make you slow to change, this is why systems are engaged to be more flexible in nature so as to adopt the transformation with change.

Millennials have massively different appetites and capabilities for change, some prefer stable environment other carve challenge and high rates of innovation and find stability boring. Demanding millennials suit athletic setup- that can really stretch themselves and in so doing change the world around them. The factor of change plays a very important and crucial role, some levels of perfection only come with small steps and some transformations can only come with big ones. Setting up a mixed framework system where bold leaps, doing change in big steps or small, neither is right or wrong.

The task of this strategic intent is very much close the cultural web as well, how well the millennial support innovation, power structures, routines and rituals, control systems and paradigm. Research has shown that the entrepreneurs focus on three areas in their assessment of potential business. First the scope of venture is important, as the resources required can be vastly different, depending on the market to be served. Third, entrepreneurs raise the barrier to competitors to ensure survival.

### Towards the ARC Framework:

Over 70 per cent of successful entrepreneurs replicated or modified an idea encountered through previous employment. Job assignment should take account of employees' job tenure, as it influences motivation and innovation. A millennials perspective goes through three phases:

1. Socialization is the stage when individual is learning the responsibilities and making social contacts. This phase is short and the individual is primarily concerned with gaining experience and acceptance.
2. Innovation Phase starts when an individual feel secures enough to look for more challenging task, to enhance their contribution to the work. Hard work at this stage can enhance visibility and promotion potential.
3. Stabilization is the focus on preserving autonomy and minimizing the vulnerability, the openness to innovation can drop significantly. Individuals who have been in their roles for a long time tend to become less creative in solving problems because they are more rigid in their thinking and committed to established process.

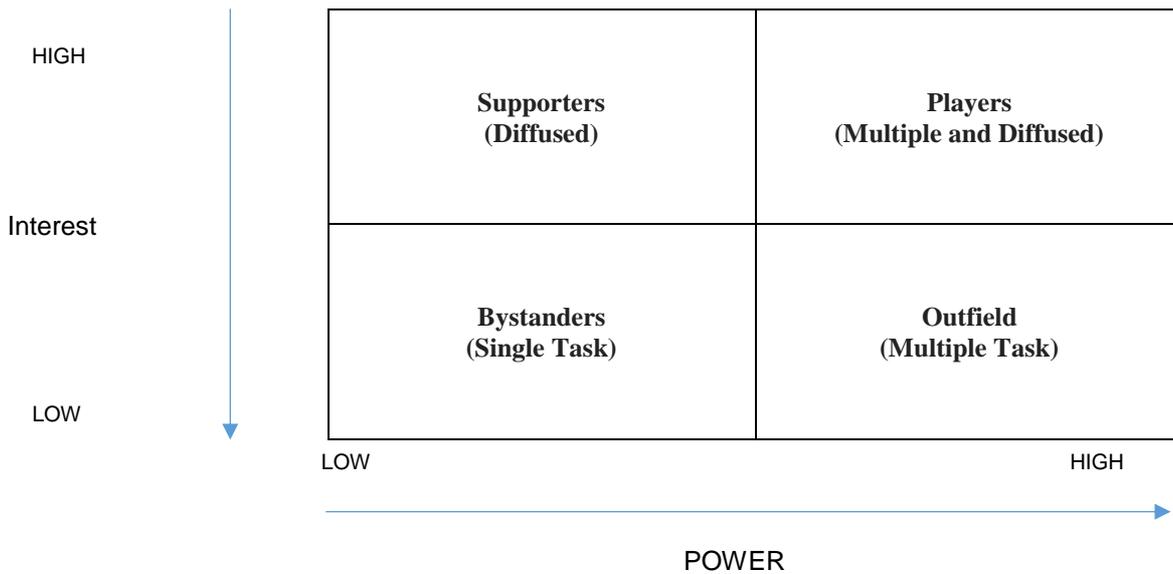
With a number of divisional strategic frameworks, the usability ratio is becoming less due to instinctive nature of millennials. **ARC framework** works on **Assessment** of the previous/ current systems framework, **Relative Mapping** of these on current entrepreneurial setup and last is to **Compute the Hybrid System** in order to meet the needs. The core of developing this framework is the concept of differentiation, drive and stretch. Differentiation is about the degree to which we are part of the herd or individual. Drive is about the degree to which the counter-parry in a startup is driving us vs. us driving them. Stretch is about the nature of change that is being driven in us by this relationship. The significance of these dimensions is that they change our existing structures, when applied to our organization, the structure in question isn't necessarily the organization structure or reporting hierarchy but to a level of incremental values, radical and disruptive entity recognition, and co-evolving the adaptation.

Lord Leverhulme of Lever Brothers (which became Unilver) once famously said that he knows half his advertising budget was wasted but he didn't know which half. A study by a team of statisticians shows that particular market, the advertising around product launch could be effective in getting a product to its natural market share but that spending after that had almost no impact at all. Myriads of product 'battles' between P&G and Unilver over soap powders and detergents had almost no effect in the long run, customer would soon revert to their nominal choices. The fact states here the sense of relative mapping need where the differentiation is much talked about in conventional strategy, but the reality is often highly misleading. Considering time as a key strategic dimension assumes that the environment in which you operate is constantly changing rather than assuming that it is static and stable. This means that you keep observing the strategic environment for changes that present either opportunities or threats.

No project of any size has much of a chance without a well trained project manager empowered to get things done, and having the support of higher management. Implementation is shown at the end of the innovation funnel in the Pentathlon Framework but this does not mean that the funnel is a linear sequence of collecting ideas, making decision and then doing the work. The Relative aspect of ARC try to correlate the changes disrupt the work of the existing factors which may also generate the resistance.

Entrepreneurial setups are not usually designed for innovation, whatever their publicity blurb may say. They are- they have to be- designed, above all, for regular and repeatable performance. The performance engine poses two challenges to innovation teams. First they must recognize that however promising their product or idea is for the future, the business must go on. Second, the hard nosed disciplines and incentives of the performance engine need to be relaxed somewhat in innovative projects, very much so in the fuzzy front end, but also in the implementation phase because significant uncertainties may remain.

People are naturally averse to change, this is why innovation is so often resisted, at least by some. But a little bit of thought process and planning by the management team can ensure that even a radical innovation meets enthusiastic support by those affected. Let us have a quick look on the famous change equation and matrix, further trying to map the stakeholders for the development of effective strategic intent in order to foster innovation. The Power and the Interest mapping with subsequent formulation will try to give a better understanding.



The Bystanders are the least significant stakeholders. They have little interest in the project and the little influence over it, so they need no deliberate attention. The supporters are more or less keenly interested in the outcome but have little direct power over the project or policy. In company launching a new product, these might be the shop floor staff, service personnel and perhaps the majority of the sales force. Supporters may carry influence because of their number. They have a right to be kept informed and may turn out to be important in influencing the more powerful stakeholders. The players are clearly the most important group. This include the key staff and managers directly involved and often others, such as sales head, key account managers and union heads. They must be kept closely involved and consulted on any major change of direction. The outfield is those who have a powerful influence on the organization but are not directly involved with this particular project. The project leaders must take care to understand where the project may have knock-on effects that may impinge on the domain or interests of one of these ‘big hitters’, and then work to avert trouble.

The major cognitive trend in the dimensional approach of the organization is the balanced competition between these stakeholders, while millennial in the organization tend to have a more differences on the facts. When weaker competes directly with the stronger, the competition tends to be relatively short. Either the weaker will triumph relatively quickly through guile or speed, or if they don’t, if it turns into a longer war of attrition, then stronger is likely to win out. Though the situation is very different, and both can settle into a situation of direct competition that can last for long with neither side gaming much of an advantage and ultimate failure for the organization.

The model and solution for the challenges is the concentration of power as single, multiple and diffuse. The target to attain the task delivery to single channel if the nature of task and person is bystander in nature as the reason to be focus driven formulation to attain the delivery. An alternative is to create a repeatable and consistent model that deploy multiple times in different setups. The risk for such channel is high dependency and autocracy in the model. The next is the diffused task allotment to the supporters, as the power will be distributed, supported by agility of being able to switch with the external partners rapidly. The risk of diffuse offerings is one of over adaptation. The next is the outfield where the task is suggested to be of a nature of multiple, due to its distinctive characteristic of power and influence and with certain effect they can delegate better to perform. The risk are that the model can be open to attack, because of its predictable nature and that there may be a limit to the number of functional opportunities with both internal and external environment. Players being the most important element of the matrix must be regulated to be in a multiple and diffused state of work and strategy. We can use multiple in concealment, with a single parent strategic departmental authority and further the diffusing ability of the player.

The risk with any of these model on a differential basis is the nature of work, vulnerable effect, deployment structure and the deviation of strategic intent from external environment. Concentrating on available resources allows weaker strategic roadmaps to compensate the overall weakness by gaining a localized power advantage. In so doing, they can win the challenge of sustenance, and hold it. The degree of concentration necessary can be calculated and is a function of your total resources available, the size of the departments, and how much resources needed in each of those departments to first achieve dominance and hold it. This tells you big a segment you can bite off at any one time and therefore how concentrated you need to be, which is further a leap towards the scaling. Hence scaling and sustenance both can be achieved in multiple ways by 3 pronged mapping of factors discussed.

**Conclusion with Future Degree:**

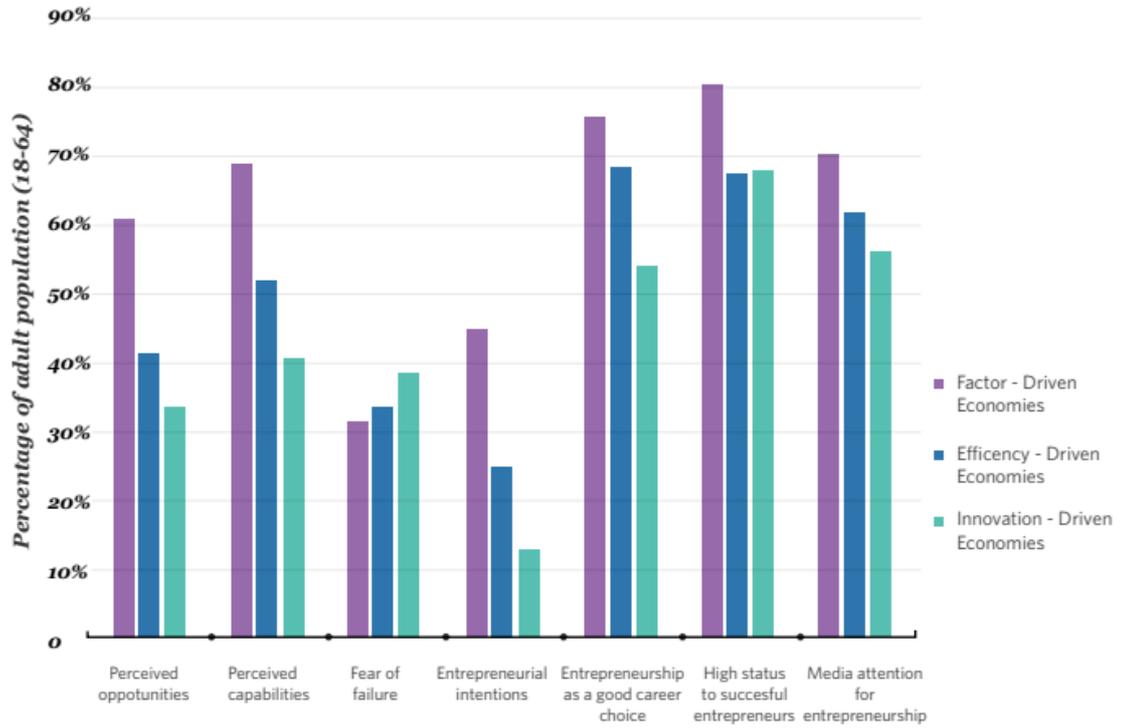
The Information Loop

*Any enterprise CEO really ought to be able to ask a question that involves connecting data across the organisation, be able to run a company effectively, and especially to be able to respond to unexpected events. Most organisations are missing this ability to connect all the data together.*

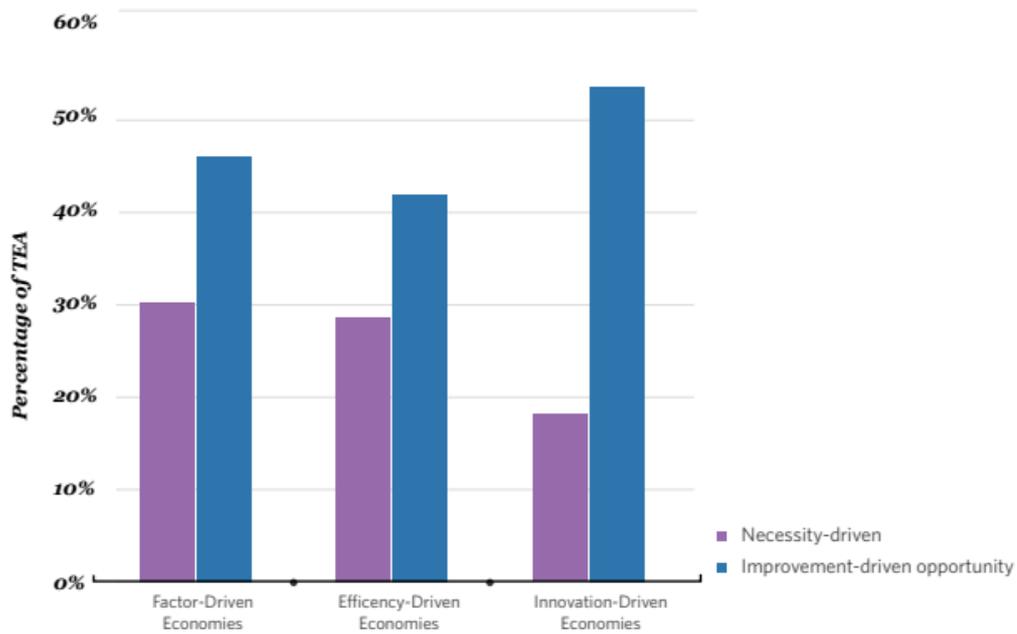
Tim Berners- Lee (2007)

Most of the start-ups die because of the inconsistency with two major factors that is time and information. The non factored, non accountable, unregulated communication channel deplete the start-up from inside. The future degree must focus on these parameters mapped on the 3P, and ARC framework channelled with optimal use of Artificial Intelligence and Machine Learning.

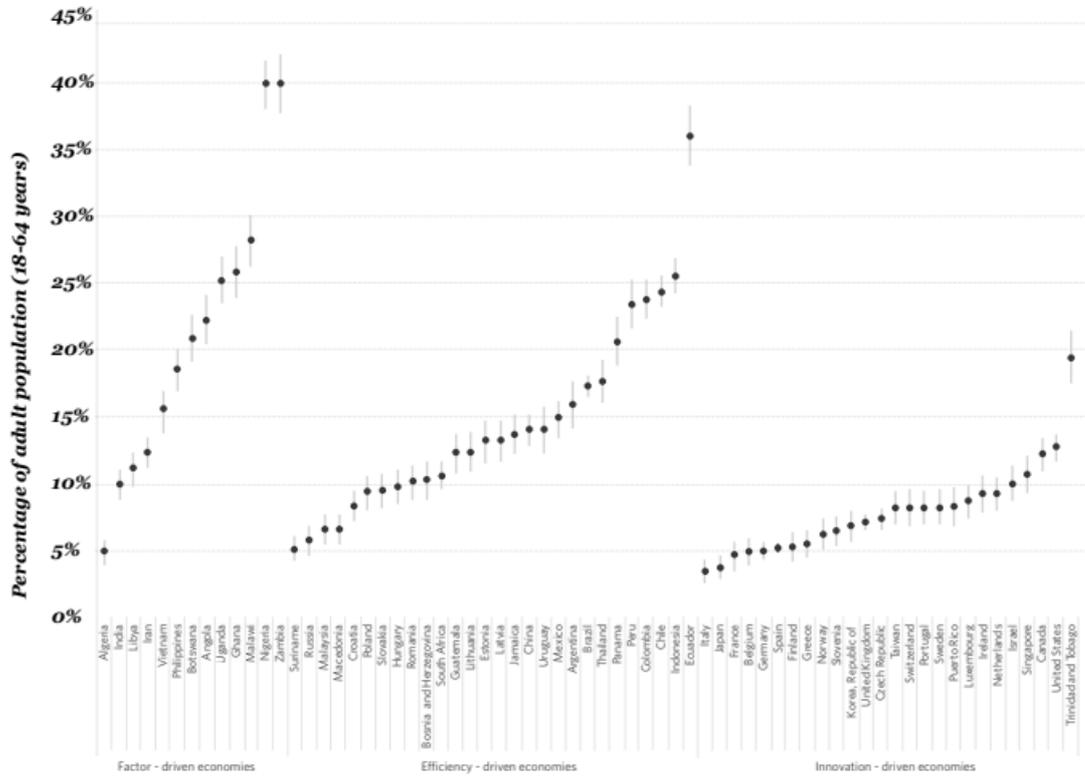
<b>POWER</b> (Critical Mass, Agility)	Concentration	Single- Sole focus of effort
		Multiple- Effort Spread over several areas
		Diffuse- effort spread over a wide range
	Strength	Stronger- more capable
		Balanced- relevant capabilities
		Weaker- lesser capabilities
<b>FIT</b>	Differentiation	Herd- similar set of activities
		Edge- on the fringe of herd, trailing, leading
		Individual- a separate entity
	Stretch	Incremental- continuous improvement
		Radical- step changes
		Disruptive- change in what we do
		Paradigm Shift- change in external view
		Confound- purposeful destabilisation
	Drive	Shape- drive the change
		Co-evolve- mutual adaptation
		React- response to adaptation
	<b>TIME</b> (Cycle Time, Foresight, Change Rate)	Faster
Synchronised		Similar Speeds
Slower		Slower adaptation



**FIGURE 2.3 PERCENTAGE OF ENTREPRENEURS MOTIVATED BY NECESSITY AND OPPORTUNITY, BY PHASE OF ECONOMIC DEVELOPMENT, 2013**



**FIGURE 2.2 TOTAL EARLY-STAGE ENTREPRENEURIAL ACTIVITY (TEA) 2013, BY PHASE OF ECONOMIC DEVELOPMENT**



Note: Vertical bars represent 95% confidence intervals for the point estimates of TEA

## References:

- Womack, J., and Jones, D. (1996) *Lean Thinking*. New York: Simon & Schuster.
- Womack, J., Jones, D. and Roos, D. (1990) *The Machine That Changed the World*. New York: New Press.
- Yamo, S. and Sato, K. (1995) *New Lanchester Strategy: 001*. Forestville: Lanchester Press.
- Yamo, S. and Sato, K. (1996) *Sales and Marketing Strategy for the Strong: 3* (New Lanchester Strategy). Forestville: Lanchester Press.
- Yamo, S. and Schuler, J. (1996) *Sales and Marketing Strategy for the Weak: 2* (New Lanchester Strategy). Forestville: Lanchester Press.
- Hoverstadt, P. (2010) 'Defining identity by Structural Coupling in VSM Practice.' *Systemist*, 33(1): 5-19
- Hoverstadt, P. (2010) *The Viable System Model in Systems Approaches to Managing Change* eds Reynolds, M. and Holwell, S. London, UK: Springer
- Hoverstadt, P. and Bowling, D. (2002) 'Complexity as a Factor in the Growth of Medium Sized Enterprises.' Conference paper available at [https://www.researchgate.net/profile/Patrick\\_Hoverstadt/contributions](https://www.researchgate.net/profile/Patrick_Hoverstadt/contributions).
- Hoverstadt, P., Loh, L. and Marguet, N. (2016) 'Measuring the Performance of Strategy.' Conference paper available at [https://www.researchgate.net/profile/Patrick\\_Hoverstadt/contributions](https://www.researchgate.net/profile/Patrick_Hoverstadt/contributions).
- Hoverstadt, P., Loh, L. and Marguet, N. (2016) 'Performance Management: The Glue between Strategy, Organisation & Change.' Conference paper available at [https://www.researchgate.net/profile/Patrick\\_Hoverstadt/contributions](https://www.researchgate.net/profile/Patrick_Hoverstadt/contributions).
- Hoverstadt, P., Loh, L. and Marguet, N. (2016) 'Using Organisational Agility Metrics in Business Turnaround.' Conference paper available at [https://www.researchgate.net/profile/Patrick\\_Hoverstadt/contributions](https://www.researchgate.net/profile/Patrick_Hoverstadt/contributions).
- Howard, N. (1991) *Confrontational Analysis: How to Win Operations Other Than War*. Washington, DC: Author.
- Howard, N. (2003) *Paradoxes of Rationality: Theory of Metagames and Political Behaviour* (Peach Research Studies Centre). Cambridge, MA: MIT Press.
- Howard, N. (1991) *Confrontational Analysis: How to Win Operations Other Than War*. Washington, DC: Author.
- Hurst, D. (1995) *Crisis and Renewal*. Cambridge, MA: Harvard Business School Publishing.
- Kaplan, R. and Norton, D. (2003) *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Cambridge, MA: Harvard Business School Publishing.
- Keynes, J.M. (1931) *Essay in Persuasion*. New York: Classic House Books.
- Kiechel, M (2010) 'Lord of Strategy: A Conversation with Walter Kiechel.' *Harvard Business Review*, February 2010.
- Kim, W.C. and Mauborgne, R. (2005) *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Cambridge, MA: Harvard Business School Publishing.
- Longford, E. (1969) *Wellington: The Years of the School*. New York: Smithmark Pub.
- Machiavelli, N. (1521) *The Art of War*. Cambridge, MA: De Capo Press (trans. Copyright 1965).
- Machiavelli, N. (1532) *The Prince*. New York: Bantam Classics [reprint 1984].
- Maturana, H. (1992) *Tree of Knowledge: The Biological Roots of Human Understanding*. Boulder, CO: Shambhala.
- Maturana, H. (2002) *Autopoiesis: Structural Coupling and Cognition*. *Cybernetics & Human Knowing*, 9(3-4): 5-34. Available at <http://cepa.info/685>.
- Meadows, D.H. (1997) 'Leverage Points: The Places to Intervene in a System.' Available at <http://donellameadows.org/archive/leverage-points-places-to-intervene-in-system/>.
- Meadows, D.H. (2008) *Thinking in Systems: A Primer*. White River Junction: Chelsea Green Publishing Company.
- Mintzberg, H. (1978) 'Patterns in Strategy Formation.' *Management Science*, 24(9): 934-938.
- Mintzberg, H. (1993) *The Rise and Fall of Strategic Planning*. New York: Free Press.
- Mintzberg, H. and Ahlstrand, B. (2<sup>nd</sup> edition 2008) *Strategy Safari: The Complete Guide through the Wilds of Strategic Management*. Harlow, UK: Pearson Education.
- Monden, Y. (1983) *The Toyota Production System*. Boca Raton, FL: Productivity Press.

Moore, G. (1995) *Crossing the Chasm: Marketing and Selling Technology Products to Mainstream Customers*. New York: Harper Business.

Bhide, A., 'How Entrepreneurs Craft strategies that work', *Harvard Business Review*, 72 (2) (1994), 150-61

Case based on: Discussions with Dr. Ritesh Malik and Mr. Russell Longjam.

Drucker, P.F., *Innovation and Entrepreneurship* (Oxford: Butterworth- Heinemann, 1985)

PwC Consultants, *Breakthrough Innovation and Growth* (2013). Available at:

[www.pwc.com/gx/en/innovationsurvey](http://www.pwc.com/gx/en/innovationsurvey)

Rao, J. and Weintraub, J., 'How Innovative is your Company's Culture', *MIT Sloan Management Review*, 54 (3) (2013), 29-37.

Op. cit., Drucker, 1985.

GEM Reports: <https://www.gemconsortium.org/report>

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**IMPACT OF BUSINESS PROCESS REENGINEERING ON  
PERFORMANCE OF BHARAT SANCHAR NIGAM LIMITED**

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## **ABSTRACT**

*The rapid change in Technologies, customer needs and increased customer awareness force the Telecom Service providers in India to focus on Service Quality and Customer Satisfaction, thereby increasing the market share, retaining the existing customer base and attracting new customers, to withstand the present competitive scenario. The purpose of this research paper is to infer the impact of managerial tools like Business Process Reengineering (BPR) for the improvement in the performance of a company. A sample survey is conducted on internal customers' (employees) perception of Bharat Sanchar Nigam Limited (BSNL), a government owned Telecom Company in India to study the pre- and post- BPR effects.*

*A sample size of 711 covering all over India in BSNL is collected and statistically analysed for empirical results using SPSS (ver. 21). Descriptive statistical tests such as ANOVA and paired t-test are executed. A dynamic model for effective implementation of BPR in BSNL is proposed to achieve better results.*

**KEYWORDS:** *BPR, Internal Customers, Company performance, Statistical Analysis and Dynamic Model.*

## **INTRODUCTION:**

In the growing global competition, many service providers are trying to choose different marketing strategies, adapting latest tools like Business Process Re-engineering (BPR) to dominate over the remaining Telecom Operators. The up-gradation in technology, telecom products as well as services contributed a lot in promoting the Telecom business. On realizing the importance of competition, companies started focusing on improving the market share by retaining customers, attracting new customers and applying strategies to face the stiff competition. Companies used to monitor and improve their competitiveness to continue in the business due to the demand of high quality products / services, rapid development of new technology and shorten of products life cycles. To meet this type of challenges the BPR has proven to be a powerful and elaborated one among various business process management tools.

### **Bharat Sanchar Nigam Limited:**

BSNL is government owned Public Sector Undertaking providing multi-facet telecommunications services all over India. BSNL is one of the important Mobile Service Provider covering all the zones in India. While other private operators are having a limited zones according to their allotments, it is providing 2G as well as 3G Network in India. At present, BSNL is introducing Wi-Fi hotspots i.e. 4.5 G, which is the advanced version better than the existing 4G version.

As per the Annual Report of BSNL 2016-2017, BSNL has a total switching capacity of 1,417.10 lakhs and wire line connections of 360.69 lakhs, GSM Capacity of 987.14 lakhs, fixed telephone exchanges 1,17,090 GSM BTS towers, 102 satellite stations. There are 2,92,04,321 Rural Telephone Connections are working.

### **BPR in BSNL:**

To improve a company performance through BPR implementation with the aim of modernizing and improving its effectiveness and efficiency, there are plenty of empirical evidences in the industry. On realising the importance of implementing the BPR in Telecom Service Sector, BSNL is also made its mind to carry out BPR exercise to improve its company performance and to reduce the company cost. In that process the BSNL took the help of M/S Ernest and Young to study the various existing working processes and to suggest the modification in the process before adopting the Enterprise Resource Planning (ERP) concept.

BSNL formed on 1<sup>st</sup> October 2000 and enjoyed all the privileges and gestation period advantages till 2007. Later on BSNL realised getting losses thereafter. Hence, BSNL had started implementing ERP aligned with BPR recommendations in 2009 and completed it in 2012. To study the impact of BPR on BSNL company performance, in this research paper, the employees' perception on pre- BPR (from 2007 to 2012) and post-BPR (from 2012 to 2017) periods is compared and analysed. The hypotheses are tested using the statistical tools. BPR is implemented in various functional dimensions: Human Resources, Finance, Material Management, Sales and Distribution, Operations and Maintenance, Planning, etc. for attaining better results in improving company performance.

## **Literature review:**

Hammer and Champy (1990) claimed that BPR is a collection of previously existing business concepts and novelties. Earl (1995) contents that it is an integration of pre core elements - IT, processes and transformation rather than any fundamentally new idea which distinguishes BPR.

The massive re-engineering of public as well as private industry is initiated in 80s and accelerated in 90s. The major re-engineering attempts are made to cop-up with the opportunities and challenges posed by globalization and liberalization are business strategy, business process, technology and human resources. The ICT has played vital role in gigantic measures of BPR in the industry.

An excellent management system, their support, their awareness provided to employees about importance of BPR, teamwork and commitment plays an effective role in making a success BPR (Habbib, 2013).

In an effort to meet the demands for efficient, transparent, accountable and quality public service delivery by citizens and business, governments both in the developed and developing economies are reforming their public sectors (Reyes 1998).

The definition of Hammer and Champy (1993) as “the fundamental rethinking and radical redesign of Business Processes to achieve dramatic improvements in critical measures of performance, such as cost quality service and speed”, BPR is a customer-driven IT-enabled approach which aims to transform organizations. They are in the opinion that it is a radical change and rethinking of overall process to achieve overall performance in terms of cost, quality, service and speed, while Davenport& Short (1990) calls it as processes of analysis and workflow redesign in an organisation.

Business Processes Redesign is the “The analysis and design of workflows and processes within and between organisations” (Davenport &Short 1990). Grover et al. (1995) define BPR as “the critical analysis and radical redesign of existing business processes to achieve breakthrough improvements in performance measures.”

According to R. McAdam and J. Donaghy (1999), Business Process Reengineering (BPR) is a managerial tool used for bringing in drastic performance improvements in organizations. In India, many Public Sector Undertakings (PSUs) were recently closed down and still more are on the verge of closure due to various reasons.

Davenport (1993) defined BPR as the ‘radical redesign of broad, cross-functional business process with the objective of order of magnitude performance gains, often with the aid of IT. The revised approaches involved may include automation, reorganization, downsizing, optimal sizing, out sourcing, and disintegration. With effective use of IT, BPR can improve company’s performance because IT can save time and improve the accuracy of information transfer and about company boards and strategies (Gunashekar and Nath, 1997).

Md. Sabbir Rahman (2012) stated that the service oriented organization should give due importance for customer satisfaction and to meet customer expectations which related to the employees service ability, product quality and good service environment.

Marjanovic (2000) conducted a study which supports the fact that business environment is changing rapidly and it requires companies to change their way of doing business to meet the expectations of customers and thus be able to survive in the global competition. The concept of BPR is originated in 1990s enabling companies to improve productivity and relationships with customers and reduce time to launch new products services in terms of cost, quality, customer satisfaction and shareholder's value in link with the strategy by identifying the most important processes of the company.

As per Md. Sabbir Rahman (2012), in service oriented companies, the customer satisfaction is an important parameter in measuring its company performance. To withstand in disruptive marketing in Telecom, the BSNL has chosen to improve Service Quality and Customer Satisfaction.

### **Objectives of the study**

In this research paper, the Pre- and Post- BPR study is conducted to assess the overall company performance.

The following objectives are selected for the current research study:

- 1) To examine the employee perception about overall company performance on Post- BPR implementation with respect to demographic variables a). Age b). Qualification c) Rank d) Experience in BSNL.
- 2) To determine the difference in overall company performance in BSNL between Pre- and Post –BPR implementations.
- 3) To suggest the measures for achieving BSNL company performance.

**Hypotheses:** The following hypotheses are broadly constructed to verify the research objectives set in this research study.

H<sub>0</sub>1: There is no significant difference in the perception of BSNL employees about overall company performance on Post-BPR implementation with respect to age.

H<sub>0</sub>2: There is no significant difference in the perception of BSNL employees about overall company performance on Post-BPR implementation with respect to qualification.

H<sub>0</sub>3: There is no significant difference in the perception of BSNL employees about overall company performance on Post-BPR implementation with respect to designation.

H<sub>0</sub>4: There is no significant difference in the perception of BSNL employees about overall company performance on Post-BPR implementation with respect to experience.

H<sub>0</sub>5: There is no significant difference in the overall company performance of BSNL between Pre- and Post- BPR implementation.

### **Research Methodology**

The present study is made based on primary source i.e. Employee (Internal Customer) perception collected through questionnaire. To study and investigate the problem in the current study, a survey is being conducted in BSNL covering all over the Country.

The perception of employees (Internal Customers) through employee questionnaire (EQ) is designed. Within the targeted internal customers convenience sampling was employed to get the questionnaires filled. In case of collection of employee perception the targeted sample is chosen on the basis of Manager Levels, i.e. Top level, Middle level and Lower level managers.

**Table-1: Sample size**

Sample	Number of questionnaires
Distributed	865
Response Received	793
Data Considered	711

711 samples have been collected from **22** Telecom Circles spreading across the Country. The EQ consists of 30 items for collecting the perception from the respondents. To determine the sample size, YAMANE formula is used.

Under the employee related variables, certain demographic variables for the study are selected as (i) Age (ii) Education qualification (iii) Unit working (iv) Rank and (v) Experience. All the demographic variables in the questionnaire selected in this study are found relevant and help data analysis in testing the Hypotheses.

#### **Validity and Internal Reliability of the Instruments**

Reliability test using Cronbach's Alpha is conducted on 30 descriptive items covering the Employee Questionnaire and found the Alpha value ( $\alpha$ ) 0.950, which is highly reliable ( $>0.7$ ) and significant.

**Table-2: Reliability of Pre- BPR and Post- BPR**

	Number of Items	Cronbach's Alpha Value
Pre- BPR (2001-07)	15	0.938
Post- BPR (2008-16)	15	0.942
Total	30	0.950

#### **Sampling Plan**

The survey was conducted by following the convenient sampling method with certain limitations.

1. The research work is focused on BSNL, hence the Employees of the BSNL are only targeted.
2. The Employees of BSNL are selected exclusively for having opinion on Pre- BPR and Post- BPR impacts because the employees are aware of BSNL status. But the customers may not have that knowledge.
3. As the employees of BSNL are thousands in numbers and spread all over India the sampling units (Employees) are confined to convenient sampling.
4. The purpose is to ensure that sample truly represents the original population.

#### **RESEARCH INSTRUMENTS (Employee Questionnaire) :**

The employee questionnaire is prepared exclusively for BSNL Executives. This questionnaire is having two parts: (A) Demography (6 nos.) and (B) Pre- and Post - BPR (total 30 nos.) where the number of constructs is mentioned in brackets. Of the total 30 items, 15 items pertaining to Pre-BPR and 15 items related to Post-BPR.

### Profile of Respondents:

Table -1 presents characteristics of 711 respondents. The sample has 19.0% of respondents between 20-35 years group and 43.3% between 35-50 years group and 37.7% between 50-60 years group. The dominant group represents is middle age group i.e. 35 to 50 years which has a frequency of 308 out of 711.

Qualification-wise analysis is: Below graduation (10.5%), graduates (54.9%), post-graduates (31.4%) and others (3.2%) have represents the sample (N=711) as shown in the Table. Major representation in this sample is graduates.

In case of working Units, the sample represents: Operation & Maintenance (44.3%), IT and Computer Technology (18.1%), Finance (10.3%), HR (6.6%), Marketing (7.7%) and others (12.9%). Major response received from Operation Units out of 711 samples.

Regarding Rank of employees, Managers (10.5%), Executives (76.2%) and Non-Executives (13.2%) are represented. Executives represent Major sample N=711.

Experience-wise sample responded are: the service group - 1-10 years (18.8%), 11-20 years (31.2%), 21-30 years (23.8%) and above 30 years (26.2%). 11-20 years service experienced representation is comparatively more.

**Table-3 Profile of Respondents (N=711)**

Variables	Categories	Frequency	Percent
Age group	20 to 35 years	135	19.0
	36 to 50 years	308	43.3
	51 to 60 years	268	37.7
	Total	711	100.0
Educational Qualification	Below Graduation	75	10.5
	Graduation	390	54.9
	Post-Graduation	223	31.4
	Any other	23	3.2
	Total	711	100.0
Units of working	Operation / Maintenance	315	44.3
	IT & Computer Technology	129	18.1
	Finance	73	10.3
	HR	47	6.6
	Marketing	55	7.7
	Others	92	12.9
	Total	711	100.0
Rank	Manager	75	10.5
	Executive	542	76.2
	Non -Executive	94	13.2
	Total	711	100.0
Service Experience	1 to 10 years	134	18.8
	11 to 20 years	222	31.2
	21 to 30 years	169	23.8
	Above 30 years	186	26.2
	Total	711	100.0

**TABLE 4. Item Statistics (Pre- and Post- BPR)**

	Pre-BPR		Post-BPR	
	Mean	Std. Deviation	Mean	Std. Deviation
Over-all Performance	3.80	.908	3.75	.893
Customer Relation Management	3.47	.977	4.04	.816
Skill Development	3.55	.967	3.94	.908
Office Automation	3.44	.968	3.93	.891
Marketing Reach	3.16	1.049	4.08	.820
Implementation of IT	3.51	1.028	3.80	.934
Data Base Management Systems	3.49	.987	4.21	.738
Staff Product Knowledge	3.44	.928	4.20	.749
Work Environment	3.74	.852	3.81	.945
Organizational Profits	3.76	.961	3.86	.900
Prompt Delivery System	3.48	.916	3.60	.955
Organizational Brand Image	3.88	.907	3.80	.933
Customer Satisfaction	3.53	.981	4.02	.878
Management Technology Policy	3.44	.935	3.80	.926
Response Cycle Time	3.40	.939	3.87	.876

**Data Analysis and Interpretation**

The list of hypothesis and the results and Interpretations are tabulated below:

**Table 5 : Results of One way ANOVA Demographic Item Wise Hypotheses**

Perceived Functional areas (Dependent Variable)		Independent Variable				
		(a) Age	(b)Qualification	(c)Rank	(d)Experience	
		<b>F<sub>(2,708)</sub>= 3.01</b>	<b>F<sub>(2,708)</sub>= 3.01</b>	<b>F<sub>(2,708)</sub>= 3.01</b>	<b>F<sub>(3,707)</sub>= 2.62</b>	
Company Performance (Post – BPR)	1	F	0.272	2.391	2.231	0.339
		Sig.	0.762	0.067	0.108	0.797
		Test Result	<b>H<sub>01</sub> is Accepted</b>	<b>H<sub>02</sub> is Accepted</b>	<b>H<sub>03</sub> is Accepted</b>	<b>H<sub>04</sub> is Accepted</b>

@ Significant at 0.05 levels.

**Rejected:** There is a difference ( $F_{cal} > F_{tab}$ )

**Accepted:** There is no difference ( $F_{cal} < F_{tab}$ )

From the Table-4 it is clear that all hypotheses H<sub>01</sub> to H<sub>04</sub> are accepted and alternate Hypotheses are rejected. This shows that there is no significant difference in the perception of BSNL employees about overall company performance on Post-BPR implementation with respect to all the demographic items Age, Qualification, Rank and Experience.

A paired *t* test is used to test if there was a significant difference in the average of the two (Pre- and Post-) tests. The Hypotheses are:

H<sub>05</sub>: There is no significant difference in the overall company performance of BSNL between Pre- and Post- BPR implementation.

**Table 5a: Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_BPR	53.0816	711	10.49274	.39351
	Post_BPR	58.7159	711	9.80749	.36781

**Table 5b: Paired Samples Test**

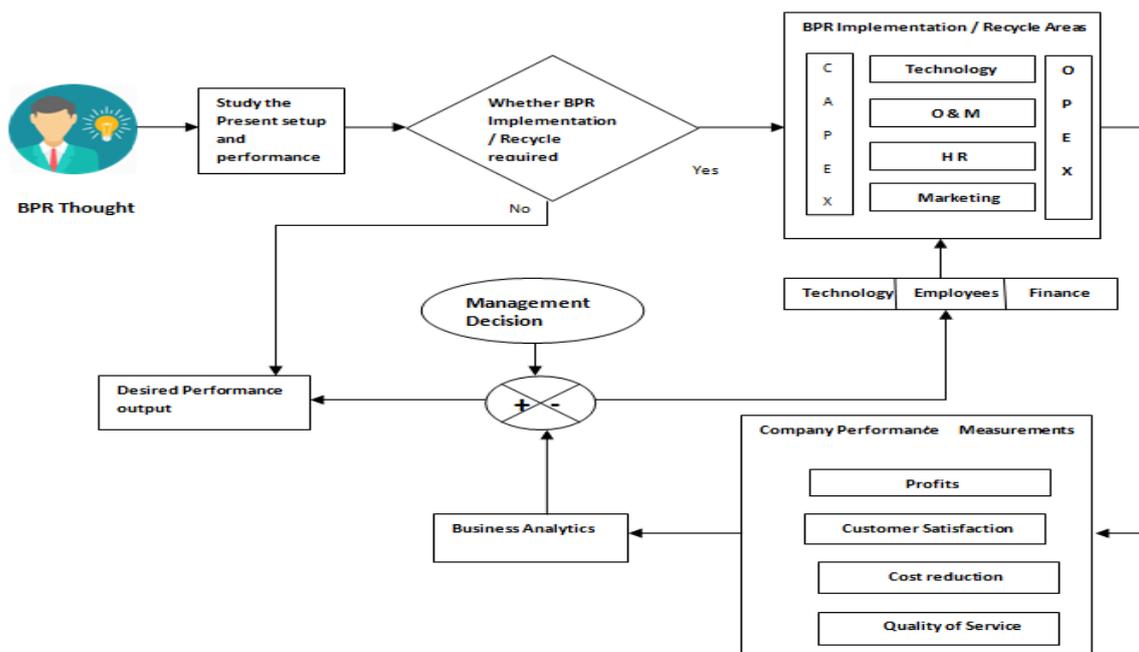
		Paired Differences	t	df	Sig. (2-tailed)
		Mean			
Pair 1	(Pre_BPR) - (Post_BPR)	-5.63432	-12.558	710	.000

From the above,

1. There was a significant difference between Pre-BPR and Post-BPR mean scores ( $t_{710} = 12.558, p < 0.001$ ). i.e.  $H_0$  is rejected.
2. Post-BPR mean scores were 5.63 points higher than Pre-BPR mean scores (95% CI [10.49, 9.80]).

**Proposed Dynamic BPR Model:**

In this present study it is found that the BPR has its own impact in improving the company performance and is proved through empirical analysis. In accordance to Chen lei and Liu Bin (2007), explaining dynamic BPR model, it is revealed that any BPR model should be reviewed periodically after implementation and necessary modifications in the process have to be incorporated for obtaining continuous benefits of BPR. On the same lines a dynamic BPR model suitable for the BSNL Company is proposed and shown in Fig. 1.



**Fig. 1: A Proposed Dynamic Model on BPR in BSNL**

Once BPR is implemented through various dimensions i.e. HR, O&M, Technology and Marketing providing sufficient Capital Expenditure (CAPEX) and Operational Expenditure (OPEX), the company performance is measured considering the parameters: Profits, Cost Saving, Service Quality and Cost reduction. In the business analytics, the company performance results obtained are verified for the management's expectations. Based on the outcome, the management will take decision whether to continue the present BPR process or not. If any further improvement is required the whole cycle will be repeated again by prioritising the fund allocation (OPEX / CAPEX) in those dimensions wherever required. The above BPR cycle will be repeated till the desired results are achieved. Such suggested dynamic model is to be reviewed periodically. Based on the feedback received from the field units, certain BPR post implemented solutions (PIS) are to be incorporated from time to time for achieving better results.

### **Conclusions & Recommendations:**

1. There is significant difference between pre- and post- BPR implementation in the perceptions of the employees in improving the company performance of BSNL.
2. No significant difference is found on the employee perception about overall company performance on assessing the post-BPR implementation results with respect to demographic variables: Age, Qualification, Rank and Experience.
3. All the employees uniformly accepted that Database Management has contributed significantly in successful implementation of BPR.
4. Prompt service delivery is to be improved as per the employees' perception.

Recommendations are summarised below:

- i. Front end and field employee skills are to be improved by conducting programmed on-line trainings to keep abreast with changing technologies.
- ii. Interactive sessions are to be organized between the management and employees in regular intervals to get the feedback about the field problems and for finding real time solutions.
- iii. For further improving the profitability of the company the available vast resources and assets shall be utilized to generate additional revenues.
- iv. Due weightage is to be given in allocating funds for Capital Expenditure (CAPEX) and Operational expenditure (OPEX) to improve quality of service which in turn enhance the customer satisfaction.
- v. New dynamic marketing strategies may be adopted to face the competition.
- vi. To have continuous and consistent improvement in company performance, the recommended dynamic model has to be reviewed periodically.

### **References**

1. Guimaraes, T & Bond, W. (1996), "*Empirically assessing the impact of BPR on manufacturing firms*", International journal of operations and production management, Vol.16,pp 5-28.
2. Gunashekar. A & Nath. B. (1997), "*The role of information technology in the business process reengineering*", International Journal of Economics, Vol.50, pp. 91-104.
3. Ghosh,S, & Skiniewski, M. J. (2010), "*Enterprise resource planning systems implementation as a complex project: A conceptual frame work*", journal of business economics and management, Vol .11(4), pp.533-549.

4. Habib, N. M. (2013), "*Understanding critical success and failure factors of business process reengineering*", International Review of Management and Business Research, Vol.2, Issue-1.
5. Asmar zahoor. (2015), "*Effective Management Systems: a key to BPR Success*", *European Journal of business and management*", Vol.7, No-25.
6. Hammer, M., & Champy. (1993). "*Reengineering the corporation: A manifesto for business revolution*". New York: Harper Business.
7. R. McAdam and J. Donaghy (1999), "*Business process re-engineering in the public sector - A study of staff perceptions and critical success factors*," Business Process Management Journal, Vol. 5, pp. 33-49.
8. Reyes, DR. (1998), "*Public sector reengineering: practice, problems and prospects*", Asian Review of Public Administration, Vol. 10(1-2), pp. 42-56.
9. Rodney McAdam, John Donaghy, (1999) "*Business process re-engineering in the public sector: A study of staff perceptions and critical success factors*", Business Process Management Journal, Vol. 5 (1), pp.33-52.
10. Davenport, T.H. and Short, J.E. (1990), "*The new industrial engineering: information technology and business process redesign*", *Sloan Management Review*, Summer, pp. 11-27.
11. Chen lei and Liu Bin (2007), "*A Workflow Model Supporting Dynamic BPR*," The Sixth International on Grid and Cooperative Computing(GCC).
12. Earl, M.J., Sampler, J.L., & Short, J.E. (1995), "*Strategies for BPR: Evidence from field studies*", Journal of Management Information Systems, 12(1), PP 31-57.
13. Habib, N.M. (2013), "*Understanding Critical Success and Failure Factors of Business Process Reengineering*," International Review of Management and Business Research, Vol.2.
14. Grover, V., Jeong, S.R., Kettinger, WJ. and Teng, J.T.C. (1995), "*The implementation of business process re-engineering*", *Journal of Management Information Systems*, Vol. 12(1), pp. 109-44.
15. Md. Sabbir Rahman(2012), "*Service Quality, Corporate Image and Customers satisfaction towards customers Perception: An Exploratory study on telecom customers in Bangladesh*", Business Intelligence Journal, Vol-5(1), pp 56-63.
16. Marjanovic, O. (2000), "*Supporting the soft side of business process reengineering*" Business Process Management Journal, Vol.6(1), pp. 43-53.
17. Hammer, M. (1990), "*Reengineering Work: Don't Automate, Obliterate*", Harvard Business Review July–August Issue pp.104-112.
18. BSNL Annual Reports (2016-2017), [www.bsnl.co.in](http://www.bsnl.co.in) Accessed in May 2018.

# **“Institutional enablers of National Innovation System: A Total Interpretive Structure Modelling Approach”**

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## **ABSTRACT**

**Purpose:** The purpose of this paper is to identify and analyze the interactions among different enablers of National Innovation System using TISM. The existing enablers in the extant literature are scant and hold a diverse view about the institutional enablers. So, it becomes necessary to have a comprehensive understanding of interactions among the enablers which can foster innovation in the country.

**Design/ Methodology:** Identification of enablers followed by application approach of TISM is used to study and analyze the mutual interaction between identified enablers.

**Findings:** The results identifies the four level of institutional enablers of NIS. It also establishes the hierarchical relationships among the factors, which helps to develop the clear understanding of the driving-dependent relationship.

**Research Limitation:** The model is developed on the basis of input from the literature, may not reflect the scenario of every country.

**Practical Implication:** Policy Makers must stress on enablers having the strong driving power of National Innovation System. Organizations can also use this framework to evaluate the innovative capability of a country and may drive useful insights from the empirical study presented in this paper.

**Originality/ Value:** TISM based framework structural model is being proposed for National Innovation System, which can foster innovation in the country.

**Keywords:** Interaction; Enablers, TISM, National Innovation System.

## 1. Introduction

Innovation acts as a catalyst for a nation's sustainable development and competitiveness (Beck et al., 2016). It has also been identified as a fundamental factor for economic development (Wong et al., 2005). A National Innovation System (NIS) influences the innovation capability of a country (Fischer & Tello-Gamarra, 2017). NIS is a socio-economic system where different participants interact (Gogodze, 2016). NIS also relies on elements such as investment, institutional development, import of foreign technology, education and training (Cvetanović & Sredojević, 2012). It can be determined regarding technological competitiveness, knowledge management competence, government business relations, and decision-making structure of the country (Bartels et al., 2012).

Institutions are the crucial component of NIS (Gogodze, 2016; Bartels et al., 2012). Institutions are comprehended as conventions, habits, rules, and regulations which plays a substantial role in deciding how people relate to each other and how they use their knowledge. Institutions need to rectify the problems faced by economy including information asymmetry and moral hazard (Waarden, 2001). The institutional approach to understand invention system is taken as efficient institutions will minimize total cost to the government regarding policy failures and boost innovation practices (Davidson & Potts, 2016).

Researchers have identified the institutional enablers of NIS. For example, political shifts and political instability and its impact on innovation support (Jacob & Simms, 2009; Allard et al., 2012). Ease of starting business helps increase the entrepreneurial activity (Şipoş-Gug & Badulescu, 2015). The constancy and persistence of institutional arrangements affect the NIS of a country (Gokhberg & Roud, 2016). Institutions positively impact human capital, business and market sophistication (Gogodze, 2016), which are the sub-factors of NIS. However, there is a need for a systematic approach to studying the institutional enablers of NIS. In this paper, seven enablers have been identified through literature. This paper analyses these enablers with total interpretive structural modelling (TISM).

The objectives of this paper are as follows:

- to identify and rank the different institutional enablers of the National Innovation System
- to establish a mutual relationship, relative importance and interdependence of each enabler with the help of the TISM technique.

## 2. Literature Review

In the literature on the National Innovation System, the scholars like Lundvall (1992), Freeman & Soete (1997), Rodri'guez-Pose & Cataldo (2015) recognizes that innovative capacity of a country depends on their institutions. Institutions are engaged in the government policies, education, training and network services (Freeman, 1995). The researchers have classified institutions into seven categories, namely political stability, government effectiveness, regulatory quality, rule of law, ease of starting business, ease of paying taxes and ease of resolving insolvency.

## 2.1 Political Environment and Innovation

Political changes and instability can make the support system of innovation less reliable (Jacob et al., 2009). Political instability is negatively related to the innovation support (Allard, Martinez & Williams, 2012). The government change leads to uncertainty about the new policies of a potential new government. Predictable political elements provide opportunities for policy to induce positive outcomes (Hawkins, 2016).

## 2.2 Government Effectiveness and Innovation

The government effectiveness measures the perception of the bureaucracy quality, public services, quality of policy formulation and implementation, and government's commitment credibility to such policy. The government effectiveness influences multi-national enterprises entry mode choice (Williams & Martinez, 2012). Government effectiveness of a country creates a better environment for investment opportunities (Globerman & Shapiro, 2002).

## 2.3 Regulatory quality and Innovation

New ventures choose to invest into that markets where the country offers better regulatory protection (Coeurderoy & Murray, 2008). In the telecommunication sector, regulatory authorities ensure high quality and reasonable cost of service, prioritizing interconnection arrangements on commercially reasonable terms (Schmid, 2009).

## 2.4 Rule of law and Innovation

The rule of law measures the perceptions of the agents who have faith in and abide by the rules. It positively impacts the economic performance of a nation (Rigobon & Rodrik, 2005). Rules and regulations are issued by government agencies which affect the business working of the firms and thus impacting innovative capability of the firm.

## 2.5 Ease of starting a business and Innovation

Ease of starting business is estimated regarding the cost, time and procedures required is contrarily related to the entrepreneurial activity (Şipoş-Gug & Badulescu, 2015). Lesser the time required to start and operate a new business, the company can invest more time in innovative activities like developing new products.

## 2.6. Ease of paying taxes and Innovation

In today's era, all around the world paying taxes have become less complicated for mid-sized organizations all around the world. Now, the concentration has shifted from decreasing tax

rates to easing the compliance burden for firms (PwC, 2016). Easier the ease of paying taxes, more comfortable for the business to operate (Acuity, 2016).

### 2.7 Ease of resolving insolvency and Innovation

Effective bankruptcy system facilitates faster and cheaper insolvency proceeding which results in the speedy restoration of business to the usual activity and increase in returns to the creditor as well as a debtor. Sound insolvency system provides access to financing and saves viable companies as well (Khan, 2016; Stern, 2017).

## 3. Methodology

TISM is the advanced extension of Warfield's (1974) Interpretative Structural Modelling (ISM) that is used to know interrelationships among various enablers, the degree of associations and logic behind the relations. TISM methodology answers three basic questions: what, how and why (Sushil, 2012; Singh, 2017); this helps in building a conceptual framework. What is defined by basic constructs, dimensions, or elements constituting the framework. Thus it is answered by identifying the different enablers affecting the concept from the literature. How represents the primary element relationship in the form of hierarchy. Why is used to interpret the linkages among enablers.

ISM follows a methodological series of steps which are as follows:

Step I: Identify and Define Elements

Step II: Define Contextual Relationship

Step III: Interpretation of Relationship

Step IV: Interpretive Logic of Pair-wise Comparison

Step V: Reachability Matrix and Transitivity Check

Step VI: Level Partition on Reachability Matrix

Step VII: Developing Diagraph

Step VIII: Interaction Matrix

Step IX: Total Interpretive Structural Model

In this study, TISM is used for developing the conceptual model of institutional enablers impacting the National Innovation System. In TISM, the logic of the model is more transparent and there are clear interpretations of linkages (Sushil, 2012; Jena et al., 2017). In this study, the verified factors have been used as the basic unit of the model. The final model contributes by identification of the linkages among the various institutional enablers impacting NIS. Understanding of various steps of ISM as discussed above is illustrated in the flow diagram shown in Figure 1.

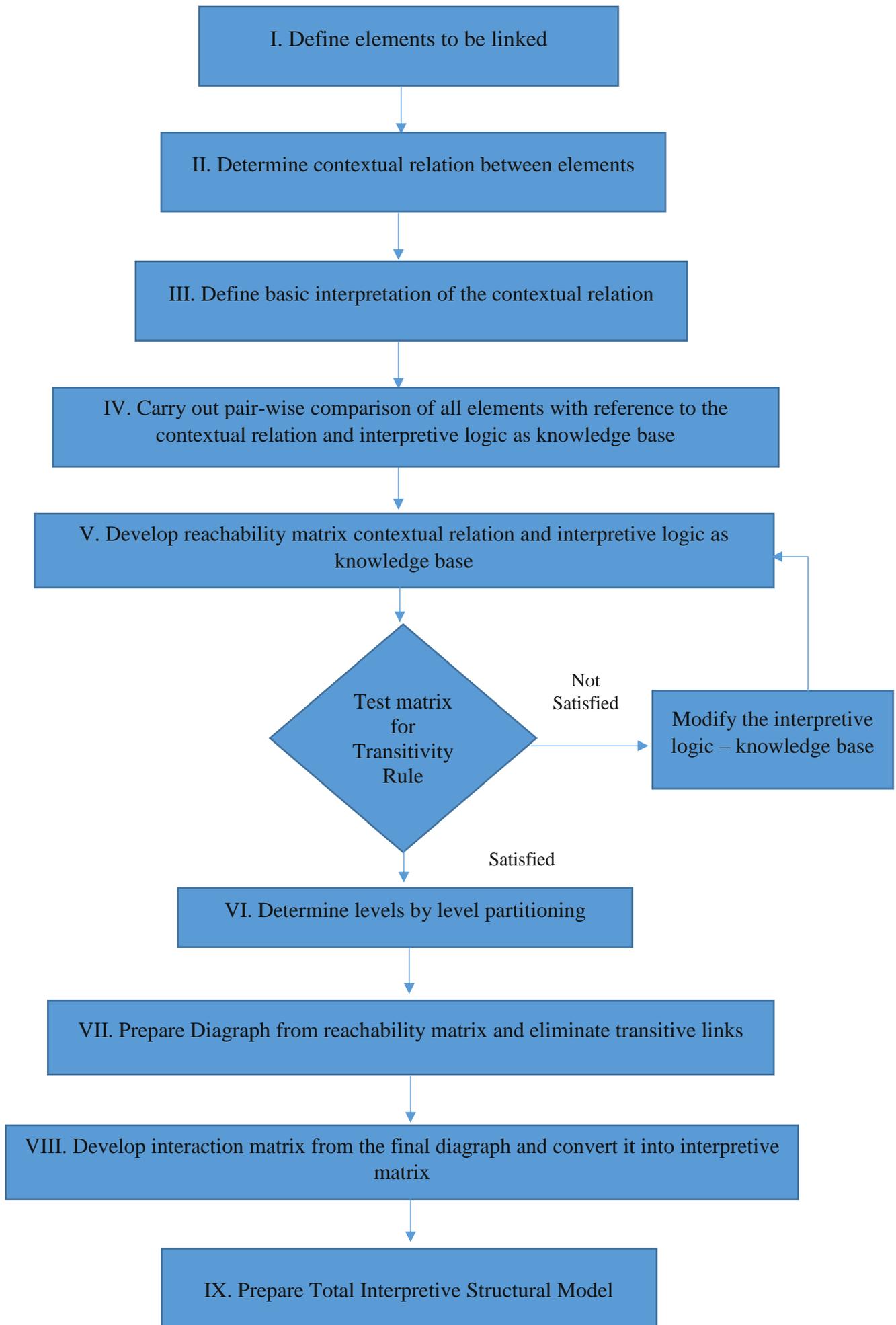


Figure 1: ISM steps (Reference: Sushil, 2012)

#### 4. TISM for Institutional enablers of NIS

##### Step I: Identification and definition of elements to be linked

The Institutional enablers of NIS the have been identified and defined through literature as mentioned above in the paper. The total of seven institutional enablers of NIS was identified through the analysis of literature.

##### II. Determination of the contextual relationship between elements

The contextual relationship is the causal relationship between factors like factor A affects B. In this study the contextual relationship has been determined through the review of the literature

##### III. Define basic interpretation of the contextual relation

The interpretation of the contextual relations provides a deeper understanding of the relationship between the factors, i.e., in “what way does one element will influence or enhance another element. These relationships were defined with reason from a group of experts and literature review.

##### IV. Carry out a pair-wise comparison of all elements concerning the contextual relation and interpretive logic as a knowledge base

For pair-wise comparison, each element is individually compared with all the other elements. The total number of pair-wise comparison for  $n$  identified elements will be  $n \times (n-1)$ . Experts' opinion for each pair-wise comparison, is represented by entry code “Y” for yes and “N” for no and if it is “Y,” it is further interpreted.

##### V. Develop reachability matrix contextual relation and interpretive logic as a knowledge base

The reachability matrix is formed with the help of interpretive logic-knowledge base by making entry 1 if there is “Y” entry code; else 0 is entered for “N” entry code. This reachability matrix is also checked for transitivity rule. The knowledge base is updated as “Y” for each new transitive link.

##### VI. Determine levels of level partitioning

Level partitioning is done by the intersection between the reachability set and antecedent set of the final transitive matrix. The element of level 1 is removed, and the same process is continued to complete the leveling.

##### VII. Prepare Digraph from reachability matrix and eliminate transitive links

Digraph for elements is constructed by arranging all the elements at their respective levels and drawing directed links as per the relationship revealed in the reachability matrix.

##### VIII. Develop interaction matrix from the final digraph and convert it into the interpretive matrix

The final digraph is converted into a binary interaction matrix form by depicting all interactions by “1” in the respective cells. Further, each cell with “1” is interpreted with respective relevant interpretation taken from the interpretive logic-knowledge base to form the interpretive matrix.

#### IX. Prepare Total Interpretive Structural Model

TISM for the identified elements is developed with the help of digraph and interpretive matrix. The nodes in the digraph are substituted by interpretation of the elements placed in boxes. In the structural model, information obtained from the interpretive matrix is illustrated by the side of respective links.

## 5. Results

This study illustrates the institutional enablers of National Innovation System of a country using TISM methodology. It establishes the hierarchical relationships among the factors, which helps to develop the clear understanding of the driving-dependent relationship. The study identifies the four level of institutional enablers of NIS, which are written as below:

Level I: Ease of Starting Business, Ease of Paying Taxes

Level II: Ease of Resolving Insolvency

Level III: Political Stability

Level IV: Rule of Law, Government Effectiveness, Regulatory Quality

## 6. Conclusion

The contribution of this research work is to identify seven institutional enablers of National Innovation System. This model identifies the influence of the enablers, mutual relationships, relative importance, and interdependence of enablers with the help of TISM. This finding will allow policy makers to efficiently utilize their resources and to focus their attention on the most significant enablers. This research also adds to the body of knowledge by providing empirical insights into the relationships between different institutional enablers of NIS.

A further expansion of enabler can be performed with the help of data collected from industry and academia experts, researchers, etc. This will help in a better understanding of NIS. Also, statistical analysis can be performed for better understanding of institutional factors which have a significant impact on the national innovation system.

## References:

- Allard, G., Martinez, C. A., & Williams, C. (2012). Political instability, pro-business market reforms and their impacts on national systems of innovation. *Research Policy*, 41(3), 638–651. <https://doi.org/10.1016/j.respol.2011.12.005>
- Bartels, Frank; Voss, Hinrich; Lederer, Suman; Bachtrog, C. (2012). Determinants of National Innovation Systems: Policy implications for developing countries. *Innovation: Management, Policy & Practice*, 14(141), 2–18. <https://doi.org/10.5172/impp.2012.203>
- Beck, M., Lopes-Bentob, C., & Schenker-Wicki, A. (2016). Radical or incremental: Where does R&D policy hit?. *Research Policy*, 45(4), 869-883.
- Coeurderoy, R., & Murray, G.(2008). Regulatory Environments and the Location Decision: Evidence From The First Foreign Market Entries Of New Technology-Based Firms. *Journal of International Business Studies*.
- Cvetanović, S., & Sredojević, D. (2012). The Concept of National Innovation System and Economy's Competitiveness. *Economic Themes*, 50(2), 167–185.
- Davidson, S., & Potts, J. (2016). Policy Forum : Research and Innovation A New Institutional Approach to Innovation Policy. *The Australian Economic Review*, 49(2), 200–207.
- Fischer, B., & Tello-Gamarra, J. (2017). Institutional quality as a driver of efficiency in laggard innovation systems. *Journal Globalization, Competitiveness and Governability*, 11(1), 129–144. <https://doi.org/10.3232/GCG.2017.V11.N1.06>
- Freeman, C. (1995). The “National System of Innovation” in historical perspective Introduction: The National System of Friedrich List. *Cambridge Journal of Economics*, 19(July 1993), 5–24.
- Freeman, C., Soete, L., 1997. The Economics of Industrial Innovation. *Pinter Publication*, London, 1 – 27.
- Globerman, S., & Shapiro, D. (2002). Governance Infrastructure and U.S. Foreign Direct Investment. 1–36.
- Gogodze, J.(2016). Mechanisms and Functions within a National Innovation System. *Journal of Technology Management*, 11(4), 12-21
- Gokhberg, L., & Roud, V. (2016). Structural changes in the national innovation system : longitudinal study of innovation modes in the Russian industry, 269–288. <https://doi.org/10.1007/s10644-015-9164-8>
- Hawkins, R. (2016). The Trouble with Innovation: Why Cleaning Up the Environment Is Going to Be a Lot More Challenging than We Think. *Canadian Public Policy*.
- Jacob, B., Welch, E., & Simms, T. (2009). Emergent management strategies in a public agency: A case study of alternative fuel vehicles. *Public Organization Review*, 9(3), 213–234. <https://doi.org/10.1007/s11115-009-0081-z>
- Jena, J., Sidharth, S., Thakur, L.S., Pathak, D. K., Pandey, V.C. (2017). Total Interpretive Structural Modeling (TISM): approach and application, *Journal of Advances in Management Research*, 14(2), 162-181. <https://doi.org/10.1108/JAMR-10-2016-0087>

- Khan,A.(2016). Quality of Business Environment in India: A Cross-Country Investigation into South Asian Economies. *International Journal of Research in Commerce & Management*, 7(2), 79-85.
- Lundvall, B.A., 1992. Introduction. In: Lundvall, B. (Ed.), National Systems of Innovation toward a Theory of Innovation and Interactive Learning. *Pinter Publishers*, London, pp. 1–19.
- Not Too Taxing.(2016). *Acuity*.
- PwC. (2016) Canada Ranks in Global Top 10 for Ease of Paying Taxes. *10th Annual Paying Taxes Report*.
- Rigobon, R., & Rodrik, D. (2005). Rule of Law, Democracy, Openness, and Income: Estimating the Interrelationships. 1 – 29.
- Rodriguez-Pose, A., & Di Cataldo, M. (2015). Quality of government and innovative performance in the regions of Europe. *Journal of Economic Geography*, 15(4), 673–706. <https://doi.org/10.1093/jeg/lbu023>
- Schmid, L.(2009). Africa Harnessing a Broadband Boom. *I-Ways Journal of E-Government Policy and Regulation*, 32, 219–227.
- Singh, A., & Sushil. (2017). Developing a conceptual framework of waste management in the organizational context. *Management of Environmental Quality: An International Journal*, 28(6), 786–806. <https://doi.org/10.1108/MEQ-07-2016-0045>
- Şipoş-Gug, s., & Badulescu, A. (2015). Macroeconomic Factors of Entrepreneurship in the European Union. *University of Oradea Economic Science Series*, 601-611.
- Stern, S. (May, 2017). Insolvency rules abroad. *Business Credit*, 18-21.
- Sushil (2012), “Interpreting the interpretive structural model”, *Global Journal of Flexible Systems Management*, 13(2), 87-106.
- Warfield, J. N. (1974). Structuring complex systems. *Battelle monograph No 4*, Battelle Memorial Institute, Columbus
- Waarden, F.V. (2001). Institution and Innovation: The Legal Environment of Innovating Firms. *Organization Studies*, 22(5), 765-795.
- Williams, C., & Martinez, C.A.(2012). Government Effectiveness and the Global Financial Crisis. *Journal of International Marketing*, 20(3), 65-78.
- Wong, P.K., Ho, Y.P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. *Small Business Economics*, 24(3), 335-350.

***INTER-SURFACE ORGANIZATIONAL PROBLEMS AND TECHNOLOGY  
MANAGEMENT***

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## **ABSTRACT**

*This article is a multi-disciplinary study of Inter-Surface Organizational Problems of Technology Management from Philosophical Perspective. This article throws light upon major organizational and Human Resource related variables such as Job Security, Age, Management Goals Perception of workforce and Work attitude and analyses their relationship, role and influence upon Technology Management. In Telecom sector, inter surface problems are more vivid between New Generation Technologies (NGN) on the one hand and conventional Landline technologies such as C-DOT, OCB, EWSD and 5ESS on the other hand. Similarly, even in mobile technologies, the same problem is surfacing between the modern 5G ,4G Vs. 3G, 2.5G and others.*

*Thus, this article has got powerful theoretical foundations reinforced by advanced research, upon a sample of 726 (n=726) in HR domain (Doctoral work in Psychology), and upon a sample of 761 (n=761) in Marketing domain (Doctoral Work in Mktg. Mgmt) using highly standardized instruments with a scientific item validity index and Reliability Coefficients with more than 0.80 ( $r_{hh} = 0.80$ ) at less than 0.001 level, that is, measuring instruments are designed as per International Standards.*

Keywords: Technology Management, Job Security, Work attitude, Management Goals, Item Validity Index and Reliability Coefficient.

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## **INTRODUCTION:**

Adoption of Philosophical approach, as part and parcel of Philosophy of Technology s Management System will help modern organizations evolve themselves as true 'Learning Organizations' in general and High Technology Organizations in particular.. It is not only an age-old but historically and scientifically evolved method. It reinforces all modern organizations at foundation level giving them an upper and cutting edge over all of their competitors. On the contrary, organizations which aim at adoption of Management programs more as an abstract, imaginary, theoretical and idealistic – unrealistic – activity devoid of concreteness from the given organizational condition with respect to the universal business environment are likely to wither away from business scenario in the days to come. In the modern era of 'Globalization and Electronic Revolution' almost all the leading organizations are adopting Defects Management System with modern Management Methods and Techniques which are by and large revolving around better and optimum utilization of Electronic and Information Technology for harnessing all other resources at the disposal of organizations, so as to transform organizations as 'Knowledge Organizations' by adopting better methods of organizational learning and practice/ application.

### **Inter-surface Problems – Unpredictable Future Management**

To any organization, there are two kinds of problems – Predictable and Unpredictable problems. This will find its more reflections with respect to making predictions in Portfolio Management, Future Commodity Market, Funds flow and Cash flow Management systems. Modern software and Hardware technologies are changing with lightning speeds. Theory of the Negation of the Negation is finding its expression at a very higher plane in modern technologies, particularly in Software areas. For instance, in less than 10 years, BASIC has been negated by COBOL, the same was negated by PASCAL and FORTRAN. And those technologies were negated by C, C++, JAVA and so on so forth such as Cloud Computing, Artificial Intelligence, Robotics, etc.

### **Inter-surface Problems as impediments to Technology Management:**

Inter-surface problems crop up into being due to lack of compatibility between advanced systems on the one hand and poor and less-developed systems on the other. In India, most of the organizational problems are cropping up due to lack of compatibility between highly advanced Technological systems such as Computer Systems, Telecom. Engineering Systems, Automated systems such as Robotics, AUTOCAD and AUTOCAM based design systems on the one hand and work force with poor technical skills, not-much positive disposition towards advanced technological systems on the other. Lack of compatibility between advanced Technological System with obsolete workforce and lack of congenial physical organizational environment will act as kind of obstructive forces towards the implementation modern technologies in general and 'High Technologies' such as new generation telecom. Technologies, such as 4G GSM, Wi-Fi, Wi-Max technologies, Cloud Computing, Neural Networks, Satellite Communication systems, computerized design technologies using artificial intelligence, machine learning and Robotics in particular.

This kind of contradiction between advanced technological systems and less developed and retrogressive workforce are finding its reflections through the following variables necessitating the constant monitoring of the functionality of those organizational variables.

### **Inter-Surface Problems, the Root-Cause for Internal and External Contradictions**

Any organization will have both internal and external contradictions with respect to Organizational Change Management. Internal Contradictions pertain to internal organizational work environment that is relations among colleagues, subordinates and superiors in general whereas the External contradictions pertain to the contradictions between workforces on the one hand and external customers on the other. One of the root causes for internal contradictions is improper perception of Management goals, Job Security, Automation and/or New Technology implementation. Often, internal contradictions play a vital role but in subtle form.

In Telecom sector, inter surface problems are more vivid between New Generation Technologies (NGN) on the one hand and conventional Landline technologies such as CDOT, OCB, EWSD and 5ESS on the other hand. Similarly, even in mobile technologies, the same problem is surfacing between the modern 5G, 4G Vs. 3G, 2.5G and others.

For instance, India has got the world-class automobile technology. Unfortunately our Roads & Bridges technology is mostly moderate or obsolete, resulting in galloping rate of road accidents which are taking a number of human lives apart from causing colossal loss of property.

Mining Technology gave birth to blue collar worker with primitive behavior patterns. Service sector gave birth to white collar workers. Modern information technology produced Gold collar workers Stephen P. Robbins (1996). Each and every behavior patterns are coupled with corresponding levels of work attitude, organizational behavior and knowledge management practices. All these changes in the history of Science and Technology, vividly shows that even to implement advanced technology there shall be a suitable and corresponding level of behavioral patterns reinforced by Knowledge Management practices.

### **REVIEW OF LITERATURE**

The four recognized major components of high-technology organizations are viz; Orgaware, Humanware, Technoware and Infoware (Sheriff and Ramanathan, 1985). There is a greater need for Research and Development as part and parcel of Defects Management System and for their sound application of Programs in the modern technology based organizations.

In the changed production scenario, the very approach to managing the process of change in organizations is acquiring a new dimension. Management of change without resistance itself has become the major concern, for modern Organizational Development specialists. It is a system-wide application of behavioral science knowledge to the planned development and reinforcement of organizational strategies, structures and processes for improving an organization's effectiveness (Northcraft et al, 1990).

Management of change without resistance, even when it does not result in the replacement of existing man-power, is not an easy task as it sounds. Resistance can be overt, implicit, immediate, or deferred. It is easiest for management to deal with resistance when it is overt and immediate. For instance, a change is proposed and employees quickly respond by voicing complaints, engaging in a work slowdown, threatening to go on strike, or the like (Robbins, 1996).

Constant up gradation of knowledge and skills on the part of workers called for a change in the approach of Managers as team-leaders towards their workers. The leader of modern age will be a facilitator of change – a learner and a teacher, a coach and counselor, a role model, a diagnostician, a designer of new systems and organizational structures and a master of conversation (Bounds, 1996). Dawn of automated, digital technology is calling for a planned and scientific human resources strategy for the next millennium. In the coming age of the new technology worker, work cannot be organized if planning is divorced from doing. The more planning a worker does and the more responsibilities he takes for what he does, the more productive he can be. A worker who does only as instructed can do only harm (Rath, 1998).

The role of the enterprise is to devote itself to the difficulties of economic creativity, of change and innovation, making all the decisions necessary to stimulate their occurrence. The particular characteristics of this creative activity are the vision of possible points of initiative and innovation, the influence needed to start it and the acceptance of adequate responsibilities, and the effort necessary to surmount the difficulties and the risk of change. This creative capacity is the foundation of the act of entrepreneurship without which it would fail (Pathak and Richards, 1996).

Modernization of production process means changing the existing mode of production process with a better and sophisticated one (Arnold and Robertson, 1991). Change in the nature of Technology is influencing not only the internal organizational sub-systems but the very nature of workers itself; their personality attributes such as work-attitude and job-satisfaction are finding their realization in a higher order (Arnold, et al, 1991).

With increasing mechanization, automation and development in technology, many organizations have emerged as complex organizations that produce a wide range of products. Even medium-sized organizations have expanded their business. Expansion has led to a growth in the number of employees, and layers of hierarchical levels, and complex organization structures involving advanced technologies such as Digital Communications Switching Technologies such as 5ESS, 3-G, 4-G and 5-G technologies, implementation of BIG DATA ANALYTICS, Artificial Intelligence, Cloud Computing, Neural Networks and Digital Control mechanisms and so on so forth. Digital Networking has facilitated the emergence of Automatic Teller Machines across the globe. Automatic Signal routing mechanisms, automatic fault localization techniques with automatic alarms and so on so forth are playing a vital role in the emergence of modern, complex organizational structures with advanced and highly talented workforce in all the modern organizations in general and vital organizations such as Space Technologies, Telecommunications Technologies, Navigational Electronics, Modern Networking based Banking and others. This kind of expansion has led to complex problems of coordination and integration of activities. Eventually, the need for continuous training is felt at all levels in such organizations from shop floor to top executives (Monappa, 2006)

Information Technology, while bringing changes in the production process in industrial sector is determining the direction of service sector development and thereby the entire social production process. It is activating modern man by tapping all of his innate abilities to come to their realization in production. Ramprasad, an expert in Information Technology and Optics noted that the task of development cannot be defined as a closely bound social project. It has necessarily to be a movement from below working with a self sustained motive force generated

within the system through mass enlightenment and feedback thrust. The course of social events around us is determined by the degrees of freedom for action and advancement available to individuals and by the checks and controls, deliberate or implied. The totality of Social Intelligence in general and that of a worker in active production in particular is nothing but an integration of individual contributions over space and time (Ramprasad, 1988).

Concepts such as Self Confidence, Job satisfaction, work attitude and Organizational Perceptions such as Management Goals, Unions perception and Job Security were started studying by Management Theorists and Organizational Psychologists from humanistic, ethical standpoint. Thus, modern organizational psychology has become the humanistic psychology in essence. Mechanistic, Machine-centered approaches of the erstwhile industrial age started withering all over the world (Davis, 1995).

Further, emergence of advanced Engineering Psychology has helped Managers and Technologists in studying the most important human problems related to modern technology such as analysis of the tasks facing man in the Control Systems and distribution of functions between man and automatic devices, computers in particular, study of the joint activities of operators communication and informational interaction among workers, analysis of the psychological activity of operators study, of the factors influencing the efficiency, quality, precision, speed and reliability of the actions of operators, study of the reception by man and of man's sensor 'input', analysis of decision-making and the processing and, storage of information by man, the psychological mechanisms of the regulation of the activities of workers, elaboration of the methods of psycho-diagnosis, professional orientation and selection of operator-specialists, analysis and optimization of the processes of teaching and training of workers (Krylov and Shadrikov, 1988).

It is suggested that companies should consider establishing and integrating strategic technology management as a distinguishing managerial discipline amongst other organizational functions Sahlman, Kari,(2010) . Academic research and consultancy in technology innovation management have potential to be a valuable external resource that can be used by organizations for the improvement of management methodologies and human resources training, Adalberto Mantovani, et al (2013). It is important to highlight basic aspects related to value creation and business model, strategy formation and execution, technology strategy, technology management, innovation management, and interface between technology and innovation strategy, Z. Mahmood, A. Amir ,et al.(2013)

Another high-technology related but the product of Engineering Psychology which came into being during the modern 'Information Age' is Ergonomics. It plays a major role in studying modern worker's role in automated production activity, machine design and job design areas of research. Ergonomics as a group of sciences concerned with comprehensive study of man in production activity and with optimization of means and conditions of labor. Ergonomics also includes the applied sections of Engineering Psychology, Labour Physiology, Hygienics, Anthropology, scientific organization of labour, Technical Design, Cybernetics, the General Systems Theory, the Theory of Automatic Control, etc. The subject of Ergonomics involves the study and optimization of man-machine environment systems. The methodological foundation or Ergonomics involves a systems approach allowing to obtain a comprehensive idea on the process of labour and on ways for perfecting that process in order to enhance the

efficiency and quality of work all round development of the individual, and satisfaction of the creative requirements of working people (Lomov et al, 1998). Even in Marketing, it is established by Vishnumurthy N,( 2013) that Customer Loyalty is a function of Employee Loyalty. The Cohen's Effect-Size Correlation for the total sample of 761 (n=761) stood at 0.658 at a probability level of 0.001 (Vishnumurthy N, 2013).

### RESEARCH PROBLEM

#### ***“INTER-SURFACE ORGANIZATIONAL PROBLEMS AND PHILOSOPHY OF TECHNOLOGY MANAGEMENT”***

#### **Objective of the Study:**

**Study of Inter-surface Organizational Problems in Service Sector Organizations and their mutual influence and determination of Other factors which come under Management Goals, Unions Perception and Demographic Variables.**

### HYPOTHESES

- 1). Organizational variables, Management variables and Demographic variables have got considerable inter-relationships in influencing and determining their values, role and future of organizations in general and service sector organizations in particular.
- 2). Study of organizational, management, demographic and marketing variables shall not be considered as holistic, abstract and water-tight compartments.
- 3). Study of organizational, management, demographic and marketing variables as water-tight compartments will lead to abstract, incoherent and inter-surface problems among organizational sub-systems.
- 4). Scientific solution to Inter-surface problems lies in undertaking a comprehensive, correlated, concrete and dialectical understanding of the issues and organizations under investigation.
- 5). Organizations are dynamic and the external environment is also dynamic, as such, variables and issues shall be studied in constantly changing time-space organizational and business environments respectively.

#### **Sample:**

The Sample comprises of non-executive, non-managerial personnel, that is, the line level operative personnel, administrative personnel and supervisors working in computer environment belonging to Telecommunications, Banks and Insurance Service sector organizations. Total size of the sample is 726 (n=726) spreading across three service sector organizations. All are collected from Hyderabad and Secunderabad urban population as computer oriented automation process is taking place on large-scale in Urban limits. The selection of sample from the various categories was guided by two principles viz. Incidental selection and random selection. The principle of incidental selection operated when the responders were available individually. An unbiased random procedure was adopted when they were in small groups without allowing the likes and dislikes of investigator. Since the investigator was not involved intimately in interpersonal interactions with the respondents, the scope for bias was minimal.

#### **Description of Tools:**

Total number of tools in the present study is eight. While three tools are already established tools, five are newly developed by the investigators.

A. Tools already established

1. Self- Concept
2. Self-Confidence
3. Job-satisfaction

B. Tools newly developed by the investigators

1. Automation – Dependent Variable
2. Work Attitude
3. Management Goals
4. Union Perception
5. Job Security

Development of New Instrument:

New instruments were developed after conducting a pilot study in consultation and under the guidance of professional experts for Item Analysis, establishment of Item Validity and Reliability of the instruments developed. In validating the tests, the first step adopted in the procedure is the administer the preliminary forms to seven judges with a request for evaluating the items with respect to

- a)Relevance to the variable
- b)Clarity
- c)Language
- d)Avoiding Redundancy
- e) Range – Coverage of the full spectrum of the variable

All the individual items in each sub-questionnaire have got the considerable discriminating power. Item analysis was done for each and every question by studying the response pattern for each individual question and the frequencies spread both below the Median and above Median scores of every responder.

S.No.	Name of the Test	Reliability Coefficient (r <sub>tt</sub> )	Significance level
1	Automation	0.89	0.001
2	Work Attitude	0.85	0.001
3	Job Security	0.81	0.001
4	Management Goals	0.88	0.001
5	Unions Perception	0.87	0.001

**Collection and Analysis of Data:**

Data was collected from workers working in three service sectors: Telecom; Insurance and Banking. The study was confined to urban areas and therefore all the responders are chosen from offices situated within the twin cities of Hyderabad and Secunderabad. Data was collected from responders on individual basis with a request to give their responses without consulting others.

**ANALYSIS OF DATA:**

Role of Organizational and Management Factors in Automation Process has been studied scientifically. Job Satisfaction and Customer satisfaction shall be monitored by using scientifically designed instruments with proper Item Validity Index and Reliability Coefficients.

When a study is being conducted in Telecom; Insurance and Banking sectors, it is established that perception of management goals by workforce has got a positive correlation of 0.37 (r = 0.37) to Automation process at a significance level of less than 0.001 (n=726). (Vishnumurthy Narra, 2007).

Similarly, Job Security has got a significant, positive correlation to Automation process in modern sectors such as Telecom; Insurance and Banking sectors (n=726). It is found to be as r=0.41 at a significance, less than 0.001 level (Vishnumurty Narra, 2013).

Work Attitude has got a significant, positive correlation to Automation process in the leading service sectors, Telecom, Insurance and Banking (n=726). It is found to be as r=0.43 at a significance level, less than 0.001 level (Vishnumurty Narra, 2007).

It is also established that Age has got a negative correlation to Automation Process in the service sector organizations such as Telecom, Insurance and Banking sectors (n=726). It is found to be as r=0.14 at a significance level less than 0.001. (Vishnumurty Narra, 2007).

### **STATISTICAL ANALYSIS OF CROSS-CORRELATIONS**

When a research study has been undertaken by the present investigator in the leading sectors such as Telecommunications, Insurance and Banking sectors, a very close inter-relationship between organizational variables on the one hand and management variables on the other was found. Following are some of the valid scientific observations found in all those three major service sector organizations which include both private and public sector organizations. For instance, Management goals perception by the workforce found to be a valid, significant and positive inter-correlation to the workforce attitude towards MNCs, Job satisfaction, Self Confidence, Self Concept and above all their attitude towards implementation of Automation processes in general and implementation of New Generation Technologies in particular. All those correlations were significant at less than 0.001 levels (n-726).

Also, very positive, significant and definite cross-correlations were found to have between Work attitudes on the one hand and Job satisfaction, Self confidence, Job security and Self Concept. This is true in all the three major service sector organizations, such as Telecommunications, Insurance and Banking sectors. All those cross correlations were significant at less than 0.001 levels (n=726). Similarly, when Multiple Regression Analysis was conducted upon workforce working in Telecommunications, Insurance and Banking sectors upon a good sample of 726 (n=726) in one of the major cities in India, such as Hyderabad, it is observed by the investigator that organizational variables such as Work Attitude, Job security, Management Goals perception by Workforce, Workers age and another important psychological variable such as Self Concept emerged as major contributing factors towards determining the value of Coefficient of Determination (R<sup>2</sup>). Their t-values in Multiple Regression Analysis were also found to be considerably valid and significant.

### **MULTIPLE REGRESSION ON AUTOMATION (n=726)**

R<sup>2</sup> 0.368                      R<sup>2</sup> Adj: 0.352                      Prob: 0.0000010 AIC:4.94  
F: 24.27                      ROOT MSE: 11.69                      Intercept 'a' : 44.47

S.No	Variable	Beta Wt.	R.Square	Reg.Coefficient	Std.error	t-value	t-prob
1.	Sex	0.01	0.0005	0.37	0.84	0.438	0.67
2.	Age	0.09	0.016	0.18	0.07	2.503	0.013
3.	Edn-gen	0.03	0.0033	0.403	0.488	0.826	0.409
4.	Tech.Qlfns	0.015	0.0025	0.2026	0.5029	0.403	0.687
5.	Dptl.Trng	0.109	0.0009	0.956	0.3021	3.166	0.002

6.	Comp.Edn	0.09	0.0172	1.139	0.464	2.452	0.014
7.	Income monthly	0.026	0.001	0.0001	0.0002	0.709	0.479
8.	Union participation	0.009	0.0005	0.27891	0.9463	0.295	0.768
9.	Hobbies	0.027	0.0012	0.3192	0.3652	0.874	0.382
10	Mgmt.goals	0.173	0.065	0.421	0.092	4.0589	0.000
11	Union Perception	0.063	0.002	0.216	0.107	2.008	0.045
12	Job security	0.230	0.09	0.611	0.097	60243	0.000
13	Work Attitude	0.289	0.121	0.832	0.101	8.22	0.000
14	Attitude > (MNC+MRTP)	0.003	0.0002	0.030	0.248	0.121	0.904
15	Job satisfaction	0.056	0.017	0.084	0.055	1.514	0.130
16	Self Confidce	0.020	0.0049	0.0168	0.039	0.433	0.665
17	Self Concept	0.087	0.025	0.06639	0.036	1.842	0.066

FACTOR ANALYSIS (VARIMAX ROTATION) and the Association between variables found to have five major innate factors that are operating beneath their apparently, external influence. Communalities as the sum of squares for all the five innate factors were found to be above  $\geq 50\%$  with respect to the organizational variables such as Work Attitude, Job security, Job satisfaction, Self Confidence, Self concept on the one hand and Management related variables such as Management goals perception, Unions Participation in Management, Attitude towards MNCs+MRTP, Union Perception on the other. Not only that, even the apparently not much significant variables such as Educational Qualifications (general), Technical qualifications were also exhibited considerable influence in determining the combined effect of innate factors in the form of Communalities.

S.No.	Variable	Communalities of 5 innate factors
1.	Educational qualifications	0.46
2.	Technical Qualifications	0.77
3.	Departmental Training	0.63
4.	Computer Education	0.78
5.	Union Participation	0.55
6.	Automation	0.56
7.	Management Goals	0.68
8.	Union Perception by workforce	0.52
9.	Job Security	0.63
10.	Work Attitude	0.55
11.	Attitude towards MNCs & MRTP	0.67
12.	Job Satisfaction	0.53
13.	Self Confidence	0.78
14.	Self Concept	0.78

### **ASSOCIATION BETWEEN VARIABLES**

s.no.	Variable	Vect-1	Vect 2	Vect 3	Vect 4	Vect 5	Vect 6
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1	Edn-gen	0.27	0.28	0.02	0.51	0.18	0.38
2	Tech.Qlfn	0.22	0.78	0.25	0.11	0.14	0.05
3	Dept.Trg	0.27	0.09	0.07	0.70	0.21	0.24
4	Comp.Edn	0.25	0.78	0.25	0.05	0.19	0.05
5	Union participation	0.04	0.07	0.13	0.52	0.50	0.35
6.	Automation	0.66	0.13	0.07	0.27	0.17	0.25
7.	Mgmt. goals	0.57	0.15	0.56	0.13	0.03	0.01
8.	Union Perception	0.28	0.16	0.23	0.40	0.44	0.25
9.	Job Security	0.63	0.09	0.46	0.01	0.08	0.01
10.	Work Attitude	0.62	0.22	0.26	0.10	0.17	0.29
11.	Atitude to MNCs& MRTPs	0.10	0.04	0.40	0.33	0.61	0.43
12.	Job satisfaction	0.65	0.19	0.23	0.04	0.10	0.07
13.	Self Confidence	0.61	0.31	0.51	0.12	0.14.	0.24
14.	Self Concept	0.67	0.27	0.48	0.04	0.12	0.24

**3-D Principal Component Analysis:** All those above results observed through Correlation Analysis, Factor Analysis, Multiple Regression Analysis were also put to screening in 3-D Principal Component Analysis. There also, it is found that, several apparently independent organizational and management policy related variables are closely associated with one another, each one influencing and determining the values of other organizational and management related variables. At times, the organizational variables are influencing and determining the values of Management variables and vice versa. Many at times, the apparently not much significant Demographic variables such as Age, Sex, Monthly Income, Service and others were also determining and influencing the workforce attitude towards implementation several programs such as implementation of New Generation Technologies (NGN switches in Digital Switching) and Digital Automation processes in general.

#### **Conclusions and Recommendations**

1. Lack of Coherence among organizational and management perceptions by the workforce will play a vital role in Technology Management.
2. There shall be a proper and scientific coherence among all sub-systems.
3. Constant monitoring of Inter-surface problems by Expert Management System.
4. Internal and External Contradictions shall be brought down to the bare minimum.
5. Proper and Scientific future predictions shall be made by the Top Management leaving no room for short-sightedness.
6. Job Satisfaction and Customer satisfaction shall be monitored by using scientifically designed instruments with proper Item Validity Index and Reliability Coefficients.
7. Internal and External Contradictions shall be resolved by developing a higher order management system without much inter-surface problems among organizational sub-systems.
8. A true participation of Workforce on the one hand and Customers/Clients on the other shall be there while initiating modern Technology Management process methods and techniques.
9. Even in Marketing, it is established by the present investigator that Customer Loyalty is a function of Employee Loyalty.

## **REFERENCES**

1. Arnold, J.H. and Feldman C.A. (1998). *Organizational Behavior*. New York, McGraw-Hill
2. Baruch, Y.(1997). *High Technology Organization*. International Journal of Technology Management, Vol.13,2, p.183.
3. Bounds, G.(1996). *Total Quality Management's Approach: A Model for Organizational Learning*. Journal of Productivity, Vol.37,1, 43.
4. Davis K (2006). *Organizational Behaviour*. New Delhi: Tata McGraw Hill Co.
5. Krylov and Shadrikov (1998). *A Concise Dictionary of Psychology*. Moscow: Progress.
- 6.. Lomov B.F. (1997). *The Contribution of Psychology to Systems Research of Man*. In Makarov I.M. (Ed.). *Cybernetics of Living Matter*. Moscow: Mir
7. Monappa A and Saiyadain, S.M. (2006).*Personnel Management*.New Delhi: Tata McGraw-Hill Co.
8. Northcraft, B.G. and Neale, A.M. (1990). *Organizational Behaviour – A Management Challenge*. Chicago: Dryden Press.
- 9.. Pathak, R.D. and Richards (1996). *Culture and its Consequences for Creativity and Innovation management*. *Journal of productivity*, vol. 37,1,85.
10. .Rath, S.(1996). *Human Resources Strategy for the next millennium*. *Journal of Indian Management*, July, 75.
11. Sharif, N. Ramanathan, K.(1981). *A Frame Work for Technology-based national planning*. *Technological Forecasting and Social Change*, Vol.32.
12. In Autio, E. and Laamanen, T. (1995). Measurement and Evaluation of Technology Transfer:Review of Technology Transfer Mechanisms and Indicators, *International Journal of Technology Management*, Vol.10, 7/8, pp.646-48.
13. Ramprasad (1998). *Microprocessors and Information Technology: Rhythmless Efforts are bound to go waste*. In Sadananda R & Sarkar B (Ed.). *Social Perspective of Microprocessors and Information Technology*. Allahabad: Indian Academy of Social Sciences.
- 14 Vishnumurty Narra (2007). In (Ed.) Bandyopadhyay Prabir Kumar. *Technology Management – Concepts and Applications*.: ICFAI University Press, pp. 42-49.
15. Vishnumurty Narra (2013). *Article on Employee Loyalty As a Determinant and Influencer of Customer Loyalty – A Study in Select Service Sector Organizations*. In International Journal of Management Research and Business Strategy. Vol.2. No.1 Jan, 2013. ISSN 2319-345 X, [www.ijmrbs.com](http://www.ijmrbs.com)
16. Adalberto Mantovani, et al.(2013). *Academic Research In Technology Innovation Management and Related Thematic Areas in Brazil*, Journal of Technology Management and Innovation , Vol.8 ,pp-271-284.
17. Z. Mahmood, A. Amir , et al. (2013).*Strategic Management of Technology and Innovation*, Global Journal of Management and Business Research Administration and Management, Vol. 13, pp-37-43
18. Sahlman, Kari,(2010). *Elements of strategic technology management*, Acta Univ. Oul. C 362, 2010.
19. Robbins P. Stephen(1996). *Organizational Bahaviour*. Prentice Hall of India:New Delhi.

# **Antecedents of Performance of International Joint Ventures: A Meta-Analysis Review**

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## **Abstract**

**Purpose** – The purpose of this paper is to synthesize divergent views on the factors impacting the performance of IJVs.

**Design/methodology/approach** – This paper conducts meta-analysis on 61 papers identified from A\* and A ranked journals by ABDC in strategic management area. Random effect meta-analysis technique is adopted.

**Findings** – While research on international joint ventures (IJVs) has intensified over the last few

decades, numerous reviewers have criticized the field for lack of accumulation. We use meta-analytic technique to quantitatively synthesize and evaluate inter-partner dynamics in its ability to explain IJVs performance variance. The paper is based on meta-analyses 61 independent samples and a total of 19,025 IJVs. There are total 10 factors which are identified and out of which 3 have found to be heterogeneous.

Originality/value – By providing extensive review of 61 independent samples this study can provide the researchers to identify the factors with homogenous effect size across different studies and thereby are generalizable.

Keywords- Performance; International joint ventures; Meta-analysis; Inter-partner dynamics

Paper type- Meta-analytical review

## INTRODUCTION

With the advancement of technology and increasing competition there has been an upsurge of international joint ventures (IJVs). IJVs allow organizations to leverage on their partners' capabilities, know-how, technology, resources and share risks as well, which is significant for gaining a sustainable competitive advantage (Barney, 1991; Culpan & Refik, 2008; Hamel et al., 1989; Lu & Beamish, 2001). Despite its advantages, the instability rate of IJVs is extremely high, ranging from 30 percent to 70 percent (Lowen & Pope, 2008). Hence, the study attempts to probe into the performance of IJVs. There has been a plethora of research regarding the performance of IJVs in the past few years especially in developed countries (Geringer & Herbert, 1991; Glaister & Buckley, 1998; Hong Ren, Gray, & Kim, 2009; Zhao, Ma, & Yang, 2017). However, it is a scantily examined area in the context of emerging markets. Extant literature has studied the performance of IJVs from different perspectives- commitment (Glaister & Buckley, 1998; Nakos & Brouthers, 2008), bargaining power (Awadzi, 1987), conflict (Demirbag & Mirza, 2000; Li & Hambrick, 2005), trust (Nakos & Brouthers, 2008), justice (Luo, 2005) and cultural distance (Gomez-Mejia & Leslie E., 1997; Hutzschenreuter, Kleindienst, & Lange, 2014; Kogut & Singh, 1988; Yan & Duan, 2003a). However, the literature lacks a study that undertakes to synthesize these studies and determine few important factors impacting the performance of IJVs. This study attempts to synthesize the inter-partner factors impacting the performance of IJVs.

### Literature Review

#### Performance of IJVs

One of the most important concerns about IJVs has been the performance of IJVs. An exploration of the IJVs literature identifies few major theoretical paradigms that have been employed to describe the antecedents of the performance of IJVs. Transaction cost economies explain the IJVs formation and development (Hennart, 1988). Proponents of transaction cost economies argue that IJVs occur because the transaction costs associated with joint ownership is lesser than that for single ownership or market transactions (Kogut, 1988). According to agency theory, partners can have the divergence of interests that can

increase the likelihood of conflict between them, which influence the performance of IJVs (Dhir & Mital, 2012; K. M. Eisenhardt, 1989; Hitt, Li, & Xu, 2016).

Resource-based view of IJVs suggests that the performance of IJVs is depended upon the partners' ability to create a bundle of strategic and social resources that are not otherwise available to either partner, which it can be a source of competitive advantage and improve performance (Barney, 1991; K. Eisenhardt & Schoonhoven, 1996; Wernerfelt, 1984). The above theories are being criticized by the proponents of the behavioral research paradigm. The behavioral perspective emphasizes interactional characteristics, such as commitment, trust to assure goodwill among partners (Eroglu & Yavas, 1996). Organizational learning or knowledge is another theoretical paradigm for firms cooperating and continuing to engage in IJVs. It suggests that venturing firms may enhance their competitive advantage through acquiring new skills and capabilities from partner firms (Weber, Shenkar, & Raveh, 1996). While other theories are being criticized, dynamic capabilities theory has received attention in the literature and is widely accepted. An augmentation of resource-based view, dynamic capabilities theory contends that firms develop capabilities and competencies in a changing business environment which influence the performance in many ways; firms match the resource base with changing environments (Teece, Pisano, & Shuen, 1997), create market change (K. Eisenhardt & Martin, 2000); support both the resource-picking and capability-building rent-generating mechanisms (Zhan & Chen, 2013).

Apart from the explanation by theoretical paradigms, IJVs performance is an extremely crucial issue because of two main reasons, firstly the costs of failure imposed on the firms, secondly the social costs of the failure which have to be borne by the nations in which the operations of IJVs occur (Lee & Beamish, 1995) . Another major aspect of performance is to use the appropriate indicator to measure the performance (Yadav, Sushil, & Sagar, 2013). Different yardsticks have been used by scholars in the prior research-financial indicators such as profits, growth or sales (Hutzschenreuter et al., 2014) other includes Survival (Geringer & Herbert, 1991; Killing, 1983), its duration (Harrigan,1988)

A number of observations can be made regarding the preceding overview of IJV research paradigms. First, each theory tries to explain IJVs from a different perspective, although several of the constructs employed are common to some of them due to overlapping

theoretical domains. For example, knowledge acquisition and agency problems could be contemplated together within the TCE framework.<sup>3</sup> Identifying the many connections and overlaps among the various theories is beyond the scope of the present assessment exercise. Second, the applicability of each theory depends on situation specific factors—for instance, the resource-based view is better suited to IJVs operating in highly competitive business environments. Third, while certain theories place emphasis on the establishment and structuring of IJVs (e.g., TCE), others focus more closely on management and performance outcomes (e.g., political economy). Finally, although the theoretical perspectives are all relevant to developing a deeper understanding of IJVs, no single paradigm provides an adequate foundation for a general theory explaining the economic and social outcomes of IJVs.

#### Inter-partner Dynamics

Previous research on IJVs articulated the motives and relational factors of the partners, and their interactive contingencies which are critical to the performance of IJVs (Hill & Hellriegel, 1994; Park & Ungson, 1997; Yan & Duan, 2003b). Literature has deemed the attention on to the static comparative or configurational features of the IJV parents. Researchers argued that inter-partner relations can be treated as a long-term performance dimension (Erin, 1990). In case of IJVs, it is imperative that objectives and goals of the partners are symmetric to each other as differences in strategic orientation and motives can produce the conflict of interest among partners (Dacin, Hitt & Levitas, 1997). Literature suggests that the selection of partners in an IJV needs to consider a fit in both task-related characteristics (e.g., resources and skills) and partner-related characteristics (e.g., size, objectives, and operating policies) (Geringer & Herbert, 1989). IJVs performance is influenced by strategic symmetry between the partners, which occurs when they “possess complementary strategic missions, resource capabilities, managerial capabilities, and other attributes that have a strategic fit such that the relative bargaining power of the partners is evenly matched” (Harrigan, 1988).

Partner size symmetry is revealed relatively unimportant to managers concerned with partnership options (Kogut, 1988b). Few researchers identify a link, negative in nature, between this variable and IJV performance (Ozorhon, Ardit, Dikmen, & Birgonul, 2008). The relationship between input dependency and performance can be explained by both resource dependency and the resource-based view (Hooley et al., 1996; Lee, Chen, & Kao, 1998; Pfeffer

& Salancik, 1978; Yan & Gray, 1994). Resource dependency theory (Pfeffer & Salancik, 1978) portrays the organization as facing a complex set of dependencies between itself and its environment. The literature suggests that one of the most critical factors determining alliance performance is the degree of trust between the partners (Das & Teng, 1998; Madhok, 1995). Trust has been shown to increase cooperation, improve flexibility, lowering the cost of coordinating activities and increasing the level of knowledge transfer and potential for learning (Smith, Carroll, & Ashford, 1995). Another factor is flexibility, greater flexibility will be viewed as an enhanced capacity to change old ways of doing things, to overcome resistance to change, and to respond to environmental change (Markoczy, 1992). The expectation is that increased flexibility is positively related to performance. Literature has shown relationship between competitive overlap and IJVs performance. The IJVs between competitors are likely to produce a situation in which the parent firms behave opportunistically by trying to maximize their personal interest at the expense of other (Oxley & Sampson, 2004; Park & Ungson, 1997).

#### Sample and Method

Meta-analysis was conducted on papers identified from A\* and A ranked journals by ABDC in strategic management area by searching the key terms performance of joint venture, performance of international joint venture, survival of joint venture/international joint venture, growth of joint venture/international joint venture, success of joint venture/international joint venture. We identified 87 papers for out of which only 61 papers included in the meta-analysis. As there were 17 papers which were conceptual papers, which were dropped out. It is interesting to note that out of (87-17) 70 papers, there were only 61 papers which had few common factors that appear in more than 2 studies for inclusion in our meta-analytic review as factors appearing in single studies need not be synthesized to determine overall effect size.

Random effect meta-analysis technique (Schmidt & Hunter, 2014) will be for quantitatively analyzing the 61 studies. The major strength of meta-analysis lies in its analytical ability to aggregate empirical results from different empirical studies leading to a higher statistical power. Also, by undertaking a meta-analytic review we overcome important shortcomings of qualitative review – subjective interpretation and overlooking of statistical artifacts i.e.

sampling error (Bagozzi, Yi, & Phillips, 1991; Cook, Guyatt, Salena, & Laine, 1992; Reus & Rotting, 2009).

Journal	No. of articles
International Business Review	12
Journal of International Business Studies	10
Strategic Management Journal	10
Management International Review	7
Journal of world business	3
Journal of International Marketing	3
Journal of business research	3
Journal of management studies	3
Organisation Science	3
Journal of Management	2
Organisation Studies	2
Academy of Management Journal	1
Long range planning	1
Administrative Science Quarterly	1
Total	61

Table 1 List of Journals selected for article search and number of articles

#### Variables and Results

Factors that have been extensively analyzed for its influence on the performance of IJVs are size asymmetry, competitive overlap, goal alignment, interdependency of resources, trust, relatedness, cooperation, technology transfer, control, conflict, and cooperation. In total, there were 10 factors which were identified. Results of meta-analysis suggest that few factors amongst 10 factors included in our study significantly influence IJVs performance. There were 7 factors which were found to have homogenous effect size across different studies and thereby are generalizable. However, 3 factors were found to be heterogeneous- equity ownership, control, conflict, commitment and cooperation.

Factors	weighted correlation	k	N	EFFECT SIZE	Q STATISTICS	RESULT	I <sup>2</sup>
Goal alignment	0.179	6	507	0.36	36.08	accepted	
Cooperation	0.247	3	576	0.51	14.95	accepted	
Competitive overlap	-0.185	2	396	-0.38	7.06	accepted	
Conflict	-0.07	6	440	-0.14	50.03	accepted	
Control	0.052	19	11941	0.10	164.33	not accepted	89
Commitment	0.91	5	2779	4.39	10635.39	not accepted	99
Relatedness	0.141	5	627	0.28	8.26	accepted	
Resources	0.1901	4	320	0.39	13.55	accepted	
Size symmetry	0.44485	6	868	0.99	24810.43	not accepted	99
Technology Transfer	0.229	5	571	0.47	77.98	accepted	
		61.00	19025.00				

Table 2 meta-analysis results

### Discussions and Implications

The main objective of this study was to respond to the repeated call to cumulate IJVs research with respect to inter-partner dynamics. Cumulating the findings of prior research does provide evidence for several key relationships and support for inter-partner dynamics factors. First, as predicted, the results suggest goal alignment between the partners of IJVs tends to increase the likelihood of mutual understanding and cooperation. Second, conflict, in turn, likely to impairs trust and enhances the opportunistic behavior of IJV partners, and, as such, creates considerable costs and adversely affects the performance of IJVs. Third, commitment between IJV partners is associated with more positive IJV performance, supporting a behavioral perspective that suggests that partners that are committed to an IJV share a common identity and mutual interest, are bound to the stability and success of the venture, and are more likely to cooperate. Fourth, commitment not only directly contributes to the performance of an IJV, but also indirectly advances IJV performance to the extent to which it curtails conflict between partner.

The meta-analysis allowed us to compile a holistic list of factors that have been examined in extant literature at least by 2 studies for its influence on IJVs performance. An important implication emerging from our meta-analytic review concerns the relative importance of various antecedents.

### Limitations and Conclusion

It is important to reiterate that the analyses conducted for this study are limited to

correlational studies. More, and often richer, research has been conducted in the form of qualitative case studies. Consequently, further consolidation can be achieved by integrating findings of case studies. Additionally, the aim of this study was to evaluate inter-partner dynamics in its ability to explain IJVs performance variance, further it can be conducted for other factors explain a significant portion of the remainder of IJV performance variance.

## References

- Awadzi, W. K. (1987). Determinants of Joint Venture Performance: a Study of International Joint Ventures in the United States (Japan, Europe).
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Culpan, & Refik. (2008). The role of strategic alliances in gaining sustainable competitive advantage for firms. *Management Revue*, 19(1/2), 94–105.
- Demirbag, M., & Mirza, H. (2000). Factors affecting international joint venture success: an empirical analysis of foreign–local partner relationships and performance in joint ventures in Turkey. *International Business Review*, 9(1), 1–35.
- Dhir, S., & Mital, A. (2012). Decision-making for mergers and acquisitions: the role of agency issues and behavioral biases. *Strategic Change*, 21(1–2), 59–69.
- Eisenhardt, K. M. (1989). Agency Theory : An Assessment and Review. *Academy of Management Journal*, 14(i), 57–74.
- Eisenhardt, K., & Martin, J. (2000). Dynamic Capabilities: What are they? *Strategic Management Journal*, 21(2), 1105–1121.
- Eisenhardt, K., & Schoonhoven, C. (1996). Resource-Based View of Strategic Alliance Formation: Strategic and Social Effects in Entrepreneurial Firms. *Organization Science*, 7(2), 136–150.
- Erin, A. (1990). Two Firms, One Frontier: On Assessing Joint Venture Performance. *Sloan Management Review*, 31(2), 19–25.
- Eroglu, D., & Yavas, U. (1996). Determinants of Satisfaction with Partnership in International Joint Ventures: *Journal of Marketing Channels*, 5(2), 63–80.
- Geringer, M., & Herbert, L. (1989). Control and Performance of International Joint Ventures. *Journal of International Business Studies*, 20(2), 235–254.
- Geringer, M., & Herbert, L. (1991). Measuring Performance of International Joint Ventures. *Journal of International Business Studies*, 22(2), 249–263.
- Glaister, K. W., & Buckley, P. J. (1998). Management–performance relationships in UK joint

- ventures. *International Business Review*, 7(3), 235–257.
- Gomez-Mejia, L. R., & Leslie E., P. (1997). Cultural Diversity and the Performance of Multinational Firms. *Journal of International Business Studies*, 28(2), 309–335.
- Hamel, G., Doz, Y. L., & Prahalad, C. K. (1989). Collaborate with your competitors and win. *Harvard business review*, 67(1), 133-139.
- Harrigan, K. R. (1988). Joint Ventures and Competitive Strategy. *Strategic Management Journal*, 9(2), 141–158.
- Hennart, J.-F. (1988). A Transaction Costs Theory of Equity Joint Ventures. *Strategic Management Journal*, 9(4), 361–374.
- Hill, R. C., & Hellriegel, D. (1994). Critical Contingencies in Joint Venture Management : Some Lessons from Managers Management : Some Lessons from Managers. *Organisation Science*, 5(4), 594–607.
- Hitt, M. A., Li, D., & Xu, K. (2016). International strategy: From local to global and beyond. *Journal of World Business*, 51(1), 58–73.
- Hong Ren, Gray, B., & Kim, K. (2009). Performance of International Joint Ventures: What Factors Really Make a Difference and How? *Journal of Management*, 35(3), 805–832.
- Hutzschenreuter, T., Kleindienst, I., & Lange, S. (2014). Added psychic distance stimuli and MNE performance: Performance effects of added cultural, governance, geographic, and economic distance in MNEs' international expansion. *Journal of International Management*, 20(1), 38–54.
- Killing, J. P. (1983). *Strategies for joint venture success*. Routledge.
- Kogut, B. (1988). Joint Ventures : Theoretical and Empirical Perspectives. *Strategic Management Journal*, 9(4), 319–332.
- Kogut, B., & Singh, H. (1988). The effect of national culture on the choice of entry mode. *Journal of international business studies*, 19(3), 411-432
- Lee, C., & Beamish, P. (1995). The characteristics and performance of Korean joint ventures in LDCs. *Journal of International Business Studies*, 26(3), 637–654.
- Li, J., & Hambrick, D. (2005). Factional groups : A new vantage on demographic faultlines , conflict , and disintegration in work teams. *The Academy of Management Journal*, 48(5), 794–813.
- Lowen, & Pope. (2008). Survival Analysis of International Joint Venture Relationships. *Journal of Business and Economics Studies*, 14(1), 62–80.
- Lu, J. W., & Beamish, P. W. (2001). The internationalization and performance of SMEs. *Strategic Management Journal*, 22(6–7), 565–586.

- Luo, Y. (2005). How important are shared perceptions of procedural justice in cooperative alliances ? *Academy of Management Journal*, 48(4), 695–709.
- Nakos, G., & Brouthers, K. D. (2008). International alliance commitment and performance of small and medium-size enterprises: The mediating role of process control. *Journal of International Management*, 14(2), 124–137.
- Oxley, J. E., & Sampson, R. C. (2004). The Scope and Governance of International R & D Alliances. *Strategic Management Journal*, 25(8–9), 723–749.
- Ozorhon, B., Arditi, D., Dikmen, I., & Birgonul, M. T. (2008). Effect of Partner Fit in International Construction Joint Ventures. *Journal of Management in Engineering*, 24(1), 12–20.
- Park, S., & Ungson, G. (1997). The effect of national culture, organizational complementarity, and economic motivation on joint venture dissolution. *Academy of Management Journal*, 40(2), 279–307.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
- Weber, Y., Shenkar, O., & Raveh, A. (1996). National and Corporate Cultural Fit in Mergers/Acquisitions: An Exploratory Study. *Management Science*, 42(8), 1215–1227.
- Wernerfelt, B. (1984). A Resource-based View of the Firm. *Strategic Management Journal*, 5(2), 171–180.
- Yadav, N., Sushil, & Sagar, M. (2013). Performance measurement and management frameworks. *Business Process Management Journal*, 19(6), 947–971.
- Yan, A., & Duan, J. (2003). Interpartner fit and its performance implications: A four-case study of US-China joint ventures. *Asia Pacific Journal of Management*, 20(4), 541-564.
- Zhan, W., & Chen, R. (Rongxin). (2013). Dynamic capability and IJV performance: The effect of exploitation and exploration capabilities. *Asia Pacific Journal of Management*, 30(2), 601–632.
- Zhao, H., Ma, J., & Yang, J. (2017). 30 Years of Research on Entry Mode and Performance Relationship: A Meta-Analytical Review. *Management International Review*, 57(5), 653–682.

## **Changes in Practicing Teachers' Self efficacy in Teaching Scientific Inquiry**

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### **Abstract**

Teacher self-efficacy is an important predictor in teacher's professional career for inquiry based instruction. This study investigated the factors (gender, educational level and teaching experience) associated with science teachers' self-efficacy in instructional strategies, classroom management and student engagement in teaching scientific inquiry. A questionnaire was used for data collection from 47 practicing teachers in state schools in 2018. A General Linear Model (GLM) Univariate analysis using SPSS 21.00 programme was used for data analysis. Fact findings revealed that mean perceived self- efficacy in inquiry based instruction was considerably high irrespective of gender, education level, and teaching experience. Neither teacher self-efficacy in student engagement nor classroom management did not show statistically significant difference according to gender, education level and teaching experience. However, results concluded that science teaching experience was a significant predictor of self-efficacy in instructional strategies of inquiry based instruction.

**Key words:** Teacher self- efficacy, scientific inquiry, student engagement, classroom management, instructional strategies

### **1. Introduction**

The quality of science education greatly depends on inquiry based instruction which has been recognized as the center piece of science teaching and learning. In the past three decades, several initiatives have been taken to reform the teaching and learning of science in Sri Lankan schools on

this valuable instructional approach (Athurupana et al., 2011). Despite such reforms, researchers noted that enactment of scientific inquiry in most of Sri Lankan classrooms at all levels are much less, instead, characterized by expository methods. Among the many factors affecting this gap, science teacher's receptivity to inquiry based instruction is predominant. Teacher efficacy is a powerful predictor of teacher's instructional behavior, especially in scientific inquiry as teaching with inquiry is a relatively complex and demanding activity. It is critical to understand the predictors that can potentially enhance self-efficacy of practicing science teachers. Thus, the careful consideration of teacher self-efficacy may be particularly important for programs or interventions intended to enhance or change science teaching practices. Teacher self-efficacy in student engagement, classroom management and instructional strategies have been researched in many studies recently.

Several studies have illustrated a relationship between contextual factors and science teachers' self-efficacy. Ramey-Gassert, Shroyer, and Staver (1996) found that teachers' science teaching self-efficacy was related not only to antecedent factors (previous science experience, teacher preparation, or science teaching experiences) and internal factors (attitudes toward and interest in science), but also to external factors, including the school workplace environment, student variables, and community variables. Thus, teacher self-efficacy with regard to its determinants have been the focus of many studies as it has significant implications especially in educational settings. Yet, its application in Sri Lankan schools is lacking.

The aim of this study is to investigate practicing teacher's perceived self-efficacy in student engagement, classroom management and instructional practices in teaching scientific inquiry. It also attempts to test if mean self-efficacy perceptions in three domains differ according to three antecedent factors of gender, educational level and teaching experience of practicing teachers.

Swan, Wolf and Cano (2011, p.131) pointed out the relationship between Teacher self-efficacy as a personal construct and one's intention to remain in the profession of teaching (Darling-Hammond, Chung, & Frelow, 2002; Evans & Tribble, 1986). The teachers would stay in the profession if they believe that they are competent in the tasks they are required to perform as secondary science teachers. The cross sectional study of how science teacher self-efficacy changes according to antecedent factors such as gender, the education level and the teaching experience is of great importance in reorienting teacher education programmes on teaching scientific inquiry integrating self-efficacy sources. This study will contribute to the body of knowledge on teacher self-efficacy by tracking individuals from their in-service education through consecutive years of teaching. Additionally, this study investigates the changes in the three domains (student engagement, instructional strategies, and classroom management) as identified by Tschannen-Moran and Woolfolk Hoy (2001).

## **2. Literature review**

Anderson (2002) states that "good science teaching and learning" has come to be distinctly and increasingly associated with the term inquiry. The generalized conceptions of inquiry teaching and learning which reflect current scholarship on nature of science (NOS) and in education is evident in science education reform documents presented by Association for the Advancement of Science

(AAAS)( 1990) and National Research Council(NRC),(1996). According to such conception, inquiry has been distinguished both as means and ends. Abd-EIL-Khalick and colleagues (2001) “Inquiry as means” (or inquiry *in* science) refers to inquiry as an instructional approach intended to help students develop understandings of science content (i.e., content serves as an end or instructional outcome) (p398). “Inquiry as ends” (or inquiry *about* science) refers to inquiry as an instructional outcome: Students learn to do inquiry in the context of science content and develop epistemological understandings about NOS and the development of scientific knowledge, as well as relevant inquiry skills (e.g., identifying problems, generating research questions, designing and conducting investigations, and formulating, communicating, and defending hypotheses, models, and explanations) (p.398).In this study the latter, is taken as teaching scientific inquiry so as teacher’s instructional behavior is of interest which teach students to do inquiry in the classroom using said inquiry skills. Thus, among the diverse conceptions of scientific inquiry in the line of research, the definition proposed by NRC (1996) for scientific inquiry is concerned as the specific instructional task associated with teacher’s self-efficacy. Accordingly, in this study, scientific inquiry is referred to as “Inquiry is a multifaceted activity that involves making observations; posing questions; examining books and other sources of information to see what is already known; planning investigations; reviewing what is already known in light of experimental evidence; using tools to gather, analyze, and interpret data; proposing answers, explanations, and predictions; and communicating results. Inquiry requires identification of assumptions, use of critical and logical thinking, and consideration of alternative explanations” (NRC, 1996, p. 23).

The other construct to be investigated in association with teaching scientific inquiry is teacher self –efficacy. Albert Bandura (1977 stated teacher efficacy as a type of self-efficacy and defined self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1986, p.3). On the other hand, Tschannen-Moran, Woolfolk Hoy and Hoy (1998) defined teacher efficacy as “the teacher’s belief in his or her capability to organize and execute course of action required to successfully accomplish a specific teaching task in a particular context” (p.22).Guskey (1988) determined that teacher self-efficacy is a good indicator of teacher attitudes toward implementing a new instructional practice or reform. In his study, Guskey found that teachers who are “confident about their teaching abilities” (p. 67) are also the “most receptive to the implementation of new instructional practices” (p. 67).

Two kinds of expectation: efficacy expectation and outcome expectancy as proposed by Social cognitive theory are distinct each other. As pointed out by Tschannen-Moran, Woolfolk Hoy and Hoy (1998, p.210), “An efficacy expectation is the individual's conviction that he or she can orchestrate the necessary actions to perform a given task, while outcome expectancy is the individual's estimate of the likely consequences of performing that task at the expected level of competence (Bandura, 1986). The efficacy question is, do I have the ability to organize and execute the actions necessary to accomplish a specific task at a desired level? The outcome question is, if I accomplish the task at that level, what are the likely consequences temporally, efficacy expectations precede and help form outcome expectation”. In this study, the first kind of expectation, which is efficacy expectation is the concern, thereby the Teacher Self Efficacy Scale (TSES) developed by Tschannen-Moran and Woolfolk Hoy (2001) would be employed to assess teachers, sense of efficacy in the current study.

Tschannen-Moran and Woolfolk Hoy (2001) show that the existing instruments also demonstrates both conceptual and methodological shortcomings. In an effort to overcome the shortcomings, they develop the TSES that comprises 24 items measuring three sub dimensions of teachers' sense of efficacy, namely, instructional strategies, classroom management, and student engagement. Instructional strategies measures the extent teachers can play their part as classroom instructors to facilitate both conducive learning environment and effective learning process. This involves teaching strategies, teaching approach and handling of teaching and learning and factor. Efficacy for classroom management, meanwhile, measures to what extent teachers can manage students discipline and control students' behavior. Meanwhile, efficacy for student engagement, measures to what extent teachers believe they can install all the positive attitudes among their students such as influencing students to get engaged in school activities, increasing students' motivation and others (Khairania & Razakb, 2012, p.2138).

### **3. Method**

#### **3.1 Objectives**

The purpose of the current cross-sectional study was to determine changes in practicing science teachers' self-efficacy in association with key antecedent factors: gender, education level and years of science teaching. The following research objectives guided the study:

1. Determine the changes in the three domains of teacher self-efficacy: instructional strategies, classroom management and student engagement in teaching scientific inquiry
2. Describe differences in teacher self-efficacy between male and female practicing science teachers
3. Test if mean perceived teacher self-efficacy differ between degree holders and non-degree holders
4. Test the association between practicing teacher who are novice (Less than 5 years of teaching experience) and experienced (More than 5 years of teaching experience)

Thus, three hypotheses were tested out in the study as follows:

H1: There is a difference in mean perceived self-efficacy between male and female science teachers.

H2: There is a difference in mean perceived self-efficacy between science teachers of Degree and non-degree holders.

H3: There is a difference in mean in mean perceived self-efficacy between novice and experienced teachers.

#### **3.2 Participants**

A stratified random sample of 47 science teachers participated in this study. The in-service science teachers comprised of 13 males (27.7%) and 34 females (72.3%) from state schools in Colombo North and Central divisions of Sri Lanka. By education level, the sample represented 35 degree holders (74.5%) and 12 were non degree holders which is of 25.5 percent. With regards to science teaching experience of the respondents, 22(46.8%) were novice teachers having less than 5 years

of teaching experience while 25 science teachers(53.2%) belong to the experienced category with more than 5 years of experience.

### 3.3 Instrument

The researcher utilized the Teachers’ Sense of Efficacy Scale or TSES (Tschannen–Moran et al., 1998; Tschannen–Moran & Woolfolk Hoy, 2001) to assess the teacher self–efficacy of the science teachers. The instrument asked participants to rate their capabilities; “How much can you. . .” utilizing the following anchored scale: 1 = Nothing, 2 = Very Little, 3 = Some Influence, 4 = Quite a Bit, 5 = A Great Deal. The TSES has been extensively utilized, and subjected to factor analysis procedures to assess construct validity (Tschannen–Moran & Woolfolk Hoy, 2001). The present study utilized the amended long summated rating scale (24 items) consisting of three distinct domains so that Efficacy for instructional strategies (7 items), efficacy for classroom management (7 items), and efficacy for student engagement (6 items). The published reliabilities for each domain were 0.83, 0.87 and 0.81 respectively. Adhering to the ethics which assured the self-esteem and self-respect of the subjects, the pilot tested survey instrument was administered personally just once, over a period of one month.

A General Linear Model (GLM) Univariate analysis using SPSS 21.00 programme was used for descriptive statistics and association between teacher self-efficacy and three antecedent factors: gender, education level and teaching experience and effect size using Partial Eta Squared.

## 5. Analysis

As per the first objective, the changes in the three domains of teacher self–efficacy: instructional strategies, classroom management and student engagement in teaching scientific inquiry is presented in Table 1.

Table 1: Descriptive statistics for respondent’s profile

Variable	Frequency	Percentage	Mean ± SD
Gender			
Male	13	27.7%	
Female	34	72.3%	
Education level			
Degree holders	35	74.5%	
Non-degree holders	12	24.5%	
Teaching experience			
Novice (Less than 5years)	22	46.8%	
Experienced(Morethan5years)	25	53.2%	
Teacher self-efficacy			3.98 ± 0.45
Instructional strategies			4.15 ± 0.50
Classroom management			4.06 ± 0.54
Student engagement			3.72 ± 0.53

As shown in Table 1, gender wise and education level wise the science teachers are not equally distributed so as 27.7% were males and 72.3% of females. Similarly, the percentage of degree holders was 74.5% while that of non-degree holders was 25.5%. With regards to science teaching experience of the respondents, 22(46.8%) were novice teachers having less than 5 years of teaching experience while 25 science teachers(53.2%) belong to the experienced category with more than 5 years of experience.

The mean perceived overall teacher self-efficacy was 3.98 (0.45). The mean perceived self-efficacy in instructional strategies, classroom management and student engagement in teaching scientific inquiry were 4.15(0.50), 4.06 (0.54) and 3.72 (0.53) respectively.

Among the teacher self-efficacy in specific skills of instructional strategies, the science teachers were equally efficacious in providing an alternative explanation or example when students are confused in scientific inquiry and also in providing appropriate challenges for very capable students in scientific inquiry. Furthermore, they reported fairly high efficacy level in responding difficult questions in scientific inquiry from students. The efficacy level for crafting good questions for scientific inquiry was also at a satisfactory level.

When the sub skills under the self-efficacy domain of classroom management is concerned, it found that majority are adequately efficacious in establishing a classroom management system with groups of students in scientific inquiry activities avoiding most of common disturbances in the classroom.

The practicing science teachers reported relatively lower level of efficacy in engaging students in inquiry oriented activities. Yet, they are at fairly high level of self-efficacy in conducting instructional strategies with regard to scientific inquiry teaching. The perceived self-efficacy in classroom management when the students are engaged in inquiry oriented activities. It was evident that mean perceived teacher efficacy in engaging students with less interest towards ((3.40) and those who fail in scientific inquiry (3.49) was comparatively at lower levels. Yet, it is noteworthy to indicate that science teachers reported more efficacious in getting students to believe that they can do well in scientific inquiry (3.94) and in ability in valuing learning through scientific inquiry(4.08).

The second, third and the fourth objectives of the current study was to determine the antecedent factors associated with teacher self-efficacy. The teacher related antecedent factors in this investigation were gender, education level and years of science teaching. Results from GLM Univariate procedure on association among the gender, education level and years of science teaching and overall perceived teacher self-efficacy are presented in Table 2.

Table 2: Differences in overall perceived teacher self-efficacy according to gender, education level and years of science teaching

Variable	Mean ± SE	B	p-value	Comparison
Gender			0.691>0.001	F > M
Male	3.88 ± 0.13		Not significant	
Female	3.94 ± 0.08			
Education level			0.235>0.001	D > ND
Degree holders	4.00 ± 0.08		Not significant	
Non-degree holders	3.82 ± 0.13			
Teaching experience			0.087>0.001	E > N
Novice (Less than 5years)	3.80 ± 0.11		Not significant	
Experienced(Morethan5years)	4.03 ± 0.10			
Teacher self-efficacy	3.91 ± 0.08	3.970	<0.001	

Dependent variable: perceived teacher self-efficacy

Neither gender, education level nor years of science teaching were significant predictors of perceived teacher self-efficacy.

Similarly, the GLM Univariate procedure was used to describe the association among the gender, education level and years of science teaching and perceived teacher self-efficacy in three domains and results are presented in Table 3, 4, and 5 respectively for instructional strategies, classroom management and student engagement.

Table 3: Differences perceived teacher self-efficacy in instructional strategies according to gender, education level and years of science teaching

Variable	Mean ± SE	B	p-value	Comparison	Partial Eta Squared
Gender			0.352>0.001	F > M	0.020
Male	3.97 ± 0.14		Not significant		
Female	4.12 ± 0.09				
Education level			0.09>0.001	D > ND	0.065
Degree holders	4.18±0.09		Not significant		
Non-degree holders	3.90±0.14				
Teaching experience			0.04<0.001	E > N	0.094
Novice (Less than 5years)	3.89± 0.12		Significant		
Experienced(Morethan5years)	4.19± 0.10				
Teacher self-efficacy in instructional strategies	4.04± 0.09	4.128	<0.001		

Dependent variable: perceived teacher self-efficacy

Neither gender nor education level were significant predictors of perceived teacher self-efficacy in instructional strategies. However, the novice teachers were of less efficacious in instructional

strategies with regard to scientific inquiry teaching than experienced teachers with more than five years of science teaching. Yet, the effect size is small (0.094).

Table 4: Differences perceived teacher self-efficacy in classroom management according to gender, education level and years of science teaching

Variable	Mean ± SE	B	p-value	Comparison
Gender			0.944>0.001	M > F
Male	4.05± 0.16		Not	
Female	4.04± 0.10		significant	
Education level			0.838>0.001	D > ND
Degree holders	4.07± 0.10		Not	
Non-degree holders	4.03± 0.17		significant	
Teaching experience			0.238<0.001	E > N
Novice (Less than 5years)	3.95± 0.14		Not	
Experienced(Morethan5years)	4.15± 0.12		significant	
Teacher self-efficacy in classroom management	4.15± 0.12	4.121	<0.001	

Dependent variable: perceived teacher self-efficacy

Neither gender, education level nor years of science teaching were significant predictors of perceived teacher self-efficacy in classroom management in inquiry oriented activities.

Table 5: Differences perceived teacher self-efficacy in student engagement according to gender, education level and years of science teaching

Variable	Mean ± SE	B	p-value	Comparison
Gender			0.816>0.001	F > M
Male	3.63± 0.16		Not	
Female	3.67± 0.10		significant	
Education level			0.216>0.001	ND > D
Degree holders	3.77± 0.97		Not	
Non-degree holders	3.54± 0.16		significant	
Teaching experience			0.218<0.001	E > N
Novice (Less than 5years)	3.55± 0.13		Not	
Experienced(Morethan5years)	3.75± 0.11		significant	
Teacher self-efficacy in student engagement	3.65± 0.98	6.662	<0.001	

Dependent variable: perceived teacher self-efficacy

Neither gender, education level nor years of science teaching were significant predictors of perceived teacher self-efficacy in engaging students in inquiry oriented activities.

## Conclusions

This study revealed that overall mean perceived self- efficacy in inquiry based instruction was considerably high irrespective of gender, education level, and teaching experience. The mean perceived self-efficacy in student engagement reported comparatively lower than that of in instructional strategies and classroom management in teaching scientific inquiry which conformed to the previous study findings (Roberts et al., 2006; Stripling et al., 2008; Swan, Wolf & Cano, 2011; Wolf et al., 2008). Neither teacher self-efficacy in student engagement nor classroom management did not show statistically significant difference according to gender, education level and science teaching experience. This finding supports the previous research (Gezer, 2014). However, results concluded that science teaching experience was a significant predictor of self-efficacy in instructional strategies of inquiry based instruction.

## References

- Abd-El-Khalick, F., BouJaoude, S., Hofstein, A., Lederman, N. G., Mamlock, R., Niaz, M., Treagust, D., & Tuan, H. (2001, March). Inquiry in science education: International perspectives. An ICASE symposium conducted at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MI.
- Ahmad Zamri bin Khairania & Nordin bin Abd. Razakb(2012). An Analysis of the Teachers' Sense of Efficacy Scale within the Malaysian Context using the Rasch Measurement Model, *Procedia - Social and Behavioral Sciences*, 69, 2137 – 2142
- Anderson, R. D. (2002). Reforming science teaching: What research says about inquiry? *Journal of Science Teacher Education*, 13(1), 1–12.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Review*. 84(2). 191-215.
- Gezer, S. U. (2014). A case study on pre-service science teachers' laboratory usage self-efficacy and scientific process skills. *Procedia-Social and Behavioural Science* 174(2015), 1158-1165.
- Guskey, T.R. (1988). Teacher self-efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, 4(1), 63-69.
- Hanauer, D.I. et al., Active Assessment: Assessing Scientific Inquiry, Mentoring in Academia and Industry 2, DOI 10.1007/978-0-387-89649-6 2

- Khairania,A.Z., & Razakb,N.(2012). An Analysis of the Teachers' Sense of Efficacy Scale within the Malaysian Context using the Rasch Measurement Model, *Procedia - Social and Behavioral Sciences*, 69, 2137 – 2142.
- National Research Council (1996). *National Science Education Standards*. Washington, DC: National Academy Press.
- Roberts, T.G., Harlin, J.F. & Rickettes, J.C. (2006).A longitudinal examination of teaching efficacy of agricultural science student teachers. *Journal of Agricultural Education*, 47 (2), 81-92.DOI:10.5332/jae.2006.02081
- Stripling, C.,Rickettes, J.C., Teachi Roberts,T.G.,& Harlin, J.F.(2008).Pre-service agricultural education teachers' sense of teaching self-efficacy. *Journal of Agricultural Education*, 49(4), 120-130. DOI: 10.5032/jae.2008.04120
- Swan, B.G. Wolf,K.J.,& Cano,J.(2011).Changes in Teacher Self-Efficacy from the Student Teaching Experience through the Third Year of Teaching, *Journal of Agricultural Education*, 52, (2), 128–139 DOI: 10.5032/jae.2011.02128
- Tschannen-Moran,M. Woolfolk Hoy, A. & Hoy, W.K. (1998). Teacher Efficacy: Its Meaning and Measure, *Review of Educational Research Summer*, 68(2), 202-248.
- Wolf, K.J., Foster, D.D., Birkenholz, R.J. (2008).Changes in teacher self-efficacy and perceptions of preparation of agricultural education teacher candidates. *Proceedings of the North Central AAAE Conference, Cornell, NY*, 180-191.
- Retrieved from[http://aaaeonline.org.php/show\\_what=NorthCentral](http://aaaeonline.org.php/show_what=NorthCentral)

## **Expansion and Acceptance of E-commerce in Technologically Proliferating Nations: Evidence from India**

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### **Abstract:**

The aim of the study is to investigate those factors that influence the expansion and acceptance of e-commerce in the technologically progressing nations. There have been studies conducted on e-commerce adoption by business houses and firms, but the majority of these have concentrated on big firms in the developed nations. Hence, this provides a rationale for the study to understand the reason behind the inadequacy of the developing nations in expansion and acceptance of e-commerce. In order to survive and sustain in this information age, it is imperative for the firms and business houses to follow the wave of electronic commerce or else their sustenance in this competitive age will be in a questionable state. Most of the developing nations anyhow are far away from reaping the benefits abundantly due to various bottlenecks for e-commerce to expand and succeed. Therefore the result of this study will be helpful and provide insight for discernment of e-commerce adoption in an effective and efficient manner.

**Keywords:** *Developing Nations, E-commerce, Expansion, Adoption, Technological Advancement*

### **Introduction:**

E-commerce has been exemplified as an electronic process through which organizations and individuals make various kinds of transactions like buying, selling, exchanging, transferring of information, products and service (Rayport & Jaworski, 2001; Turban, McLean & Weatherbe, 2004). E-commerce has efficaciously removed the requirements of establishing brick and mortar outlets for reaching the customers'. This medium of electronic business (e-business) has revolutionized the approach of managing and operating a business in a global platform; hence the present economic era is entitled as the era of information (Rahayu & Day, 2015). E-commerce has altered the business perspective from production superiority to customer experience (Macgregor & Vrazalic, 2005). Taking into consideration the developing nations it has the potentiality to put forward solutions for various predominant issues like education, healthcare in remote parts of the country (Alyoubi, 2015). However, these nations are gradually accepting the wave of change but are still not able to garner the benefits completely; due to the obstacles and gap between adoption, implementation and use of e-commerce (Alyoubi, 2015). This study aims at deciphering the rationality behind the lacuna and the plausible impacts of e-commerce along with the technological advancements taking place in the developing nations. To sustain in this highly competitive environment the firms have to cash upon the technology, and the one who does not adopt this system will be surpassed by the competitors. President of the United States National Association of Manufacturers, Jerry Jasinowski, once stated in Wall Street Journal that " the small firms need to adopt the e-commerce practices so that they won't be left

behind in among their competitors” (Shah Alam, Ali & Mohammad Jani, 2011). The developing nation delineates markets with tremendous scopes and opportunity for e-commerce through which these countries could treasure on the new economic pathways. Secretary-General of United Nations Conference on Trade and Development (UNCTAD) Mukhisa Kituyi (2015) urged the developing countries to join the e-commerce revolution and not to be left behind. “Those countries, populations and small enterprises, which have no presence on the digital platform, are not only invisible, but they basically cannot grow, they cannot compete,” he said.

As conferred by United Nation Development Program (2005) developing countries should adopt e-commerce profoundly in order to boost their economic and social development, prompt up the commercial productivity, reduce the operational cost and match up the national and international market integrations. There have been studies conducted on e-commerce adoption by business houses and firms, but the majority of these have concentrated on big firms in the developed nations (Daniel & Grimshaw, 2002; Williams, Dwivedi, Lal & Schwarz; 2009). There are myriad of differences between the developed and developing nations; the disparate factors contributing towards it are the related to economic, social, environmental, political, technological and cultural concerns. Hence, the research findings of the developed nations can't be applicable to the developing nations. According to Welsh & White (1981), the e-commerce strategies were developed at the beginning to suffice the exigencies of the big business houses of the developed countries.

The above situation conferred stipulates the rationale behind the study to examine the factors behind the expansion and adoption of e-commerce by the developing nations. Here of, India has been considered for the country to conduct the research as it is one of the expeditious proliferation nations amongst the South Asian countries. It is the 7<sup>th</sup> largest country by area, 2<sup>nd</sup> most populous nation and the most populous democracy in the world.

## **2. Theoretical Foundation in E-commerce adoption by developing countries**

The literature on e-commerce has various theories contributing towards exploring the factors determining the adoption of e-commerce. The intermittently used theories are The Diffusion of Innovation Theory (IDT); Theory of Reasoned Action (TRA); Theory of Planned Behaviour (TPB); Technology Acceptance Model (TAM); Technological, Organizational and Environmental Framework (TOE).

The Theory of Reasoned Action was proposed by Fishben & Ajzen (1975). According to the theory, an individual's behaviour is driven by the motive of the individual for exhibiting the behaviour and the intention is stimulated by the subjective norm and attitude towards the behaviour (Davish, Bagozzi & Warshaw, 1989). Ajzen (1991) reprimanded this theory as the model didn't hold well in a case where the subject was not under unforced conditions; it was also found out that the conjecturing powers of the model was limited when it was tested on a situation in which the real behaviour and intention are highly correlated (Yousafzai, Foxall & Pallister, 2010). Ajzen (1991)

worked on the limitations of the model and developed the Theory of Planned Behaviour (TPB), in which he introduced constructs termed Perceived Behavioral Control (PBC). According to this theory the three factors that influence intention to execute certain behaviour are perceived behavioral control, subjective norms and attitude towards behaviour.

The Innovation Diffusion Model (ID) was developed by Rogers (1983) it was grounded on the psychological and sociological theory. In this model more emphasis was given to the “process oriented” prospect concerning the adoption and dispersion of the innovation amidst the people (Yu & Tao, 2009).

The Technology Acceptance Model (TAM) was developed by Davis (1989) elucidated an individual behaviour concerning the applicability of computer. In this theory actual behaviour of an individual is driven by behavioral intention and intention is collectively determined by perceived usefulness and attitude. In conjunction with determining the behavioral intention perceived usefulness also impacts the attitude of an individual.

The Technology Organization Environment (TOE) framework was developed by Tornatzky, Fliescher & Chakrabarti (1990) to illustrate the impact of contextual factors in acceptance of innovation. This framework has stirred three aspects of firms’ practice that influences the acceptance of new technological innovations; those are environmental context, organizational context and technological context. The environmental context refers to

the stakeholders like government, competitors and suppliers related to the firm; the organizational context relates to type, size and structure of the firm whereas, the technological context depicts about the internal and external technologies that are pertinent to the firm.

From the above mentioned theories, the TOE framework is preferred as the theoretical premise for structuring our research model. The TOE framework has been extensively acknowledged by the previous studies conducted as a well-established framework for analyzing e-commerce adoption (Zhu, 2004; Salwani, Marthandan, Norzaidi & Chong, 2009; Morteza, Daniel & Jose, 2011; Sila & Dobni, 2012, Ramdani, Chevers & Williams, 2013). Further, the TOE framework considers all the factors like environmental, organizational and technological factors. Rahayu & Day (2015) added the individual factors that affect the acceptance of e-commerce. Lastly the TOE model engages an interactive perspective which that ascertains that changes in an organization are driven by two the individuals in the organization and the attributes of the organization in which they function (Hameed, Counsell & Swift, 2012). This interactive prospect deals with all the factors and its interaction in a single dynamic framework (Molla & Licker, 2005). Hence it is expected to analyze the e-commerce expansion and acceptance effectively. Along with the above mentioned factors this study considers the most important concern in the area of e-commerce that is the security and privacy concern of the consumers

## 2.1 Factors Influencing the Adoption of E-commerce in Developing Nations

Grounded on the above discussion, the factors that affect the expansion and adoption of e-commerce have been categorized into five main categories namely: the environmental factors, organizational factors, technological factors, individual factors, and security & privacy factors.

### a. Environmental Factors:

The environmental factors deals with the external dominations faced from the stakeholders like the customers, suppliers, competitors etc. The customers have the power to force the organization for adopting or expanding the technology for their convenience and ease. Similarly the suppliers push the organization for the acceptance of electronic medium to channelize the supply chain management system for averting from the glitches caused in the supply chain management system due to the human interventions. Hence greater is the pressure from the stakeholders and business partners more is the likeliness for adoption and expansion of the technological advancements by the organization for the sake of having a competitive edge over their competitors (Duan, Deng & Corbitt, 2005). A competitor's pressure is experienced by the firm when the competitors are technologically advanced and adopt various electronic mediums for achieving competitive advantage; therefore higher the competition the higher is the usage of

e-commerce (Zhu & Kraemer, 2005). The next groups of stakeholders are the Government agencies and the IT traffickers' who formulate and manage the regulatory and transaction policies involved in the business. The regulations for the use of internet, to be a secured medium for transaction, medium for procurement and transfers within industries are the various IT support being provided which are helpful for driving the firms business functions.

### b. Organizational Factor

The organizational factors refer to the attributes of the firm that influences the adoption of e-commerce technologies. The most determining factor that impacts the adoption of e-commerce by a firm is the size of the firm. The firm size reveals the capability of a firm's resource like the financial resource, human resource, infrastructural resource etc.; the larger is the firm size the higher is the capability of adoption of e-commerce mediums for functioning. The other factor that impacts the acceptance of e-commerce is the technological readiness of the firm. This factor determines about the technological infrastructure, technically skill human resource and the technically relevant system that can provide a support for adoption of e-commerce within an organization (Zhu & Kraemer, 2005; Zhu et al, 2006). A well build and well managed technological as well as human resource are the most valued assets for an organization as it contributes

towards building the value chain (Tiago & Maria, 2010).

**c. Technological Factors**

The technological factor deals with the factors like the perceived benefits, perceived compatibilities and the perceived cost that influences the acceptance of e-commerce technologies. The variable perceived benefit indicated to the degree of acceptance of e-commerce because of the numerous benefits being offered to the organization (Iacovou, Benbasat & Dexter, 1995; Tiago & Maria, 2010). The better is the understanding of the advantages of e-commerce the more is the feasibility of the firms of designating the financial and technological resources towards the adoption of e-commerce in an organization. Mortreza, Daniel & Jose (2011) contemplated that the perceived compatibility variable concerns to what degree the e-commerce is pertinent to the culture, value, working culture and technology appropriateness of the firm. Innovation and technological advancements can be readily acknowledged and approved by the organizations if it in sync with the present functioning of the firm so that it can fulfill the needs of the organization in affirmation with the culture of the organization. Compatibility between the policy of the organization and the technological advancements will make the innovations more smooth and uncomplicated, and can be presented in a familiar manner (Roger, 2003).

The perceived cost is also considered to be a major influencing factor for acceptance of the e-commerce technology. It has been found in the earlier studies that a less expensive and cost effective technology is likely to be approved and put into functioning in an organization (Tornatzky & Klien, 1982; PremKumar & Roberts, 1999).

**d. Individual Factor**

The individual factors are also considered to be one of the determinants that are considered to impact the adoption of e-commerce in the developing nations. In most of the firms the strategic decision are taken up by the high level managers or by the owners of the organization. The owners of the new startups are prone to the early stage barriers due to which they try to adopt new technologies and innovative ways to scale-up in the venture. Thong & Yap (1995) propounded that a manager who cultivates on finding out solution to the bottlenecks in the framework is considered to be an innovative manager.

Therefore it signifies that the innovative manager is a risk taker, who is ready to take a leap in form of technological innovation for the sake of crossing the chasm and scaling up towards a sustainable venture. Ghobakhloo & Tang (2013) articulated that more innovative an owner is the more likely he is intended to adopt the e-commerce applications to the business functionalities. Insufficient IT

knowledge and skills are considered as a bane for the firm. An organization with skilled and experienced IT manpower will be able to adopt the technology with ease and confidence, which can reduce the uncertainty and risk of working with the technologically advanced system. Morteza et al (2011) acclaimed that skilled and knowledgeable human resource can facilitate and aggrandize the technology adoption. Hence it can be comprehended that the function and the functioning and advantages of the e-commerce will be highly acknowledged by an innovative manager.

**e. Security and Privacy Factors**

The continual augmentation of the virtual relationships is considerably stirring the commercial sectors (Gunasekaran & Love, 1999; Van der Smagt, 2000; So et al., 2005 Wu & Chang, 2005). However, this repercussion has not been reflected numerically since there is dearth of trust among the consumers due to their reluctance in adopting e-commerce (Jarvenpaa et al., 2000; Gefen, 2000; Hedelin & Allwood, 2002; So & Sculli, 2002). The lack of trust is an outcome of the change in the medium and mode of transactions that takes place in case of traditional channel (Yousafzai et al., 2003). A transaction in an online store takes place in an uncertain environment (Fung & Lee, 1999) in a virtual space through internet. The consumers have a perplexity that everything about the transaction is absolutely ensured and safe as compared to that of an offline transaction. As in an

online e-commerce transaction the consumer has no physical communication with the vendor, the products can't be touched or tested tangibly nor the identity of the seller can be completely traced. The payment is usually made by credit/ debit card prior to the delivery of the products or services, making it possible for the consumer's financial data to be used fraudulently. There is also a possibility that the product received is not the one that was ordered. Tracing and placing of complaints to companies are one more additional issue as the product/ service might have been order from some different country; and some consumers are not knowledgeable with the internet usage so that they can distinguish between the alternatives like exchange or replacements. In accretion to it there are other related issues related to e-commerce like the hacker attacks and malware or virus attacks which brings about an uncertainty in the mind of consumers. Hence, it can be summed up that the risk associated with the e-commerce consumer appears to be extremely high (Koufaris & Hampton-Sousa, 2002). Indeed, e-commerce transactions are perceived to be riskier operations (Taylor Nelson Sofres Interactive, 2002), and the development of trust in the virtual medium is too less as that of the traditional channels (Bitting & Ghorbani, 2004). Because of this uncertainty and risk associated with e-commerce an technologically advanced organization needs to prove his mettle by being honest and acting in good faith, he has to sound technically, financially and as well as with efficient manpower needed for

successful completion of the transactions being made. Activities like delivering on time the appropriate product/ service without failure, securing the privacy and confidentiality of the consumer data should be taken care of as being promised at the time of transaction. In an e-commerce platform it is not only sufficient to make promise to the consumers and be honest in dealing; but also ensure them that the promises are efficiently and effectively delivered. To earn the trust of the consumers the privacy and security factors must be kept in mind by the organization as these are the two most important factors in the mind of the consumers while transacting in an e-commerce medium.

### **3. Suggestive Measures for encouraging expansion and acceptance of E-commerce in developing nations**

According to Genus & Noor (2005) the term “DIGITAL DIVIDE” is usually mentioned in reference to the difference among the communities and groups for accepting and disseminating the information and communication through the electronic medium and practicing e-business. Because of the adoption of e-commerce the chasm between the developed and developing nations is perceptibly shortening.

However, one of the major shortcomings in this field is the knowledge about the technological advancements taking place. The technologically proliferating nations primarily face the issue of digital divide due to the lack of the skilled human resource. The lack of knowledge among the mass is affecting the future of e-commerce. Hence, the foremost measure

to be taken by the developing nations is to engage the masses in the empowering the e-commerce skills. According to Rouibah et al. (2008) proper knowledge must be imparted through training in order to reduce the e-illiteracy and to embank the opportunities being bestowed by e-commerce.

The Government has to put a step forward to bring about a digital revolution in the nation by bringing about changes in the policies and regulations which are acting as unseen barriers for the expansion and acceptance of e-commerce. The first and foremost changes to be made are to be made by developing appurtenant regulatory and legal habitat for growth of e-commerce. According to Zaied (2008) the e-commerce strategies can successfully sustain and grow only when the consumers and the startups can trust the security and reliability of the system. For both the parties to function in without uncertainty and risk the regulatory policies must ensure secured laws and regulations pertaining to cybercrime, consumer protection, e-transactions, banking policies, e-business etc. These related laws are fundamental for existence of electronic business in order to curb the possibility of deceptive and fraudulent activities.

Next the Government has to revamp the financial framework for the sake of facilitating a lucrative and hassle free e-transactions through means of plastic money, wallet systems and other online payment mechanisms. Incompetent and faulty infrastructure acts as a major bottleneck for the development of e-commerce in developing nations. As the

telecommunication communication infrastructure is the foundation of the digital initiatives the Government should invest in building robust infrastructure along with legal, financial and logistical developments. The government must aim at facilitating and building partnership with other nations in order to ensure appropriate and consistent e-commerce infrastructure globally.

#### 4. Conclusion

The recent rise of the digitalization wave has affirmed the reasons behind digital divide among the developed and developing nations. Hence the developing or technologically proliferating nations need to equip themselves with e-commerce which can act as a powerful tool to achieve the economic equality with the developed nations. But for advancing in this direction they need to work on the bottlenecks for development of a strong and robust e-commerce system by customizing their resources and formulating policies and strategies conducive for development, growth, expansion and acceptance of e-commerce. They need to design a boisterous telecommunication infrastructure, revamp the financial environment, and bring about changes in the legal and regulatory climate, proper education to the masses and prudent institutional reforms should be made for the new and upcoming startups to build a strong foundation which will be helpful for the developing nations to grow as strong contestants globally.

#### 5. References

Ajzen, I., 1991. The theory of planned behavior. *Organizational behavior and*

*human decision processes*, 50(2), pp.179-211.

Alyoubi, A.A., 2015. E-commerce in developing countries and how to develop them during the introduction of modern systems. *Procedia Computer Science*, 65, pp.479-483.

Bitting, E. and Ghorbani, A. 2004, "Protecting e-commerce agents from defamation", *Electronic Commerce Research and Applications*, Vol. 3, pp. 21-38.

Davis, F.D., Bagozzi, R.P. and Warshaw, P.R., 1989. User acceptance of computer technology: a comparison of two theoretical models. *Management science*, 35(8), pp.982-1003.

Daniel, E.M. and Grimshaw, D.J., 2002. An exploratory comparison of electronic commerce adoption in large and small enterprises. *Journal of Information Technology*, 17(3), pp.133-147.

Duan, X., Deng, H. and Corbitt, B., 2012. Evaluating the critical determinants for adopting e-market in Australian small-and-medium sized enterprises. *Management Research Review*, 35(3/4), pp.289-308.

Fishbein, M. and Ajzen, I., 1975. *Belief, attitude, intention and behavior: An introduction to theory and research*.

Fung, R. and Lee, M., 1999. EC-trust (trust in electronic commerce): exploring the antecedent factors. *AMCIS 1999 Proceedings*, p.179.

Gefen, D., 2000. E-commerce: the role of familiarity and trust. *Omega*, 28(6), pp.725-737.

Genus, A. and Nor, M.A.M., 2005. Socialising the digital divide: Implications for ICTs and E-business development. *Journal of Electronic Commerce in Organizations*, 3(2), p.82.

Ghobakhloo, M., Arias-Aranda, D. and Benitez-Amado, J., 2011. Adoption

of e-commerce applications in SMEs. *Industrial Management & Data Systems*, 111(8), pp.1238-1269.

Ghobakhloo, M. and Hong Tang, S., 2013. The role of owner/manager in adoption of electronic commerce in small businesses: The case of developing countries. *Journal of small business and enterprise development*, 20(4), pp.754-787.

Gunasekaran, A. and Love, P.E.D., 1999. Current and future directions of multimedia technology in business. *International Journal of Information Management*, 19(2), pp.105-120.

Hedelin, L. and Allwood, C. 2002, "IT and strategic decision making", *Industrial Management & Data Systems*, Vol. 102 No. 3, pp. 125-39.

Iacovou, C.L., Benbasat, I. and Dexter, A.S., 1995. Electronic data interchange and small organizations: Adoption and impact of technology. *MIS quarterly*, pp.465-485.

Intan Salwani, M., Marthandan, G., Daud Norzaidi, M. and Choy Chong, S., 2009. E-commerce usage and business performance in the Malaysian tourism sector: empirical analysis. *Information Management & Computer Security*, 17(2), pp.166-185.

Jarvenpaa, S.L., Tractinsky, N. and Vitale, M., 2000. Consumer trust in an Internet store. *Information technology and management*, 1(1-2), pp.45-71.

Koufaris, M. and Hampton-Sosa, W., 2002. Customer trust online: examining the role of the experience with the Web-site. *Department of Statistics and Computer Information Systems Working Paper Series, Zicklin School of Business, Baruch College, New York*.

MacGregor, R. and Vrazalic, L., 2005. Role of Small-Business Strategic Alliances in the Perception of Benefits and Disadvantages of E-Commerce

Adoption in SMEs. In *Advanced Topics in Electronic Commerce, Volume 1* (pp. 1-27). IGI Global.

Molla, A. and Licker, P.S., 2005. eCommerce adoption in developing countries: a model and instrument. *Information & management*, 42(6), pp.877-899.

Oliveira, T. and Martins, M.F., 2010. Understanding e-business adoption across industries in European countries. *Industrial Management & Data Systems*, 110(9), pp.1337-1354.

Premkumar, G. and Roberts, M., 1999. Adoption of new information technologies in rural small businesses. *Omega*, 27(4), pp.467-484.

Rahayu, R. and Day, J., 2015. Determinant factors of e-commerce adoption by SMEs in developing country: evidence from Indonesia. *Procedia-Social and Behavioral Sciences*, 195, pp.142-150.

Ramdani, B., Chevers, D. and A. Williams, D., 2013. SMEs' adoption of enterprise applications: A technology-organisation-environment model. *Journal of Small Business and Enterprise Development*, 20(4), pp.735-753.

Rayport, J.F. and Jaworski, B.J., 2002. *Introduction to e-commerce*. McGraw-Hill/Irwin marketplaceU.

Rogers, E.M. and Shoemaker, F., 1983. Diffusion of innovation: A cross-cultural approach. *New York*.

Rouibah, K. ed., 2008. *Emerging markets and e-commerce in developing economies*. IGI Global.

Shah Alam, S., Ali, M.Y. and Mohd. Jani, M.F., 2011. An empirical study of factors affecting electronic commerce adoption among SMEs in Malaysia. *Journal of business economics and management*, 12(2), pp.375-399.

Sila, I., 2013. Factors affecting the adoption of B2B e-commerce

technologies. *Electronic commerce research*, 13(2), pp.199-236.

So, M.W. and Sculli, D., 2002. The role of trust, quality, value and risk in conducting e-business. *Industrial Management & Data Systems*, 102(9), pp.503-512.

Taylor Nelson Sofres Interactive (2002), Global Ecommerce Report 2002, available at: [www.tnsinfo.com/common/corporate/images/tns/GER2002FullReport.zip](http://www.tnsinfo.com/common/corporate/images/tns/GER2002FullReport.zip)

Thong, J.Y. and Yap, C.S., 1995. CEO characteristics, organizational characteristics and information technology adoption in small businesses. *Omega*, 23(4), pp.429-442.

Tornatzky, L.G., Fleischer, M. and Chakrabarti, A.K., 1990. *Processes of technological innovation*. Lexington books.

United Nations Conference on Trade and Development (UNCTAD). Information Economy Report 2015: Unlocking the Potential of E-Commerce for Developing Countries. New York and Geneva: United Nations, 2015.

United Nations Development Programme (UNDP). The Esee Initiative: Interim Review of the Esee Agenda's Policy Impact. Bratislava: UNDP Regional Center, 2005.

van der Smagt, T., 2000. Enhancing virtual teams: social relations v. communication technology. *Industrial Management & Data Systems*, 100(4), pp.148-156.

Wang, H., Lee, M.K. and Wang, C., 1998. Consumer privacy concerns about Internet marketing. *Communications of the ACM*, 41(3), pp.63-70.

Welsh, J.A. and White, J.F., 1981. Small business ratio analysis: A cautionary note to consultants. *Journal of Small Business Management (pre-1986)*, 19(000004), p.20.

Williams, M.D., Dwivedi, Y.K., Lal, B. and Schwarz, A., 2009. Contemporary trends and issues in IT adoption and diffusion research. *Journal of Information Technology*, 24(1), pp.1-10.

Yousafzai, S.Y., Pallister, J.G. and Foxall, G.R., 2003. A proposed model of e-trust for electronic banking. *Technovation*, 23(11), pp.847-860.

Yousafzai, S.Y., Foxall, G.R. and Pallister, J.G., 2010. Explaining internet banking behavior: Theory of reasoned action, theory of planned behavior, or technology acceptance model?. *Journal of applied social psychology*, 40(5), pp.1172-1202.

Yu, C.S. and Tao, Y.H., 2009. Understanding business-level innovation technology adoption. *Technovation*, 29(2), pp.92-109.

Zaied, A.N., 2008. Strategic Planning for e-Development in Developing Countries. *Int. Arab J. Inf. Technol.*, 5(2), pp.109-114.

Zhu, K., Kraemer, K.L. and Dedrick, J., 2004. Information technology payoff in e-business environments: An international perspective on value creation of e-business in the financial services industry. *Journal of management information systems*, 21(1), pp.17-54.

Zhu, K. and Kraemer, K.L., 2005. Post-adoption variations in usage and value of e-business by organizations: cross-country evidence from the retail industry. *Information systems research*, 16(1), pp.61-84.

Zhu, K., Kraemer, K.L. and Xu, S., 2006. The process of innovation assimilation by firms in different countries: a technology diffusion perspective on e-business. *Management science*, 52(10), pp.1557-1576.

**The effect of celebrity endorsement on customers' attitudes, emotional value and purchase intention toward a footwear brand. The successful business case of Son Tung MTP endorsing Biti's in Vietnam.**

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**ABSTRACT**

As one of smaller players in leather footwear industry, Biti's, a local manufacturer in Vietnam, faces fierce competition from many giants with global brand names such as Nike, Adidas, Puma and so forth. Biti's has implemented a successful marketing strategy to build up its brand, made differentiated products, and attracted more customers. Notably, the company has signed a celebrity, Son Tung MTP, to endorse its brand's endorsement contract. This paper aims to exploit Biti's successful business case by developing an endorsement model to test the causal relationship between antecedents and purchase intention of Biti's footwear. By using structural equation model approach to analyze a questionnaire survey of 328 correspondents, the findings illustrated that endorser attractiveness had a positive impact on both perceived quality and brand attitude. Additionally, consumers' purchase intention are affected by emotional value, quality perceived, and brand attitude. The results also provide managerial implications related to how local manufacturers adopt a celebrity endorsement strategy, nourish consumers' attitude, and create emotional value for attracting and retaining customers, and increase market share.

*Keywords: celebrity endorsement, brand attitude, emotional value, purchase intention.*

**INTRODUCTION**

One of many common advertising tactics is utilized to promote brand awareness and sales at higher level by celebrity endorsement, which is acknowledged as a preeminent marketing (McCracken, 1989). This useful and powerful means of communication is previously exploited in some studies (Solomon, 2002; Ranjbarian, Shekarchizade, & Momeni, 2010) and has become commonplace in Vietnam recently. An impressive case of adopting celebrity endorsement mostly mentioned in the last year was Son Tung MTP endorsed Biti's Hunter. This local footwear company has established since 1982 but has been faded in consumers' mind due to its out-of-fashion and consumers' tendency to purchase foreign products. Until the remarkable comeback with Son Tung MTP acting as their spokesperson, he has revived Biti's image and reputation, resulting in consumers' preference toward the products and hence stimulate the buying action. This successful business case indicates an optimistic promise for local brands, which are gradually merged or acquired by foreign firms.

This marketing strategy is using more extensively, and marketers have to spend a bundle of budget for hiring a celebrity endorser. However, a question in doubt is whether this advertisement approach can work well in all cases and its essential role to brand purchase improvement. Endorsed products feature is sometimes overshadowed by the celebrity's fame and popularity, while product's attributes create long-lasting in consumers' attitude to the brand. To explore the business case, the study digs into the consumers' preference of celebrity endorsement and its impact on attitude toward brand, perceived quality, and purchase intention. Celebrity's features are widely mentioned in previous studies and attractiveness is the most essential quality in endorsing process (Rifon, Jiang, & Kim,

2016) which is proven to strengthen conclusively favorable attitude and purchase intention (Amos, Holmes, & Strutton, 2008; Bergkvist & Zhou, 2016).

More significantly, few studies have investigated the topic in the context of Vietnam. Thus, this paper explores celebrity endorsement effect only measured by attractiveness (Pornpitakpan, 2004; Hovland and Wiess, 1951). In a specific case of Biti's, celebrity endorsement is considered as an additional action along with affective achievement, which has been recognized in consumers' mind. Moreover, their favor toward a brand encourage the intent to buy the product (Kumar, Lee, & Kim, 2009). Hence, this study aims is to evaluate the influence of celebrity endorsement through attractiveness and investigate the casual relationships between the constructs. As a result, the findings enable to propose effective ways of marketing campaign and enrich their brand awareness in consumer perception; especially for local brands to reposition in a competitive global marketplace.

## **LITERATURE REVIEW**

### ***Celebrity Attractiveness***

Attractiveness is a crucial indicator of active celebrity endorsement practice (Rifon et al., 2016; Joseph, 1982; Kahle and Homer, 1985) and can be observed from the particular Biti's case that attractive celebrity endorser is linked with the effective advertisement. Erdogan (1999) defines attractiveness scope does not restrict to physically attractiveness, but also other celebrity's traits consist of personality, intellectual or physical ability perceived by consumers. Audiences have a favorite and more involvement to the message conveyed by communicator having physically attractiveness than less attractive one. Hence their attitude and belief are affected or modified (Gupta, 2015; Kahle and Homer, 1985). Therefore attractiveness is an important characteristic needed when selecting a celebrity endorser to promote purchase intentions (Friedman et al., 1976). This study considers attractiveness of a celebrity regarding both physical and personality properties.

### ***Perceived Quality***

Celebrity endorsement is induced with the purpose of improving consumers' product awareness or quality perception due to his/her attractiveness. The celebrity endorser shapes a lasting impression that encourages consumers to purchase (Erdogan et al., 2001). Attractiveness of celebrity is assumed to be reliable source according to halo effect by audiences; then they notice a product recommended by credible celebrity endorser as an indication of high quality (Sabir et al., 2014).

Moreover, perceived quality is consumers' overall judgment of the brand when comparing their expectations to perceptions of product performance (Lewis & Chambers, 1989), and can be created regardless of whether purchasing stage is made or not (Sweeney and Soutar, 2001). Vietnamese consumers have great preference to foreign product based on their high quality and prestigious (Lee and Nguyen, 2017; Khattak and Shah, 2011) and this functional quality is defined as perceptive response to a product which influences purchase consideration regard to local and non-local brand by Kumar et al., (2009). It is recognized as antecedence of buying willingness in previous studies (Asshidin, 2016; Das, G., 2014; Tsiotsou, 2006). Thus, it is hypothesized:

*H1: Endorser attractiveness has positive influence on perceived quality of Biti's products.*

*H2: Consumers' brand perceptions of quality perceived will increase purchase intention for Biti's*

### ***Brand attitude***

The internal assessment made by individuals toward a particular brand is described in term of brand attitude (Mitchell and Olson, 1981; Solomon, 2008). Brand attitude expressed as a lasting opinion or perception whether positive or negative outcome and could be changed in case people had new experiences (Whan Park et al., 2010). This state of mind are formed through a responsive expression toward an objective, i.e., the brand, and remained stable which should be considered as a useful predictor of brand behaviors. Spears and Singh (2004) assumed attitude toward a brand is a relatively sustainable, one-way summary of the brand that can probably promote behavior.

Many previous studies examined the effect of celebrity endorsement on product or brand. They showed celebrity endorser is partly responsible for meaning transfer from he/she to product and

product to users (McCracken, 1989). A celebrity can boost the product image more favorable (Atkin and Block, 1983). An attractive endorser has strong effect on both product and brand image in consumer perception than non-attractive endorser (Gupta, 2015; Wei & Lu, 2013; Till and Shimp, 1998). Moreover, brand attitude are proposed to create a positive impact on purchase intention (Wu and Lo, 2009; Shah et al., 2012). Therefore, Hypothesis 3 & 4 propose:

*H3: Endorser attractiveness has positive influence on consumers' attitude toward Biti's*

*H4: Consumers' endorsed brand attitude promotes the intention on purchasing Biti's*

### **Emotional value**

Kumar et al. (2009) concluded affective components is significant point in consumer perception between local and non-local brands in which consumers experience fun and enjoyment. The more the emotional value satisfy their emotional needs, the more they are intent to buy product. It is shown in many studies that emotions enhance customer's purchase intention when they achieve emotional reward including sense of pleasure and happiness (Asshidin, 2016) which are as important as the product itself (Sweeney and Soutar, 2001). Such emotional response is almost relevant to product experience and satisfaction (Mano & Richard, 1993); for this reason, product consumption gains beneficial experience for something new or different creating good emotional value or impression related to the brand. Thus, emotional value is considered as critical antecedence of purchase intention stated in hypothesis below:

*H5: Consumers' brand perceptions of emotional value will increase purchase intention for Biti's*

### **Purchase intention**

Purchase intention includes three meanings of consumer's willingness to buy, purchase intent in the future and repurchase intention (Rahman, Haque, & Khan, 2012). It is the process of planning and decision making of buying certain products or services in short term future and is specified as consumer's purchase tendency to a particular brand consistently even they are offer by other brands (Bagozzi et al., 1979).

According to Daneshwary and Schwer (2000), purchase intention is encouraged by perceived brand credibility and brand attitude toward an endorsed product. Moreover, Gobe (2001) indicated consumers who have positive feelings upon using the brand may keep purchasing the same brand and avoid switching to others. In this paper, author examines the effect of brand attitude, perceived quality and emotion toward an endorsed brand.

## **METHODS**

**Table 1.**

### **1. Measurement**

All items in questionnaire were adopted by reviewing relevant previous literatures, shown in **Table 1.**

The set of questionnaires was applied a 5-point Likert scale, ranging from 1="strongly disagree" to 5="strongly agree." A pilot test was conducted to examine validity of the construct with 35 correspondents whose background are vary. Based on their comments

<b>Construct (Items)</b>	<b>Code</b>	<b>Sources</b>	<b>Reliability</b>
Attractiveness (4)	ATR	Ohanian (1991) and McCracken (1989)	<b>0.869</b>
Emotional Value (6)	EMO	Holbrook (1986); Sweeney and Soutar (2001)	<b>0.879</b>
Perceived quality (4)	PQ	Yoo et al., (2000); Keller (2001)	<b>0.798</b>
Brand attitude (4)	BA	Mitchell and Olson (1981)	<b>0.762</b>
Purchase intention (4)	PI	Turhan, G., & Özbek, A., (2013), Shukla (2010)	<b>0.853</b>

on measurement scales and responses to the test, the questionnaire was corrected, and some items were deleted due to duplicate meaning. Since all measurement items are translated from original that was in English, ambiguous words of some questions were modified and adjusted to be understandable and appropriate in Vietnamese context. Finally, the revised questionnaire was ready to test

consumers' identification of Biti's through celebrity endorsement; besides, demographic questions are also included.

## 2. Data collection

Since target correspondents are local people have watched music video of Son Tung MTP endorsed Biti's and have known this brand name, *convenient sampling* is appreciate to collect the data. The 350 questionnaires were distributed via both online and offline surveys during April, and generated 328 valid respondents, yielding a 93.7% response rate.

## 3. Data analysis

IBM SPSS and AMOS software are used to analyze the data. Firstly, reliability test checks whether the measurement scale which is applied to collect set of data offers consistent results. Then, Exploratory Factor Analysis (EFA) is conducted to determine whether variables follow models or new factors are created by grouping these related items. Secondly, the test of validity of construct and quality of items are performed by Confirmatory Factor Analysis (CFA). Finally, Structural Equation Modelling (SEM) is conducted to verify the significant relationship among constructs simultaneously.

**Table 2. Results of Confirmation factor analysis**

Variable	Items	Factor loading	CR	AVE
Attractiveness	ATR1	0.791	<b>0.872</b>	<b>0.634</b>
	ATR2	0.893		
	ATR3	0.829		
	ATR4	0.652		
Perceived Quality	PQ1	0.688	<b>0.799</b>	<b>0.499</b>
	PQ2	0.749		
	PQ3	0.694		
	PQ4	0.692		
Emotional Value	EMO1	0.742	<b>0.891</b>	<b>0.622</b>
	EMO2	0.772		
	EMO3	0.862		
	EMO4	0.825		
	EMO5	0.735		
Brand Attitude	BA1	0.961	<b>0.770</b>	<b>0.547</b>
	BA2	0.715		
	BA3	0.455		
Purchase Intention	PI1	0.744	<b>0.859</b>	<b>0.604</b>
	PI2	0.844		
	PI3	0.779		
	PI4	0.736		

## ANALYSIS

**1. Demographic profile:** Approximately one half (40.5%) of correspondents are male; almost they are under 25 years old (age range from 18 to 25 is 85.4%). The most significant percentage of 93.3% respondents are students. Thus majority reports a low monthly income (75.9% lower than 3 million VND).

### 2. Reliability and factor analysis:

The reliability test is conducted to assess the variables' consistency and stability through Cronbach's alpha coefficients (Bollen, 2014). A criteria for an alpha of each variable greater than 0.7 is acceptable (George & Mallery, 2003), and each factor loading should be greater than 0.3 (Nunnally, 1978; Hair et al., 2003). The result shows that Cronbach's  $\alpha$  values ranging from 0.727 to 0.879 are exceed the benchmark level and all values in the Corrected Item-Total Correlation are higher than 0.3. As the result, there are no apparent violations.

Then, EFA is applied to group a large number of items into factors representing a concept (Newsom, 2005). An item has significance if absolute of factor loadings should be at or larger than 0.5 (Hair et al., 1995) and the difference between absolute value of factor loadings is required to be at or higher than 0.3 (Jabnoun & Altamimi, 2003). After the EFA test is performed for all constructs, there are two items that are EMO6, BA4 violate the mentioned criteria, and all of them are removed from the variable list.

**3. Confirmatory Factor Analysis:** CFA is employed to evaluate the proposed measurement model using maximum likelihood estimation before testing the fit of full model through SEM. Convergent validity is performed; AVE of all constructs meet thresholds, except the Perceived quality with AVE=0.499, however, its CR is larger than 0.6 then its convergent validity is adequate (Fornell & Larcker, 1981). Thus measurement scales are supportively reliable and valid. **Table 2** illustrates all CFA test.

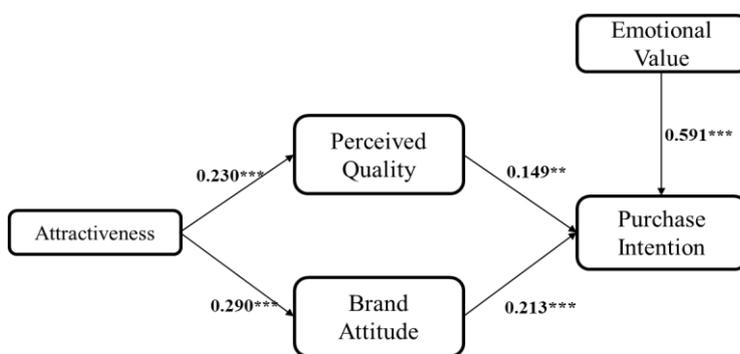
**4. Structural Equation Modeling:** Finally, SEM is applied to explain the relationship among constructs. Table below illustrates the statistical outcome of hypothesized structural model.

**Table 3. Summarized of SEM analysis**

		Standard error	Standardized coefficient	p-value	C.R.	Decision
H1	ATR → PQ	0.051	0.230	0.000	3.374	Accepted
H2	PQ → PI	0.067	0.149	0.011	2.558	Accepted
H3	ATR → BA	0.090	0.290	0.000	4.630	Accepted
H4	BA → PI	0.034	0.213	0.000	3.773	Accepted
H5	EMO → PI	0.068	0.591	0.000	8.616	Accepted
Fit indices		<b>CMIN/DF = 2.857, CFI = 0.912, RMSEA = 0.075, TLI = 0.897</b>				

Note: \*\*\*:  $p < 0.001$ , \*\*:  $p < 0.05$ . All hypotheses are supported at a significance level of 0.05 or 0.001.

**Figure 1. Conceptual model and hypothesis testing result**



This conceptual framework is aim to evaluate the influence of celebrity attractiveness preferred by consumers on perceived quality, brand attitude, and emotional value along with purchase intention. The overall model fit index was excellent. Thus research model fits well to the data. **Figure 1** displays the result of hypothesis testing that all hypotheses are strongly supported at statistical level of 0.01, resulting in significant relationship

between celebrity’s attractiveness and brand attitude, perceived quality and buy intent.

Most studies support attractiveness is an essential quality of an celebrity endorser to achieve effective advertisement (Lord & Putrevu, 2009) while the research of Ohanian (1990) assumes there is no relationship. This research reveals the success of endorsement is based on celebrity who enjoys publicity and spreads out the advertising, generates attention and interest of mass audiences. Moreover, there is a perfect match between an attractive celebrity and target consumers who are millennial showing sensitivity to trends and media exposure. By that way, attractiveness of an endorser – Son Tung MTP who utilizes his influential power to successfully persuade them to try product and recall brand name in their mind generating achievement of marketing objectives.

The findings also demonstrated that consumers’ perception of celebrity endorsement was critical prior of brand attitude, and high quality perceived are statistically significant. These results were consistent with prvious ones (Spears and Singh, 2004; Shimp, 2008). In other words, once consumers rely on the influence of celebrity endorser, their impression toward endorsed brand will be dramatically increased simultaneously with high quality perceived as well. Finally, consumers are willing to make purchase when they are affected by emotional value, quality perceived, and brand attitude, which are consistent with previous researches (Wang, 2017; Asshidin, 2016; Kumar et al., 2009; Till and Busler, 2000).

## CONCLUSIONS

Consumers in Vietnam have good feelings and pleasure toward Biti’s products for years; as a result, this brand gets the consumers’ favor when releasing new product line. However, the success of Biti’s also comes from other influential factors including appropriate marketing strategy that makes use of celebrity endorsement. Even though vast number of consumers are aware of Biti’s in terms of high quality products, it is more pressed in their mind by a well-known celebrity – Son Tung MTP. This

marketing practice has yielded an achievement as improving consumers' attitude toward Biti's as a high-end and fashionable brand name. This study implies the significance of chosen celebrity endorser on brand purchasing enhancement and suggests local brand to nourish consumers' attitude, build up emotional value for attracting and retaining customers and increase market share in competitive global market. Come to the conclusion that advertising influences consumers, but the brand's core values are also crucial to the buying intention, thus businesses need to be aware of consumers' behavior and stay competitive in such a constantly changing market. While limitations lie within a scope of study and focus on a specific selected brand, further researches could carry out in other product types or celebrity quality and exploit variables contribute to the effectiveness of advertising and sales achievement.

## REFERENCES

- Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness: A quantitative synthesis of effect size. *International Journal of Advertising*, 27(2), 209-234.
- Asshidin, N. H. N., Abidin, N., & Borhan, H. B. (2016). Perceived quality and emotional value that influence consumer's purchase intention towards American and local products. *Procedia Economics and Finance*, 35, 639-643.
- Atkin, C., Block, M., (1983). Effectiveness of celebrity endorsers. *J. Advert. Res.* 23 (1), 57e61
- Bagozzi, R.P., Alice, M., Tybout, C., Samuel, G., Brian, S., (1979). The construct validity of the tripartite classification of attitudes. *J. Mark. Res.* 16 (1), 88e95
- Bergkvist, L., & Zhou, K. Q. (2016). Celebrity endorsements: A literature review and research agenda. *International Journal of Advertising*, 35(4), 642–663.
- Daneshwary, R., Schwer, R.K., (2000). The association endorsement and consumers' intention to purchase. *J. Consumer Mark.* 17 (3), 203e213
- Das, G. (2014). Linkages of retailer awareness, retailer association, retailer perceived quality and retailer loyalty with purchase intention: A study of Indian food retail brands. *Journal of Retailing and Consumer Services*, 21(3), 284-292.
- Erdogan, B.Z. (1999) Celebrity endorsement: a literature review. *Journal of Marketing Management*, 15 (3), pp. 291–314
- Gupta, R., N Kishore dan Verma. (2015). Impact of Celebrity Endorsements on Consumers' Ad Perception: A Study of Indian Consumers. *British Journal of Marketing Studies* 3(8): 34-49
- Hovland, C.I., Wiess, W., (1951). The influence of source credibility on communication effectiveness. *Public Opin. Q.* 15 (4), 635e650.
- Joseph, W.B., (1982). The Credibility of Physically Attractive Communicators: A Review. *Journal of Advertising*, 11(3), 15–25.
- Kahle, L.R., Homer, P., (1985), Physical Attractiveness of the Celebrity Endorser: A Social Adaptation Perspective. *Journal of Consumer Research*, 11(4), 954–961.
- Kamins, M.A., (1990). An Investigation into the “Match-Up” hypothesis in celebrity advertising: when beauty may be only skin deep. *J. Advert.* 19 (1), 4–13.
- Kim, S. S., Choe, J. Y. J., & Petrick, J. F. (2018). The effect of celebrity on brand awareness, perceived quality, brand image, brand loyalty, and destination attachment to a literary festival. *Journal of Destination Marketing & Management*.
- Kumar, A., Lee, H. J., & Kim, Y. K. (2009). Indian consumers' purchase intention toward a United States versus local brand. *Journal of Business Research*, 62(5), 521–527. <https://doi.org/10.1016/j.jbusres.2008.06.018>
- Lee, J., & Nguyen, M. J. (2017). Product attributes and preference for foreign brands among Vietnamese consumers. *Journal of Retailing and Consumer Services*, 35, 76-83.
- Lewis, R. C., & Chambers, R. E. (1989). *Marketing leadership in hospitality. Foundations and practices.* New York, NY: Van Nostrand Reinhold.
- Lord, K. R., & Putrevu, S. (2009). Informational and Transformational

- Responses to Celebrity Endorsements. *Journal of Current Issues and Research in Advertising*.
- McCormick, K. (2016). Celebrity endorsements: Influence of a product-endorser match on Millennials attitudes and purchase intentions. *Journal of retailing and consumer services*, 32, 39-45.
- McCracken, Grant, (1989), "Who Is the Celebrity Endorser? Cultural Foundations of the Endorsement Process," *Journal of Consumer Research*, 16 (3), 310-321.
- McGuire, W.J., (1969). The nature of attitudes and attitude change. In: Lindsey, G., Aronson, E. (Eds.), *The Handbook of Social Psychology*, vol. 3. Addison-Wesley, Reading, MA.
- Mitchell, Andrew A. and Jerry C. Olson (1981), "Are Product Beliefs the Only Mediator of Advertising Effect on Brand Attitude?" *Journal of Marketing Research*, 18 (August), 318-32.
- Ohanian, R., (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, Vol.19, No. 3, 39-52.
- Ohanian, R., (1991). The impact of celebrity Spokesperson's perceived image on consumers' intention to purchase. *J. Advert. Res.* 31 (1), 46-52
- Pornpitakpan, Chanthika, (2004), The Effect of Celebrity Endorsers' Perceived Credibility on Product Purchase Intention. *Journal of International Consumer Marketing*, 16(2), 55-74.
- Pradhan, D., Duraipandian, I., & Sethi, D. (2016). Celebrity endorsement: How celebrity-brand-user personality congruence affects brand attitude and purchase intention. *Journal of Marketing Communications*, 22(5), 456-473.
- Rahman, M. S., Haque, M. M., & Khan, A. H. (2012). A conceptual study on consumers' purchase intention of broadband services: service quality and experience economy perspective. *International Journal of Business and Management*, 7(18), 115.
- Ranjbarian, B., Shekarchizade, Z., & Momeni, Z. (2010). Celebrity endorser influence on attitude toward advertisements and brands. *European Journal of Social Sciences*, 13(3), 399-407
- Rifon, N. J., Jiang, M., & Kim, S. (2016). Don't hate me because I am beautiful: Identifying the relative influence of celebrity attractiveness and character traits on credibility. *Advances in Advertising Research*, 6(1), 125-135.
- Sabir, R. I., Safdar, M., Junaid, M., Naima Khurshid, & Shahnawaz, M. (2014). Impact of uniform celebrity endorsed
- Shimp, T. E., (1997). Advertising, promotion and supplemental aspects of integrated marketing communication. *Consumer Behavior: A European Perspective*, 3th ed., New Jersey: Prentice Hall
- Shimp, T.A. (2008), *Advertising, Promotion, and Other Aspects of Integrated Marketing Communications*, Eighth Edition, Cengage Learning, Canada.
- Solomon, Michael R (2008). *Consumer behavior: buying, having, and being* (8th ed). Pearson Prentice Hall, Upper Saddle River, N.J
- Spears, N., Singh, S.N., (2004). Measuring attitude toward the brand and purchase intentions. *J. Curr. Issues Res. Advert.* 26 (2), 53e66
- Sweeney, J. C., Soutar, G. N. (2001), Consumer Perceived Value: The Development of a Multiple Item Scale, *Journal of Retailing*, 77, 203-220.
- Teng, L., Michel, L., Huihuang, Z., (2007). The effects of multiple-ads and multiple brands on consumer attitude and purchase behavior. *J. Consumer Mark.* 24 (1), 27e35
- Till, B.D., Busler, M., (2000). The matchup hypothesis: physical attractiveness, expertise and the role of fit on brand attitude, purchase intent and brand beliefs. *J. Advert.* 29 (3), 1e13
- Till, B.D., Shimp, T.A., (1998). Endorsers in advertising: the case of negative celebrity information. *J. Advert.* 27 (1), 67e82
- Wang, S. W., Kao, G. H. Y., & Ngamsiriudom, W. (2017). Consumers' attitude of endorser credibility, brand and intention with respect to celebrity endorsement of the airline sector. *Journal of Air Transport Management*, 60, 10-17.
- Wei, P.-S., & Lu, H.-P. (2013). An examination of the celebrity endorsements

and online customer reviews influence female consumers' shopping behavior. *Computers in Human Behavior*, 29(1), 193-201.

Whan Park, C., MacInnis, D. J., Priester, J., Eisingerich, A. B., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of marketing*, 74(6), 1-17.

Wright, S. A. (2016). Reinvestigating the endorser by product matchup hypothesis in advertising. *Journal of Advertising*, 45(1), 26-32

Wu, S.L., Lo, C.L., (2009). The influence of core brand attitude and core-brand perception on purchase intention towards extended product. *J. Mark. Logist.* 21 (1), 174-194

# Strategic innovations factors in startups: A cross-case analysis of Indian startups

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## **Abstract**

*Background:* High competitiveness in the market and its turbulent environment forces the established firms as well as the startups to concentrate more on strategic innovations. Therefore, strategic innovations support the startups to generate wealth and achieve competitive advantage among other players. Strategic innovation factors are the important lever for the startups to survive in the turbulent market space.

*Purpose:* Continuous and sustainable strategic innovations are highly required in startups to survive in the highly turbulent and competitive environment of the market. This study aims to analyze the strategic innovations factors in startups and suggest some initiatives to enhance the strategic innovations in the startups.

*Method:* The author obtained the broad and key strategic innovation factors from the literature related to the startups and new firms. Case study approach is used to study and to get deep knowledge about the strategic

innovations in two different startups. Exploratory questions and open interviews are conducted to collect the information about the role of different strategic innovation factors in startups. Furthermore, the cases are compared in a cross-case analysis to generate a generic viewpoint towards the strategic innovations in startups. *Results:* Different strategic innovations factors in the startups are compared in the cross-case comparison. The comparison between two startups gives a generic relation of startups and strategic innovations. The role of different strategic innovations factors for the startup's success are presented.

*Conclusion:* The study reveals that firm-level entrepreneurial orientation acts as the base for other innovation activities. Major strategic innovation factors in startups firm contribute directly or indirectly to product innovation or service innovation.

**Keywords:** Entrepreneurship; Strategic innovations; Cross-case analysis; Case study; Startups

## **Introduction**

In recent years, India has witnessed growing number of promising startups especially from the major cities like Bengaluru, Delhi, Mumbai and Chennai (NASSCOM, 2017). Attaining success with sustainable competitive advantage over other giants and key players in the competitive space are turning out to be very difficult in this era. Innovations are highly correlated to entrepreneurship, even innovation and entrepreneurship are complimentary terms in context to startups and small business developments. Strategic shift towards innovations and other innovative practices in the firm are appreciable when considered to achieve sustainable competitive advantage and wealth generation (Hitt, Ireland, Camp, & Sexton, 2001). Hence the term strategic innovation in a way relates to all the innovative activities and practices which help the firm to attain sustainable competitive advantage and continuous wealth generation. There can be various factors which can influence strategic innovations in any manner. Both intrinsic and extrinsic factors related to startup's innovation activities must be analyzed to get the distant vision of strategic innovation in startups. Furthermore the factors will help in understand better about the strategic innovations in the startups. Evidences of broad and primary factors related to strategic innovations in startups exists in the literature. For a successful startup existence and survival in the competitive space, it is crucial to know about

all the key impactful factors of strategic innovations on interdisciplinary and different levels in the startups. Therefore, it is important to identify the factors that helps in providing the clear picture about the role and relations of strategic innovations in startups. The paper summarizes firstly about the deeper knowledge of various strategic innovations factors in startups, secondly the role of different innovation factors in different type of startups with the help of cross-case analysis. The above mentioned study will be accomplished with the help of exploratory comparative study of product and service based startups. Brief about the identified factors from the literature is explained in the background section. Method section describes the need and how the cross-case analysis methodology (Eisenhardt, 1989) is executed, including case selection; interview of participants and data extraction and analysis. Lastly, result section explains the major findings from the study. Conclusion and discussions sections describes the findings and scope for the future research from this study.

## **Background**

Before the exploratory study and execution of methodology, understanding of few concepts and some strategic innovation factors identified from the literature.

### **i) Innovative Firm Infrastructure**

In the competitive arena, firms are dynamic in terms of organizational structure changes and technology adoption in their firm, which always helps in staying competitive in the industry. Firm infrastructure innovation is one of the key elements in organizational level innovations. The innovation process in

a firm level may include a lot of organizational changes, which can be; i) organization operational hierarchy changes, ii) cultural changes & integration and iii) Technological adoption and other changes. For example, the innovative firm structure can be moving assembly line and merging two or more operational units in the firm. (Teece, 1996)

**ii) Innovative Resource Management** (Chen & Huang, 2009) believes that strategic resource management especially the human resource in the firm is one of the key element which enhances the capacity of knowledge management. Eventually, the effective knowledge management system in the firm will influence the process of innovation positively. It is also stated that it is the role of managers to utilize the human resource effectively, for instance, it can be knowledge acquiring. The need and requirement for effective knowledge management and knowledge capacity building must be understood by the managers first. Then according to that, they must act rationally and use appropriate human resource management practices.

**iii) Innovative Operations** Operation management is all about the management of various processes which includes various activities such as process designing and process scheduling. The main goal of operation management is to achieve or increase productivity. Productivity can be increased using various methods such as just in time manufacturing and quality management tools, etc. According to (Klingenberg, Timberlake, Geurts, & Brown, 2013), appropriate operational changes in the firm affects the financial performance of the

firm positively. Strategic changes in operation are likely to enhance the efficiency of firm's inventory management. Literature shows that implementation of Just in Time methodology and various tools like Total Quality Management in the firm's operations have shown positive results in the profitability of the firm.

**iv) Innovative Sales Channel**

Innovative sales channel involves incorporation or adoption of technologies in the structure and process involved in the supply chain. (Gabrielsson & Gabrielsson, 2011) analyzed the firm which adopted internet based sales channel strategies. It is observed that use of internet in sales channel helps the firm in globalizing. It was also found that business to customer (B-to-C) firms use internet for their sales channel more than business to business (B-to-B) firms. One of the strategic move in supply chain can be restructuring the infrastructure of supply chain and using electronic forms for various activities involved in the supply chain process such as materials procurement, repairs, invoicing etc. (Croom, 2001) studied the influence of e-commerce on supply chain. Utilization of open information system can bring up competitive advantage by providing large information to the buyers. Incorporating electronic form for procurement can cut the cost as compared to the earlier traditional procurement method. It will help in cutting the cost in requisition generation & distribution, order generation and distribution and invoice processing. Innovative moves in sales channel improvisation can be; i) use of e-commerce in material procurement process, ii) outsourcing of supply chain process, iii)

strategic orientation to the supply chain structure i.e. restructuring of supply chain. (Croom, 2001) also states that, e-procurement will impact hugely in promoting the restructuring of inventory systems and practices of better deliveries by suppliers.

**v) Innovative Marketing**

Continuous opportunity seeking in the uncertain dynamic market scenarios is the main core of the innovative marketing. (Hacioglu, Eren, Eren, & Celikkan, 2012) states entrepreneurial marketing as a marketing process with emphasis on innovation and customer orientation which eventually help in opportunity grabbing in dynamic situation of market. It is also believed that, for entrepreneurial marketing the given determinants are important: i) opportunity focus, ii) calculated risk-taking behavior, iii) customer orientation and iv) value creation. The author also believes that entrepreneurial marketing is best suited to small firms and it is attached to customers, eventually help in customer attraction.

**vi) Research & Development**

Research & Development act as catalyst for the process of innovation in the firm. (Paul et al., 2010) discussed about the R&D productivity in the pharmaceutical industries. R&D productivity revolves around R&D investments as an input which gives new product or innovation as an output. It is not necessary that R&D productivity is always with accordance to huge investment in research and development. Efficiency in R&D is all about good results with low investment in research and development. The strategy behind the R&D productivity must include both R&D efficiency and effectiveness.

**vii) Team Learning**

Team learning is mostly referred in the literature in the context of problem solving. Mostly team learning is used to solve the complex problems with the help small groups or teams. According to (Roebuck, 1998), individuals participate actively in group activities or group task when compared to individual tasks. For effective team learning, a good team is required. A team can be referred as a potential team for problem solving, when it is composed of individuals from diverse disciplines. It is also observed that, individual's commitment towards the task increases in team learning. In addition to that, credibility and accountability also increase. According to (Lynn, Skov, & Abel, 1999), firms nowadays need to innovate continuously in order to survive and sustain. Team learning helps in a way to move towards sustainability of their firms. Team learning promotes knowledge creation and eventually also helps in utilizing the knowledge effectively. For innovating a new product, certainly lot of factors are involved in it. One of the factors is knowledge management. A team's learning ability and innovative capability promotes the development of new product and attaining success.

**viii) Strategic Networking**

According to (Cooke, 1996), business level networks are appreciable for successful innovation practices. Successful and effective networks are always helpful in for successful knowledge transfers between two parties. Networking or alliance between two or more teams is considered as a strategic move by many firms. The main determinants of networking are: i) reciprocity- transfer of

knowledge; ii) trust- faith on each other; iii) learning; iv) partnership; and v) decentralism. Firms develop partners in order to solve some problems related to market and other firm problems.

**ix) Product Innovation**

The innovation of new product is considered as a strategic move by the firms in order to renew their position and advantage in the competitive market. (Danneels, 2002) defines the process of product innovation is filling the bridge gap between technology and customers. In addition to that, it is the correlation between both technology and customer oriented competencies. Product innovation is also believed as the key determinant for the renewal of firm. Product innovation is linked to many other aspects of firm competencies. For example, in customer competences, it can be the reputation of the firm or brand. Similarly, on the other side, technology competence can be quality of the product.

**x) Technological Innovation**

Innovation in context with technology over time dynamically is considered as a healthy practice for a firm so as to sustain in the competitive space. According to (Stock,

Greis, & Fischer, 2002), innovation in technologies appears when there is excellence in the technological performance of the firm. It has been observed that larger firms more efficient and successful in technological innovation when compared to smaller sized firms.

**xi) Firm-Level Entrepreneurial Orientation**

Entrepreneurial orientation is the process or activity inclusive of various entrepreneurial activities and entrepreneurial approach towards different disciplines in the firm. (Wang, 2008) considered four main factors involved in the entrepreneurial orientation, namely: i) reactivity; ii) risk-taking behavior; iii) aggressiveness; iv) creativity and innovation. It has been observed that entrepreneurial orientation influences the different set of activities at a different level. For example, entrepreneurial activities after entrepreneurial orientation at the individual level will be different to that of organizational level. Also, it has been observed that entrepreneurial orientation in firm level is positively related to the overall firm performance.

**Table 1. Identified strategic innovations factors from the literature**

Sl. no.	Factors	References
1.	Innovative firm infrastructure	(Teece, 1996)
2.	Innovative resource management	(Chen & Huang, 2009)
3.	Innovative operations	(Klingenberg et al., 2013)
4.	Innovative sales channel	(Gabrielsson & Gabrielsson, 2011), (Croom, 2001)
5.	Innovative marketing	(Hacioglu et al., 2012)
6.	Research and development	(Paul et al., 2010)
7.	Team learning	(Roebuck, 1998), (Lynn et al., 1999)
8.	Strategic Networking	(Cooke, 1996)
9.	Product Innovation	(Danneels, 2002)
10.	Technological innovation	(Stock et al., 2002)

11. Firm level entrepreneurial orientation (Wang, 2008)

### Method

To identify and analyze the various broad and key strategic innovation factors in startups we chose case study analysis, studying two different startups. One is product based startup and another one is service based startups. The reason behind choosing case study analysis is to understand deeply about the innovations in startup and role & impacts in the startups.

### Data Collection

Data mainly collected through exploratory and semi structured questions and interview from the high level employees of startups like CEOs and VPs etc. Open questions allowed to explore the study about the management practices and other innovative practices related to strategic innovations in startups.

### Expected Results

As the result is still underway the process and is in the verge of completion by due course of time. We study two different startups and their innovation activities and management practices. We expect contrasting roles of above mentioned each factors related to strategic innovation. As both the startups cater to different segments and work differently to achieve their goals to attain sustainable competitive advantage. Product based startups will look on to focus more on R&D and sequential & regular product innovations over time to time to satisfy the customers. On the other hand, service based startups will look on to focus more on quality aspect of their service. Service based startups

tend to distinguish and differentiate their service from other similar kind of service based startups. Quality of their service will blow the biggest impact for their success and sustainability of their business in this competitive space.

### References

- [1] Chen, C. J., & Huang, J. W. (2009). Strategic human resource practices and innovation performance - The mediating role of knowledge management capacity. *Journal of Business Research*, 62(1), 104–114. <https://doi.org/10.1016/j.jbusres.2007.11.016>
- [2] Cooke, P. (1996). The new wave of regional innovation networks: Analysis, characteristics and strategy. *Small Business Economics*, 8(2), 159–171. <https://doi.org/10.1007/BF00394424>
- [3] Croom, S. (2001). Restructuring supply chains through information channel innovation. *International Journal of Operations & Production Management*, 21(4), 504–515. <https://doi.org/10.1108/01443570110381408>
- [4] Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic Management Journal*, 23(12), 1095–1121. <https://doi.org/10.1002/smj.275>
- [5] Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, 14(4), 532–550. <https://doi.org/10.5465/amr.1989.4308385>
- [6] Gabrielsson, M., & Gabrielsson, P. (2011). Internet-based sales channel strategies of born global firms.

- International Business Review*, 20(1), 88–99.  
<https://doi.org/10.1016/j.ibusrev.2010.05.001>
- [7] Hacıoglu, G., Eren, S. S., Eren, M. S., & Celikkan, H. (2012). The Effect of Entrepreneurial Marketing on Firms' Innovative Performance in Turkish SMEs. *Procedia - Social and Behavioral Sciences*, 58, 871–878.  
<https://doi.org/10.1016/j.sbspro.2012.09.1065>
- [8] Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6–7), 479–491. <https://doi.org/10.1002/smj.196>
- [9] Klingenberg, B., Timberlake, R., Geurts, T. G., & Brown, R. J. (2013). The relationship of operational innovation and financial performance - A critical perspective. *International Journal of Production Economics*, 142(2), 317–323.  
<https://doi.org/10.1016/j.ijpe.2012.12.001>
- [10] Lynn, G. S., Skov, R. B., & Abel, K. D. (1999). Practices that support team learning and their impact on speed to market and new product success. *Journal of Product Innovation Management*, 16(5), 439–454.  
[https://doi.org/10.1016/S0737-6782\(98\)00071-X](https://doi.org/10.1016/S0737-6782(98)00071-X)
- [11] NASSCOM. (2017). *INDIAN START-UP ECOSYSTEM - Traversing the maturity cycle*.
- [12] Paul, S. M., Mytelka, D. S., Dunwiddie, C. T., Persinger, C. C., Munos, B. H., Lindborg, S. R., & Schacht, A. L. (2010). How to improve RD productivity: The pharmaceutical industry's grand challenge. *Nature Reviews Drug Discovery*, 9(3), 203–214. <https://doi.org/10.1038/nrd3078>
- [13] Roebuck, D. B. (1998). Using Team Learning in Business and Organization Communication Classes. *Business Communication Quarterly*, 61(3), 35–49. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=1069759&site=ehost-live>
- [14] Stock, G. N., Greis, N. P., & Fischer, W. A. (2002). Firm size and dynamic technological innovation. *Technovation*, 22(9), 537–549.  
[https://doi.org/10.1016/S0166-4972\(01\)00061-X](https://doi.org/10.1016/S0166-4972(01)00061-X)
- [15] Teece, D. J. (1996). Firm organization, industrial structure, and technological innovation. *Journal of Economic Behavior and Organization*, 31(2), 193–224. [https://doi.org/10.1016/S0167-2681\(96\)00895-5](https://doi.org/10.1016/S0167-2681(96)00895-5)
- [16] Wang, C. L. (2008). Entrepreneurial Orientation, Learning Orientation, and Firm Performance. *Entrepreneurship Theory and Practice*, 32(4), 635–657.  
<https://doi.org/10.1111/j.1540-6520.2008.00246.x>

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## **A Structural Equation Modeling of Variables Influencing the Customer Loyalty of Automobile Insurance in Thailand**

### **ABSTRACT**

The objectives of this study were to examine factor influencing the customer loyalty of automobile insurance in Thailand, to study how the factors influencing the customer loyalty, and to analyze the structural equation model of variables influencing the customer loyalty of automobile insurance in Thailand. The participants of this study were 549 customers of insurance companies in Thailand derived from multi-stage sampling. The questionnaire was employed to gather the primary data. The data were analyzed using confirmatory factor analysis (CFA), and structural equation modeling (SEM). The findings reveal that service quality, brand image, and customer commitment had a positive impact on customer loyalty. However, perceived value and customer trust had a negative impact on customer loyalty. We also found that service quality had a strong impact on customer satisfaction. However, customer satisfaction had no direct effect on customer loyalty. In addition, we found that perceived value could lead to customer satisfaction. Finally, there was no relationship between brand image and customer satisfaction. Suggestions and recommendations are discussed in this paper.

**Keywords:** Automobile Insurance, Thailand, Customer Loyalty, Customer Satisfaction, Service Quality, Perceived Value, Brand Image, Trust, Commitment

### **INTRODUCTION**

Since organizations are now in the competitive world, most of them have to compete against each other to gain more customers. They have adapted themselves to meet the dynamic changes by changing their strategies to attract new customers and to retain the existing ones. Customer loyalty is the most important goal for an organization (Eakuru & Mat, 2008; Reichheld & Teal, 1996) since it provides the organization's competitive advantages. Customer loyalty results in the company's security, market share growth, and financial strengths (Kotler, 2003). The loyal customers will make a purchasing decision without hesitation and are not interested in any products of other corporate's competitors (Jacoby & Kyner, 1973). Hence, many organizations having poor loyalty from their customers are now focusing on improving the loyalty among the customers (Kuusik et al., 2009) since the customer loyalty strategically provides mutual benefits for both the organization and its customers (Reichheld & Detrick, 2003). The organizations can benefit from the customer loyalty by gaining higher revenues and market shares while the customers enjoy some privileges and feeling safe to use the company's products and services. Reichheld and Sasser (1990) supported this argument by saying that "if an organization can keep existing customers by 5%, this will result in 25-85% increase of benefit." According to Singh and Imran (2012), they stated that it costs more to get a new customer than to keep an existing one. The customer loyalty could lead to a big amount of purchasing, and competitive advantage. In addition, the loyal customers' word of mouth is valuable for securing the existing customers (Haywood, 1988; Oliver, 1999; Petrick, 2004; Shoemaker & Lewis, 1999; Yoo & Bai, 2013).

The customer loyalty is also beneficial for service industry (Snyder, 1986) like insurance company since it enhances the corporate's success (Rastgoo & Dastranj, 2016). It leads to a dramatic benefit for the insurance company in various aspects such as increasing revenues, reducing cost, gaining higher market share, and minimizing the customer's sensitivity toward the insurance premium (Abasnejad et al., 2011). Whenever the customers are loyal to the company, they will perform frequent buying, willingness to try new company's products and services, telling the others about the company's products and service, and sincerely providing suggestions for the company (Reichheld & Sasser, 1990). Previous studies indicated that there are various factors that affect the customer loyalty. For instances, customer satisfaction (Neal, 1999; Rai & Medha, 2013; Yazdanpanah et al., 2013), service quality (Rai & Medha, 2013; Yazdanpanah et al., 2013), trust (Rai & Medha, 2013; van Tonder, 2016), commitment (Rai & Medha, 2013; van Tonder, 2016), switching cost (Rai & Medha, 2013), communication (Rai & Medha, 2013), brand image (Rahi, 2016), customer relationship (Rahi, 2016), public relations perception (Rahi, 2016), and customer value (Rahi, 2016). Previous studies indicated that the customer loyalty was associated with the word of mouth (Brown et al., 2012; Lewis & Soureli, 2006; Zeithaml et al., 1996), up-selling (Reichheld & Cook, 1996), market share (Chaudhuri & Holbrook, 2001), and profit (Andreassen & Lindestad 1998; Chiou & Droge 2006; Reichheld & Sasser 1990). These can be implied that the

customer loyalty is the core foundation of competitive advantage and sustainable growth of manufacturing, service, and retail industry (Dick & Basu, 1994). This study, therefore, would like to examine factors affecting the customer loyalty of automobile insurance in Thailand and to provide suggestions for related stakeholders on improving their customer loyalty.

## LITERATURE REVIEW

### Customer Loyalty

Customer loyalty refers to a repeated purchase behavior based on an individual's knowledge, emotional feeling, assessment, and behavioral elements (Jacoby, 1971). This loyalty is also associated with trust in an organization or service providers (Fournier & Yao, 1997). Zeithaml and Bitner (1996) noted that an individual who is loyal will purchase a greater amount of products without hesitation. The individual always sincerely gives suggestions for the company to improve the products. Furthermore, this individual will continuously purchase a company's products at all time without changing his/her mind to purchase other brands. Dick and Basu (1994) divided customer loyalty into four types; true loyalty, latent loyalty, spurious loyalty, and no loyalty. However, Oliver (1997) classified it into four types as cognitive loyalty, affective loyalty, conation loyalty, and action loyalty. Coyles and Gokey (2002) provided different aspect loyalty categories. They mentioned that there are three categories of loyalty; emotive, inertial, and deliberative loyalty. Some elements and behaviors indicating loyalty to a brand consist of cognitive components (Chowdhury et al., 1998; Haelsig et al., 2007; Huddleston et al., 2009), affective elements (Chowdhury et al., 1998; Halesig et al., 2007; Huddleston et al., 2009), trust and commitment (Chiu et al., 2008; Eakuru & Mat, 2008; Haelsig et al., 2007), purchase intention (Bloemer & Odekerken-Schroder, 2002; Chiu et al., 2008; Chowdhury et al., 1998; Cronin et al., 2000; Dimitriades, 2006; Eakuru & Mat, 2008; Liang & Wang, 2005), positive word-of-mouth communication (Bloemer & Odekerken-Schroder, 2002; Chiu et al., 2008; Chowdhury et al., 1998; Cronin et al., 2000; Dimitriades, 2006; Eakuru & Mat, 2008; Liang & Wang, 2005), complaining behavior (Ibrahim & Najjar, 2008), Price insensitivity (Bloemer & Odekerken-Schroder, 2002; Chiu et al., 2008; Dimitriades, 2006; Ibrahim & Najjar, 2008), no switching behavior (Eakuru & Mat, 2008; Ibrahim & Najjar, 2008), First choice (Lee & Overby, 2004; Parasuraman, Zeithaml, & Malhotra, 2005; Wong & Sohal, 2006; Zeithaml et al., 1996), and do more business (Parasuraman et al., 2005; Zeithaml et al., 1996). According to the mentioned studies, repurchase intention, word-of-mouth communication, and recommendation will be emphasized in this study.

### Customer Satisfaction

Fornell (1992) defined the consumer satisfaction emphasizing on an evaluation process of a consumer. However, Giese and Cote (2002) defined customer satisfaction as "the response of the end user who may or may not be the purchaser." According to Lombard (2009), customer satisfaction referred to the level of satisfaction with the products or services that meet the consumer's expectation. Customer satisfaction can be measured using various measurement; Swedish Customer Satisfaction Barometer (SCSB), American Customer Satisfaction Index (ACSI), European Customer Satisfaction Index (ECSI), Japanese Customer Satisfaction Index (JCSI), and Thailand Customer Satisfaction Index (TCSI). Previous studies confirmed the positive relationship between customer satisfaction and customer loyalty (Neal, 1999; Rai & Medha, 2013; Yazdanpanah et al., 2013). In this study, the customer satisfaction was measured by three dimensions; satisfaction with the insurance staff, satisfaction with functional services provided by the automobile insurance sector, and satisfaction with the insurance company. Hence, the first hypothesis was proposed as follow;

*H<sub>1</sub>*: Customer satisfaction has an influence on customer loyalty

### Service Quality

Service quality is a concept which adheres to delivering service without defect to meet and to understand the consumer's needs (Crosby, 1988). Lewis and Bloom (1983) defined the service quality as the extent to which a corporation can provide products and services to meet the customer expectation. The most well-known tool for measuring the service quality is the SERVQUAL developed by Parasuraman et al. (1988). In their early study, there were ten dimensions of measuring the quality of service; access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangible, and understanding's knowing the customer. However, the new version of SERVQUAL consists of five dimensions; tangibility, reliability, responsiveness, assurance, and empathy. This measure consists of 22 items that measure the five dimensions (Parasuraman et al., 1994) and was applied in this study. Some studies focused on the relationship between service quality and customer satisfaction (Anderson & Sullivan, 1993; Fornell et al, 1996; Oliver, 1993; Spreng & Macky, 1996) and found positive relationship between these two variables. In addition, some studies found a positive relationship between service quality and customer loyalty (Cronin & Taylor, 1992; Kheng et al., 2010; Oliver, 1999; Rai & Medha, 2013). Hence, the second and third hypotheses were proposed as follows;

*H<sub>2</sub>*: Service quality has an influence on customer satisfaction

*H<sub>3</sub>*: Service quality has an influence on customer loyalty

### **Perceived Value**

Generally, perceived value is defined as the differentiation between total benefits and losses from purchasing products or services. The mentioned benefits involve benefits from using, social benefit, and psychological benefit (Sweeney & Soutar, 2001). According to Zeithaml (1988), it refers to the utilities of a product as evaluated by a consumer based on his/her perception. Gounaris et al. (2007) divided the perceived value into six elements; product value, procedural value, personal value, emotional value, social value, and perceived sacrifice. The perceived value was associated with the customer satisfaction (Dodds & Monroe, 1985; Gera, 2011; Schiffman & Kanuk, 2004; Yazdanpanah et al., 2013), and customer loyalty (Bolton & Drew 1991; Rahi, 2016; Sirdeshmukh et al., 2002). This study focused on only three dimensions of perceived value; social value, emotional value, and functional value. Based on the review of the literatures, the fourth and fifth hypotheses were proposed as followings;

*H<sub>4</sub>*: Perceived value has an influence on customer satisfaction

*H<sub>5</sub>*: Perceived value has an influence on customer loyalty

### **Brand Image**

Brand image is important for creating the value of the brand and its owner (Anaker, 1991). It is associated with the customer's beliefs on a brand which include functional and symbolic beliefs (Low & Lamp, 2000). Keller (1993) defined the brand image as the perception of the brand which reflects a relationship between the brand and a customer's memory. According to Kotler (2003), the brand image refers to "the set of beliefs, ideas, and impression that a person holds regarding an object." Advertisement and public relations are employed to show the specific attributes of the brand. He also noted that various brands from the same or related corporates do not have to get a similar image. The brand image is specific for each brand depending on the positioning, and differentiation strategies of the company. In this study, the brand image was defined as the set of beliefs, ideas, and impression that a person holds regarding a trademark or brand of an insurance company. It is also associated with a company's good reputation, social contribution, positive-attitude staff, and provision of good and various services to meet the customer's needs. Based on the studies of Park et al. (1986), Hsieh and Li (2008), Hung (2008), and Chi et al. (2011), the brand image can be measured by three dimensions; functional benefit, symbolic benefit, and experiential benefit. Previous studies indicated that the brand image had a positive impact on the customer satisfaction (Kapferer, 2011; Palacio, Meneses, & Perez, 2012). It also resulted in the customer loyalty (Pimentel & Heckler, 2013; Rahi, 2016). The sixth and seventh hypotheses were then proposed as follows;

*H<sub>6</sub>*: Brand image has an influence on customer satisfaction

*H<sub>7</sub>*: Brand image an influence on customer loyalty

### **Customer Commitment**

Customer commitment is one of the major elements enhancing the achievement of a long-term relationship between a corporate and its clients which finally lead to a higher level of corporate's benefits (Walter, et al., 2002). Whenever an individual has positive experiences and attitude toward an object, he/she will repurchase and give a word-of-mouth to the others. Finally, the individual will be committed to the brand resulting in sustainable competitive advantage (Hur et al., 2010). Researchers defined the customer commitment in different perspectives. According to Rauyruen and Miller (2007), the customer commitment referred to "a psychological sentiment of the mind through which an attitude concerning continuation of a relationship with a business partner is formed." Hence, it involves a customer motivation to purchase products and services presented by a corporate (Al-abdi, 2010). In this study, the customer commitment was defined as a client's firmly and stable attitude toward an insurance company since the client was impressed by its good customer-oriented service, and better benefit provision. Based on the studies of Meyer and Allen (1991), Gundlach et al. (1995), Walter et al. (2002), Bansal et al. (2004), Keh & Xie (2009), Al-abdi (2010), and Shukla et al. (2015), the customer commitment was measured by three dimensions; affective commitment, calculative commitment, and normative commitment. Rai and Medha (2013) had found the positive relationship between the customer commitment and customer loyalty. Other studies also found similar results (Hennig-Thurau et al., 2004; Morgan & Hunt, 1994; Rauyruen et al., 2007). Then, the eight hypothesis was proposed as follow;

*H<sub>8</sub>*: Customer commitment has an influence on customer loyalty

### **Customer Trust**

Chaudury and Holbrook (2001) defined customer trust as a confidence of an individual toward a brand. It is associated with a confidence on a sales agent to provide a long-term service (Chi et al., 2011). Tsu and Reng (2013) defined the customer trust according to the insurance context. They stated that trust refers to the confidence of the customer toward the expression of the insurance agents to develop a long-term relationship with their customers. Based on the studies of Crosby et al. (1990), Chi et al. (2011), and Wei et al. (2014), the customer trust can be categorized into three dimensions; credible, honest, and trustworthy. However, this study focused on three elements of trust which were trust in a company, trust in agent/staff, and trust in management. Customer trust provides positive consequences for a firm. It leads to customer satisfaction (Anderson et al.,

1990). Some previous studies found that the customer trust resulted in the customer loyalty (Abdolaziz & Mostafa, 2016; Aydin and Ozer, 2005; Chen & Xie, 2007; Doney & Cannon, 1997; Du Plessis, 2010; Morgan & Hunt, 1994). The ninth hypothesis, therefore, was proposed as follow;

*H<sub>9</sub>*: Customer trust has an influence on customer loyalty

## METHOD

### Participants

The participants of this study were 549 customers of insurance companies in Thailand derived from multi-stage sampling. The majority of the respondents were female accounting for 52.80%. Most of the respondents were at the age of 30-39 years old. Approximately 57.40% of them held a bachelor degree. Most of them worked as an employee in the private companies (41.53%), and 49.36% were single. The majority of them had an income ranging from 10,001 to 20,000 Baht. In addition, 75.41% had the car ownership.

### Measures

There were seven measures employed in this study. All constructs (customer loyalty, customer satisfaction, service quality, perceived value, brand image, commitment, and trust) were measured using 7-point Likert's scale anchored by strongly disagree to strongly agree as followings;

Customer loyalty was measured and adapted from the studies of Yazdanpanah et al. (2013); Hsieh and Li (2008); and (Nasir, 2014). It consisted of six dimensions; repurchase, positive word-of-mouth, and recommendation. The measure had three items including "I will purchase the insurance premium from the previous company" and "I will tell other positive information of the insurance company."

Customer satisfaction was developed and measured based on the studies of Yazdanpanah et al., (2013); Masood and Sharma, (2010) and Dambush (2014). This measure consisted of three dimensions; satisfaction with the company, satisfaction with functional services, and satisfaction with insurance. The measure had four items including "I am impressed in the service of the insurance agent" and "the insurance agent has a good skill, knowledge, and capability on his/her job."

Service quality was developed and measured based on the studies of Tsoukatos and Rand (2006); Masood and Sharma (2010) and Dambush, (2014). It consisted of six dimensions; tangible, reliability, responsiveness, assurance, empathy, and technology. This measure consisted of eight items including "the insurance agent provides service friendly and politely" and "I am serviced by the agent who understands the work system well, have knowledge and capability to perform his/her task."

Perceived value was measured and adapted from the study of Yazdanpanah et al., (2013). It was measured by three dimensions; social value, emotional value, and functional value. This measure consisted of five items including "the current insurance company provides protection and follows the conditions of the contract" and "purchasing the insurance premium is valuable in accordance with feeling safety and a service quality I have received."

Brand image was measured and adapted from the study of Kumar (2011). This measure consisted of three dimensions; functional benefit, symbolic benefit, and experiential benefit. There were four items including "the insurance company has a good reputation and always participates in social contribution activities" and "the insurance company is well-prepared on various services e.g. staff and service area."

Customer commitment was measured and adapted from the studies of Allen and Meyer (1990); Rai and Medha (2013) and Dambush (2014). This measure had three dimensions; affective commitment, calculative commitment, and normative commitment. It consisted of five items including "I will be the customer of this current insurance company since I am happy and be committed as its customer" and "this insurance company provides good management and places importance on its customers."

Customer trust was measured and adapted from the studies of Crosby et al. (1990) and Wei et al. (2014). It had three dimensions; credible, honest, and trustworthy. It consisted of five items including "I trust in the service system of my current insurance company" and "I am willing to be the customer of my current insurance company since comparing the advantages/disadvantages with the service of other companies requires plenty of time, energy, and efforts."

### Analysis

Several statistical techniques were used in this study. Descriptive statistics such as mean, frequency, percentage, and standard deviation were employed to describe the attributes of each variable. Confirmatory factor analysis was used to validate the measurement model of each construct. Finally, the full structural model was analyzed using structural equation modeling technique (SEM) in order to test the hypothesis and examine the model fit. The SEM nowadays has become very popular among researchers performing quantitative research (Kline, 2011; Ullman, 2006) since it allows for analyzing complex relationships between latent variables. There are two parts of SEM namely the measurement and structural parts. The measurement part links the observed variables to their latent variables. However, the structural part links each construct together. Hence, the major role of SEM is that it can estimate these two parts in a single one model.

## FINDINGS

### Confirmatory Factor Analysis (CFA)

Firstly, the confirmatory factor analysis (CFA) was conducted to test the validity of the measurement models. According to this technique, there is a comparison between theoretical measurement models against the empirical data. The overall model fit and construct validity were examined (Hair et al., 2014). Figure 1 illustrates the selected model-fit-statistics from the CFA output indicating the overall model chi-square of 591.865 with 171 degrees of freedom. The *p*-value associated with the result is .000. This *p*-value is significant since this study had the sample size of 549 that greater than 250, and the observed variables of 24 which ranged between 12 and 30 (Hair et al., 2014). The value of RMSEA is .067 indicating additional support for model fit. The normed Chi-square is 3.461 considered as acceptable fit for the CFA model. In addition, the CFI of .957 which exceeds the suggested cutoff values indicating model fit.

### SEM Analysis

According to the SEM analysis, the SEM model fit and the structural relationships were examined. The Chi-square is 1515.680 with 233 degrees of freedom ( $p < .05$ ) and the normed chi-square is 6.505. The model CFI is .924 with an RMSEA of .100. We can see that the overall model fit changed a little from the CFA model. Some measures are within the range indicating acceptable good fit. We examined the path coefficients and loading estimates to make sure that they have not changed substantially from the CFA results. Based on the residuals and modification indices information from the initial SEM model, we examined a re-specification of our hypothesized SEM model. Hence, the model was re-estimated and the model fit statistics are shown in Table 1. According to the re-specification, the overall fit reveals the chi-square value of 288.049 with 155 degrees of freedom ( $p < .05$ ), and the normed chi-square value of 1.858. The model CFI is .992 with RMSEA of .040. In addition, the GFI value is .960. All of these measures are within a range that would be associated with a good fit. These suggest that the model provides the overall good fit.

**Table 1** Comparison of goodness-of-fit measures between hypothesized SEM model and revised SEM model

Goodness-of-Fit Statistics	SEM Model	Revised SEM Model
Absolute fit measures		
Chi-square	1515.680	288.049
Degree of freedom	233	155
<i>p</i> -value	.000	.000
GFI	.812	.960
RMSEA	.100	.040
RMR	.051	.031
Normed Chi-square	6.505	1.858
Incremental fit indices		
NFI	.911	.983
CFI	.924	.992
RFI	.895	.970
Parsimony fit indices		
AGFI	.758	.923
PNFI	.769	.552

Table 2 reveals that several estimates from the original model have changed as would be expected. Most notably, the PER\_VAL→LOYALTY, BRA\_IM→LOYALTY, and TRUST→LOYALTY relationships are significant. In addition, the SERV\_QUAL→SATIS, SERV\_QUAL→LOYALTY, PER\_VAL→SATIS, and COMMIT→LOYALTY relationships remain significant but slightly smaller than before except the SERV\_QUAL→LOYALTY relationship which is substantially greater than before. Furthermore, the SATIS→LOYALTY and BRA\_IM→SATIS relationships remain insignificant.

**Table 2** Comparison of structural relationships for the hypothesized and revised model

Hypothesized Model		Revised Model	
Structural Relationship	Std. Parameter Estimated	Structural Relationship	Std. Parameter Estimated
<i>H</i> <sub>1</sub> : SATIS→LOYALTY	.101	<i>H</i> <sub>1</sub> : SATIS→LOYALTY	.021
<i>H</i> <sub>2</sub> : SERV_QUAL→SATIS	.878***	<i>H</i> <sub>2</sub> : SERV_QUAL→SATIS	.849***
<i>H</i> <sub>3</sub> : SERV_QUAL→LOYALTY	.508**	<i>H</i> <sub>3</sub> : SERV_QUAL→LOYALTY	.761***
<i>H</i> <sub>4</sub> : PER_VAL→SATIS	.142*	<i>H</i> <sub>4</sub> : PER_VAL→SATIS	.130*
<i>H</i> <sub>5</sub> : PER_VAL→LOYALTY	-.108	<i>H</i> <sub>5</sub> : PER_VAL→LOYALTY	-.196*
<i>H</i> <sub>6</sub> : BRA_IM→SATIS	-.065	<i>H</i> <sub>6</sub> : BRA_IM→SATIS	-.018
<i>H</i> <sub>7</sub> : BRA_IM→LOYALTY	.155	<i>H</i> <sub>7</sub> : BRA_IM→LOYALTY	.232**
<i>H</i> <sub>8</sub> : COMMIT→LOYALTY	.314*	<i>H</i> <sub>8</sub> : COMMIT→LOYALTY	.297**
<i>H</i> <sub>9</sub> : TRUST→LOYALTY	-.103	<i>H</i> <sub>9</sub> : TRUST→LOYALTY	-.247*

\**p*-value < .05, \*\**p*-value < .01, \*\*\**p*-value < .001

## DISCUSSION

This study extends current knowledge related to the interrelationship between selected variables (customer satisfaction, service quality, perceived value, brand image, customer commitment, and customer trust) and customer loyalty. We found no association between customer satisfaction and customer loyalty which did not support the results of previous studies (Neal, 1999; Rai & Medha, 2013; Yazdanpanah et al., 2013) that confirmed a strong relationship between customer satisfaction and customer loyalty. Hence, this issue should be studied more in different cultural contexts to obtain a better understanding of clients' attitude toward insurance products and services. The findings also revealed a positive relationship between service quality and customer satisfaction which supported the findings of previous studies (Anderson & Sullivan, 1993; Fornell et al, 1996; Oliver, 1993; Spreng & Macky, 1996). This means that individual who experiences a good service from an insurance firm will be satisfied with the service and also the firm itself. We also found a positive relationship between service quality and customer loyalty which supported the previous findings (Cronin & Taylor, 1992; Kheng et al., 2010; Oliver, 1999; Rai & Medha, 2013). Perceived value was the factor positively influencing customer satisfaction which was in line with previous studies (Dodds & Monroe, 1985; Gera, 2011; Schiffman & Kanuk, 2004; Yazdanpanah et al., 2013). However, the finding revealed a negative relationship between perceived value and customer loyalty which was in contrast with other studies (Bolton & Drew 1991; Rahi, 2016; Sirdeshmukh et al., 2002). Notably, social value was the most important indicator explaining perceived value. Hence, this might lead to different findings compared to the research findings in the western countries. The more in-depth studies should be conducted in a comparison between Thai and other social contexts in order to obtain a better understanding. Various researchers suggested that brand image is an important factor leading to customer satisfaction (Kapferer, 2011; Palacio, Meneses, & Perez, 2012). However, there was no association between brand image and customer satisfaction in Thai insurance context. We can explain that Thais are concerned about the quality of service rather than the brand reputation and image. Hence, providing the clients a good quality of service will result in the clients' satisfaction. Previous studies showed a strongly positive relationship between brand image customer loyalty (Pimentel & Heckler, 2013; Rahi, 2016). This study also found a positive relationship between brand image and customer loyalty. The more positive attitude toward brand image, the most likely the customer loyalty an insurance firm will obtain. In addition, our study found a positive relationship between customer commitment and customer loyalty which supported the previous studies (Hennig-Thurau et al., 2004; Morgan & Hunt, 1994; Rai & Medha, 2013; Rauyruen et al., 2007). Customer commitment occurs when an individual has a good experience and attitude toward the insurance products and services. The individual, then, will be gradually committed to the company products, services, and the company itself. The individual who commits to the company and its brand will have a customer loyalty as supported by the said studies. Hence, the individual will express his/her loyalty by performing repurchase, giving positive word-of-mouth communication, and giving suggestions and recommendations for the company. Last but not least, customer trust has been noted by various studies (Abdolaziz & Mostafa, 2016; Aydin and Ozer, 2005; Chen & Xie, 2007; Doney & Cannon, 1997; Du Plessis, 2010; Morgan & Hunt, 1994) that it could enhance customer loyalty. However, our study found contrast result. We found a negative relationship between customer trust and customer loyalty. This might be related to the attitude of respondents toward purchasing insurance. In western countries, people usually buy the insurance for many reasons; to pay final expenses, to cover children's expenses, to replace the spouse's income, to pay off debts, to buy a business partner's shares, to pay off estate taxes, cover health care costs, and to maintain your current standard of living. However, some Thais may see insurance as a burden and not necessary for their living so they are not interested in purchasing the insurance. Since service quality has the greatest impact on customer loyalty, insurance firms should emphasis on improving the customer service. To achieve this goal, the insurance firm should focus on its responsiveness, reliability, tangible, assurance, empathy, and technology in that order.

## REFERENCES

- Abasnejad, S., Kafash M.H. & Sehat S. (2011). The relationship between sale ethical behavior and customer loyalty in insurance life (Case study: An insurance company). *Insurance Journal*, 26(4), 131-154.
- Al-abdi, Y. F., & Kang, J. (2015). A three-dimensional customer commitment model: Its impact on relational outcomes. In Proceedings of the 2008 Academy of Marketing Science (AMS) Annual Conference (pp. 68-68). Springer International Publishing.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of occupational and organizational psychology*, 63(1), 1-18.
- Anaker, D. A. (1991). Managing brand equity: Capitalizing on the value of a brand name. NY: Free Press.
- Anderson, E.W., Fornell, C., & Lehmann, D.R. (1994). customer satisfaction, market share and profitability: findings from Sweden. *Journal of Marketing*, 58(3), 53-66.
- Anderson, J. C., Narus, J. A., & Narayandas, D. (2009). Business market management: Understanding, creating, and delivering value. NY: Pearson Prentice Hall.
- Andreassen, T. W., & Lindestad, B. (1998). Complex services and customer loyalty: The significance of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. *International Journal of Service Industry Management*, 9(1), 7-23.
- Aydin, S., & Ozer, G. (2005). How switching costs affect subscriber loyalty on the Turkish mobile phone market: an exploratory study. *Journal of Targeting Measurement and Analysis for Marketing*, 14(2), 141-155.
- Bansal, H. S., Irving, P. G., & Taylor, S. F. (2004). A three-component model of customer to service providers. *Journal of the Academy of Marketing Science*, 32(3), 234-250.
- Bloemer, J., & Odekerken-Schroder, G. (2002). Store satisfaction and store loyalty explained by customer-and store-related factors. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 15, 68-80.
- Bolton, R. N. (1998). A dynamic model of the duration of the customer's relationship with a continuous service provider: The role of satisfaction. *Marketing Science*, 17(1), 45-65.
- Brown, T.J., Barry, T.E., Dacin, P.A., & Gunst, R.F. (2012). Spreading the word: Investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context. *Journal of the Academy of Marketing Science*, 33(2), 123-138.
- Chaudhuri, A., & Holbrook, M.B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 60(2), 81-93.
- Chen, Y., & Xie, J. (2007). Cross market network effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Chi, H., Yeh, H. R., & Tsai, Y. C. (2011). The influences of perceived value on consumer purchase intention: the moderating effect of advertising endorser. *Journal of International Management Studies*, 6(1), 1-6.
- Chiou, J-S, & Droge, C. (2006). Service quality, trust, specific asset investment, and expertise: Direct and indirect effects in a satisfaction-loyalty framework. *Journal of the Academy of Marketing Science*, 34(4), 613-627.
- Chiu, H. C., Hsieh, Y. C., & Wang, M. C. (2008). How to encourage customers to use legal software. *Journal of Business Ethics*, 80(3), 583-595.
- Chowdhury, J., Reardon, J., & Srivastava, R. (1998). Alternative modes of measuring store image: an empirical assessment of structured versus unstructured measures. *Journal of Marketing Theory and Practice*, 6(2), 72-86.
- Coyles, S., & Gokey, T. C. (2002). Customer retention is not enough. *The McKinsey Quarterly*, 2(2), 81-89.
- Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Cronin, J. J., Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56 (3), 55-68.
- Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: an interpersonal influence perspective. *Journal of Marketing*, 54(3), 68-81.
- Dambush, N. H. (2014). The role of customer relationship marketing on customer retention: A case of Ethiopian Insurance Corporation in Mekelle Branch. Retrieved May 3, 2018 from <https://opendocs.ids.ac.uk/opendocs/handle/123456789/4388>
- Dick, A., & Basu, K. (1994). Customer loyalty: toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.
- Dimitriades, Z. S. (2006). Customer satisfaction, loyalty and commitment in service organizations: Some evidence from Greece. *Management Research News*, 29(12), 782-800.
- Dodds, W.B., & Monroe, K.B. (1985). The effects of brand and price information on subjective product evaluation. *Advance in Consumer Research*, 12, 85-90.

- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61(2), 35-51.
- Du Plessis, L. (2010). Customer relationship management and its influence on customer loyalty. South Africa: University of Johannesburg.
- Eakuru, N., & Mat, N. K. N. (2008). The application of structural equation modeling (SEM) in determining the antecedents of customer loyalty in banks in South Thailand. *The Business Review*, 10(2), 129-139.
- Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: nature, purpose, and findings. *Journal of Marketing*, 60(4), 7-18.
- Fournier, S., & Yao, J. L. (1997). Reviving brand loyalty: A reconceptualization within the framework of consumer-brand relationships. *International Journal of research in Marketing*, 14(5), 451-472.
- Gera, R. (2011). Modelling the service antecedents of favourable and unfavourable behaviour intentions in life insurance services in India: An SEM study. *International Journal of Quality and Service Sciences*, 3(2), 225-242.
- Giese, J.L., & Cote, J.A. (2002). Defining consumer satisfaction. *Academy of Marketing Science Review*, 2000(1), 1-24.
- Gounaris, S. P., Tzempelikos, N. A., & Chatzipanagiotou, K. (2007). The relationships of customer-perceived value, satisfaction, loyalty and behavioral intentions. *Journal of Relationship Marketing*, 6(1), 63-87.
- Gundlach, G. T., Achrol, R. S., & Mentzer, J. T. (1995). The structure of commitment in exchange. *Journal of Marketing*, 59(1), 78-92.
- Haelsig, F., Swoboda, B., Morschett, D., & Schramm-Klein, H. (2007). An intersector analysis of the relevance of service in building a strong retail brand. *Managing Service Quality*, 17(4), 428-448.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2014). *Multivariate data analysis* (7<sup>th</sup> ed.). Essex, UK: Pearson Education Limited.
- Haywood, K. M. (1988). Repeat patronage: cultivating alliances with customers. *International Journal of Hospitality Management*, 7(3), 225-237.
- Hennig-Thurau, T. (2004). Customer orientation of service employees: Its impact on customer satisfaction, commitment, and retention. *International Journal of Service Industry Management*, 15(5), 460-478.
- Hsieh, A-T., & Li, C-K. (2008). The moderating effect of brand image on public relations perception and customer loyalty. *Marketing Intelligence & Planning*, 26(1), 26-42.
- Huddleston, P., Whipple, J., Nye Mattick, R., & Jung Lee, S. (2009). Customer satisfaction in food retailing: comparing specialty and conventional grocery stores. *International Journal of Retail & Distribution Management*, 37(1), 63-80.
- Hung, C.H. (2008). The effect of brand image on public relations perceptions and customer loyalty. *International Journal of Management*, 25(2), 237-46.
- Hur, W. M., Park, J., & Kim, M. (2010). The role of commitment on the customer benefits-loyalty relationship in mobile service industry. *Service Industries Journal*, 30(14), 2293-2309.
- Ibrahim, H., & Najjar, F. (2008). Relationship bonding tactics, personality traits, relationship quality and customer loyalty: Behavioral sequence in retail environment. *The ICFAI Journal of Services Marketing*, 6(4), 1-37.
- Jacoby, J., & Kyner, D.B. (1973). Brand loyalty vs repeat purchasing behavior. *Journal of Marketing Research*, 10(1), 1-9.
- Kapferer, J. N. (2011). The roots of brand loyalty decline: An international comparison. *Ivey Business Journal*, 69(4), 1-6.
- Keh, H.T., & Xie, Y. (2009). Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment. *Industrial Marketing Management*, 38(7), 732-742.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Kheng, L.L., Mahamad, O., Ramayah, T., & Mosahab, R. (2010). The Impact of Service Quality on Customer Loyalty: A Study of Banks in Penang, Malaysia. *International Journal of Marketing Studies*, 2(2), 57-66.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3<sup>rd</sup> ed.). NY: Guilford Press.
- Kotler, P. (2003). *Marketing management*. Upper Saddle River, NJ: Prentice Hall.
- Kumar, M. (2011). The Impact of 'Brand equity' determinants on consumers' purchase decisions. A case study of the processed food sector in the national capital region of India. *Journal of Business and Retail Management Research*, 6(1), 1-8.
- Kuusik, A., & Varblane, U. (2009). How to avoid customers leaving: the case of the Estonian telecommunication industry. *Baltic Journal of Management*, 4(1), 66-79.
- Lee, E., & Overby, J. W. (2004). Creating value for online shoppers implications for satisfaction and loyalty. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 17(1), 54-67.
- Lewis, R., & Soureli, M. (2006). The antecedents of consumer loyalty in retail banking. *Journal of consumer Behaviour*, 5(1), 15-31.

- Liang, C.J. and W.H. Wang, 2007. An insight into the impact of a retailer's relationship efforts on customers' attitudes and behavioral intentions. *International Journal of Bank Marketing*, 25(5): 336-366.
- Lombard, R. M. (2009). Customer retention strategies implemented by fast food outlets in the Gauteng, Western Cape and Kwazulu-Natal Provinces of South Africa: A focus on something fishy, Nando's and Steers. *African Journal of Marketing Management*, 1(2), 70-80.
- Low, G. S., & Lamb, C. W. (2000). The measurement and dimensionality of brand associations. *Journal of Product & Brand Management*, 9(6), 350-370.
- Masood, S., & Sharma, T.G. (2010). Analyzing customer satisfaction with service quality in life insurance services. *Journal of Targeting Measurement and Analysis for Marketing*, 18(3), 221 – 238.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89.
- Morgan, R. M., & Hunt, S. D. (1994) The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38.
- Nasir, A. A. (2011). Customer loyalty of export loss insurance in South Sulawesi. *Journal of Civilization*, 5(35), 109-121.
- Neal, W.D. (1999). Satisfaction is nice, but value drives loyalty. *Marketing Research*, 11(1), 21–23.
- Oliver, R. L. (1993). A conceptual model of service quality and service satisfaction: Compatible goals, different concepts. In T. A. Swartz, D. E. Bowen, & S. W. Brown (Ms.). *Advances in services marketing and management* (Vol. 2, pp. 65-85). Greenwich: CT. JAI.
- Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(1999), 33-44.
- Palacio, A. B., Meneses, G. D., & Perez, P. J. P. (2012). The configuration of the university image and its relationship with satisfaction of students. *Journal of Education Administration*, 40(5), 486–505.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1994). Alternative scales for measuring service quality: A comparative assessment based on psychometric and diagnostic criteria. *Journal of Retailing*, 70(3), 201-230.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213-233.
- Park, C. W., Jaworski, B. J., & MacInnis, D. J. (1986). Strategic brand concept-image management. *Journal of Marketing*, 50(4), 135-145.
- Petrick, J. F. (2004). Are loyal visitors desired visitors? *Tourism Management*, 25(4), 463-470.
- Pimentel, R. W., & Heckler, S. E. (2003). Changes in logo designs: Chasing the elusive butterfly curve. In L. M. Scott & R. Batra (Eds.), *Persuasive imagery: A consumer response perspective* (pp. 105-127). Mahwah, NJ: Lawrence Erlbaum.
- Rai, A.K., & Medha, S. (2013). The antecedents of customer loyalty: An empirical investigation in life insurance context. *Journal of Competitiveness*, 5(2), 139-163.
- Rahi, S. (2016). Impact of customer value, public relations perception and brand image on customer loyalty in services sector of Pakistan. *Journal of Internet Banking and Commerce*, 21(2), 1-14.
- Rastgoo, H., & Dastranj, H. A. (2016). The impact the influence of ethical sales behavior on customers loyalty in insurance company (A case study: Iran Insurance Company-Fars branch). *International Business Management*, 10(20), 4921-4926.
- Rauyruen, P., & Miller, K. E. (2007). Relationship quality as a predictor of B2B customer loyalty. *Journal of Business Research*, 60(1), 21-31.
- Reichheld, F. F., & Cook, S.D. (1996). *The quest for loyalty: creating value through partnership*. Boston, MA: Harvard Business School Press.
- Reichheld, F. F., & Sasser, W. E. (1990). Zero defections: Quality comes to services. *Harvard Business Review* 68(5), 105–111.
- Reichheld, F., & Detrick, C. (2003). Loyalty: A prescription for cutting costs. *Marketing Management*, 12(5), 24-25.
- Schiffman, L. G., & Kanuk, L. L. (2004). *Consumer behaviour*, 8th ed. Upper Saddle River, NJ: Pearson Prentice Hall.
- Shoemaker, S., & Lewis, R. C. (1999). Customer loyalty: The future of hospitality marketing. *Hospitality Management*, 18(4), 345–370.
- Shukla, P., Banerjee, M., & Singh, J. (2016). Customer commitment to luxury brands: Antecedents and consequences. *Journal of Business Research*, 69(1), 323-331.
- Singh, R., & Imran, K. (2012). An approach to increase customer retention and loyalty in B2C world. *International Journal of Scientific and Research Publications*, 2(6), 1-5.
- Sirdeshmukh, D., Singh, J., & Sabol, B. 2002. Consumer trust, value, and loyalty in relational exchanges? *Journal of Marketing*, 66(1), 15-37.
- Spreng, R.A., Mackenzie, S.B.m & Olshavsky, R.W. (1996). A re-examination of the determinant of customer satisfaction. *Journal of Marketing*, 60(3), 15-32.

- Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of Retailing*, 75(1), 77-105.
- Tsoukatos, E., & Rand, G. K. (2006). Path analysis of perceived service quality, satisfaction and loyalty in Greek insurance. *Journal of Managing Service Quality*, 16(5), 501-519.
- Ullman, J. (2006). Structural equation modeling: Reviewing the basics and moving forward. *Journal of Personality Assessment*, 87(1), 35-50.
- van Tonder, E.V. (2016). Trust and commitment as mediators of the relationship between quality advice and customer loyalty. *Journal of Applied Business Research*, 32(1), 289-302.
- Walter, A., Mueller, T. A., Helfert, G., & Wilson, D. T. (2002). Delivering relationship value: Key determinant for customers' commitment. Retrieved May 5, 2018 from <https://www.impgroup.org/uploads/papers/131.pdf>
- Wei, Z., Tang, H. Yu, F. R., et al. (2014). Security enhancements for mobile ad hoc networks with trust management using uncertain reasoning. *IEEE Transactions on Vehicular Technology*, 63(9), 4647-4658.
- Wong, A., & Sohal, A. S. (2006). Understanding the quality of relationships in consumer services: A study in a retail environment. *International Journal of Quality & Reliability Management*, 23(3), 244-264.
- Yazdanpanah, M., Zamani, G. H., Hochrainer-Stigler, S., Monfared, N., & Yaghoubi, J. (2013). Measuring satisfaction of crop insurance a modified American customer satisfaction model approach applied to Iranian Farmers. *International Journal of Disaster Risk Reduction*, 5, 19-27.
- Yoo, M., & Bai, B. (2013). Customer loyalty marketing research: A comparative approach between hospitality and business journals. *International Journal of Hospitality Management*, 33(1), 166-177.
- Zeithaml, V.A., Berry, L.L., & Parasuraman, A.V. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31-46.

## Modeling Value Drivers for Successful Blockchain Adoption

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### Abstract

With growing academic and practitioner literature on blockchain the complexity surrounding the technology has also grown. This study aims to present a model of generic value drivers of blockchain adoption to comprehend the emerging technological landscape. By undertaking a review of extant literature, the authors identify nine generic value drivers of blockchain technology. Using a specifically designed template expert opinions were sought for applying interpretive structural modeling (ISM). On the basis of findings, the authors present a model with causal links between the value drivers to provide a coherent picture. This helps to identify a strategic framework for blockchain adoption. While many organizations are in a race of investing in blockchain technology, however, there is lack of clear understanding of the business case of the technology. Through this study the authors demonstrate that this complexity can be addressed by integrating the value drivers in a model and utilizing it to frame successful strategies.

**Keywords:** *Blockchain; Interpretive Structural Modeling; Decentralization; Data Immutability*

### INTRODUCTION

Blockchain, the technology behind bitcoin (cryptocurrency) is being hailed as the next foundational technology since the internet (Iansiti and Karim, 2017). Though blockchain is just a distributed ledger that holds records of digital data or events in such a way that makes them tamper-resistant. While users may access, inspect, or add to the data, they can't change or delete it. It stores data in a distributed set of computers and uses advanced cryptography. The ledger itself can also be programmed to automate transactions. Organizations have taken note of the steep rise in the prices of bitcoin and the media attention blockchain technology is getting. As enthusiasts are talking about its revolutionary impact, organizations are wary of missing the opportunity to make the most of it. Banking and financial technology industry is the first to explore the usage of blockchain (Beck, Czepluch, Lollike and Malone, 2016). Major central banks around the world are exploring the possibilities of incorporating blockchain (Gupta, 2017; Mills et al., 2016). Even governments around the world are engaged in the process of adoption of blockchain technologies such as Dubai's 2020 Blockchain Strategy (Government of Dubai, 2016), Georgia's land registration, etc. Researchers are suggesting the use of blockchain in other areas such as supply chain (Kshetri, 2018), urban management (Marsal-Llacuna, 2017), education records and rewards (Sharples and Domingue, 2016), identity management (Alam, 2016) to name a few. However, there is lack of clarity in terms of using blockchain and the business benefits accruing out of it.

Authors have described various value drivers associated with blockchain such as distributed security, trust, data immutability, flexibility, etc. However, with each suggested use case the complexity associated with this technology is also increasing. Moreover, the cause and effect relationship in case of Information Technology (IT) is complex and indirect (Kanungo and Jain, 2007). In such a scenario, the relationship between value drivers and outcomes of blockchain are even more complex. This study aims to provide a framework to address such complexity in the context of blockchain.

As per Gartner (2017), blockchain technology has passed the *peak of inflated expectations* and is entering the *trough of disillusionment*. Many companies remain unclear about the business case of blockchain and the anticipated outcomes from their investments. The purpose of this study is to identify and model value drivers of blockchain technology for its successful adoption. Through this study the authors demonstrate that this complexity can be addressed by integrating the value drivers in a model with causal links to provide a coherent picture.

In this paper, we identify the value drivers of blockchain technology by reviewing the extant literature. Thereafter, we conduct surveys with blockchain professionals and use Interpretive Structural Modeling (ISM) methodology to determine the underlying relationships among the identified value drivers. Results obtained are discussed and integrated with the perspective of proposing strategies and recommendations for successful adoption of blockchain technology.

### LITERATURE REVIEW

Since Satoshi Nakamoto’s famous whitepaper about bitcoin, literature on blockchain has steadily grown. Some of the initial work is highly technical in nature (Zalan, 2018). The initial research was primarily aimed at computer programmers and developers. However, with the rise of bitcoin, the first large scale use case of blockchain technology, blockchain research also entered mainstream. Since mid-2010s there has been a surge in blockchain and cryptocurrency literature (Zalan, 2018). Though not typically academic in nature, this literature is more in the form of reports from consultancies, white papers and business books (e.g. Antonopoulos, 2014; Atziori, 2015; Mougayar, 2016; Davidson, Filippi, and Potts, 2016; Tapscott and Tapscott, 2016; Swan, 2015). Lately, academic researchers have also started exploring blockchain and its applications (e.g. Kshetri, 2018; Marsal-Llacuna, 2017). We consider a characteristic/feature/benefit as a value driver if it enhances the value of the offering for the consumer. Value drivers may help in differentiating the offerings and may also provide competitive advantage. Most of the researches discuss some value drivers of blockchain either explicitly or implicitly. Such as Atzori (2015) writes, “*the blockchain has remarkable properties as a distributed ledger, such as efficiency, cost-effectiveness, irreversibility, transparency, auditability and censorship resistance*”. However, there is no specific and directed research in terms of linking these value drivers. Based on the literature review, we have identified nine generic value drivers of blockchain technology (listed in Table 1) along with the sources of reference. The importance of these value drivers shall differ from industry to industry. However, in this research our focus is to have a generic understanding of the value drivers and their interlinkages.

**Table 1: Literature Review Findings**

S. No	Value Drivers	Working Definition	Reference(s)
1.	Decentralization	Decentralized platforms do not require information to pass through a single point. Instead, many points connect, known as a peer-to-peer (P2P) network. Data is stored in a decentralized manner and not in a centralized manner.	Tapscott and Tapscott (2016), Swan (2015), Antonopoulos (2016), Buterin (2015); Atzori (2015)
2.	Transparency	Operating in such a way that it is easy for others to see what actions are performed. Implies openness, communication and accountability.	Kshetri (2018); Tapscott and Tapscott (2016), Antonopoulos (2016), Buterin (2015); Atzori (2015)
3.	Reduction in Costs	Costs can be of two types. Costs related to administration such as expense incurred in controlling and directing an organization, but not directly identifiable with financing, marketing, or production operations. The other cost is related to transactions or economic exchange.	Tapscott and Tapscott (2016), Swan (2015), Antonopoulos (2016), Buterin (2015); Atzori (2015)
4.	Flexibility	Blockchain functionality can be moulded as and when required. As a system it can have numerous applications depending on the need.	Buterin (2015), Antonopoulos (2016), Tapscott and Tapscott (2016)
5.	Preservation of Intellectual Property Rights	The rights given to persons over the creations of their minds. Blockchain’s traceability and transparency puts a tap on the unauthorized buying and selling of goods/services outside of the authorized trading channels and the benefits shall go to the rightful developer.	Tapscott and Tapscott (2016), Buterin (2015), Antonopoulos (2016), Swan (2015); Atzori (2015)
6.	Sharing Economy	The open-source community to refer to peer-to-peer based sharing of access to goods and services.	Swan (2015), Mougayar (2016)
7.	Data Immutability	An immutable data is one whose state cannot be modified after it is created. It is ensured because of time-stamping which uses a sequence of characters or encoded information identified when a certain event occurred, usually giving date and time of day and with blockchain, accurate to a small fraction of a second.	Tapscott and Tapscott (2016), Swan (2015), Antonopoulos (2016), Buterin (2015); Atzori (2015)

8.	Auditability	Authenticity of any transaction is verified by all the parties. The peer-to-peer element of blockchain eliminates the risks associated with the involvement of third parties in a transaction. It has built-in auditability	Kshetri (2018); Tapscott and Tapscott (2016), Swan (2015), Antonopoulos (2016), Gault (2017), Buterin (2015); Atzori (2015)
9.	Data Security	By storing information across a network of computers, the task of compromising data becomes much more difficult for hackers. Also, the use of cryptography makes it secure.	Tapscott and Tapscott (2016), Swan (2015), Antonopoulos (2016), Gault (2017), Buterin (2015)

## RESEARCH METHODOLOGY

The objective of the study was to understand the shared underlying mental model of the working of the identified value drivers. We employ Interpretive Structural Modeling (ISM) as developed by Warfield (1973). ISM is helpful in exploring complex relationships among significant number of elements (Waller, 1975) and in identifying a structure within a system of related elements (Anantatmula and Kanungo, 2010).

After the identification of value drivers, the following steps were followed:

- *Exploring Contextual Relationships*: Responses from experts were taken using a template (Figure 1), thereby establishing contextual relationships among value drivers.
- *Structural Self-Interaction Matrix (SSIM)*: A matrix indicating the pair-wise relationship among value drivers. Transitivity was also checked at this stage. The following symbols are used to denote the direction of relationship between two factors (i and j):
  - V for the relation from factor i to factor j (i.e., factor i will influence factor j)
  - A for the relation from factor j to factor i (i.e., factor i will be influenced by factor j)
  - X for both direction relations (i.e., factors i and j will influence each other)
  - O for no relation between the factors (i.e., barriers i and j are unrelated).
 Individual SSIM were developed for each expert. Later, final SSIM was generated after combining individual SSIMs.
- *Reachability Matrix*: A matrix prepared by converting symbolic SSIM matrix into a binary matrix. The four symbols (i.e., V, A, X or O) of SSIM are substituted by 1s or 0s. The rules for this substitution are as follows:
  - If the (i, j) entry in the SSIM is V, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry becomes 0.
  - If the (i, j) entry in the SSIM is A, then the (i, j) entry in the matrix becomes 0 and the (j, i) entry becomes 1.
  - If the (i, j) entry in the SSIM is X, then the (i, j) entry in the matrix becomes 1 and the (j, i) entry also becomes 1.
  - If the (i, j) entry in the SSIM is O, then the (i, j) entry in the matrix becomes 0 and the (j, i) entry also becomes 0.
- *Level Partitioning*: Classifying value drivers into different levels. Two sets associated with each value driver are computed. The reachability set consists of the driver itself and the other driver(s) that it may impact, whereas the antecedent set consists of the driver itself and the other driver(s) that may impact it. The intersection of these sets is derived for all the drivers. All value drivers for which reachability set is equal to the intersection set are level one drivers. In successive iterations, drivers identified as level drivers in the previous iterations are deleted and same rule is followed further. Hence, all the drivers are grouped into different levels.
- *Canonical Matrix*: Grouping together value drivers at the same level.
- *Digraph*: Combining the hierarchical levels and directional relationships a directional graph was prepared. Transivities are again checked at this stage and removed if not found logical.
- *ISM Model*: Replacing the element nodes/numbers with the name of actual value drivers.
- Finally, the model is reviewed for any inconsistencies.

**Figure 1: ISM template for data collection**

	Decentralization	Transparency	Cost Reduction	Flexibility	Preservation of IPR	Sharing Economy	Data Immutability	Auditability	Data Security
	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

Contextual relationship- leads to	
1	Decentralization
2	Transparency
3	Cost Reduction
4	Flexibility
5	Preservation of IPR
6	Sharing Economy
7	Data Immutability
8	Auditability
9	Data Security

Qualitative research data was generated by designing a template (Figure 1) and collecting responses from six experts of blockchain technology. Two experts were involved in academic research on blockchain. Two experts were senior blockchain developers and two were blockchain business consultants. The experts were encouraged to discuss the value drivers with other stakeholders in their organizations before filling the template.

### RESULTS AND DISCUSSION

The final model is depicted in Figure. 2. The arrows indicate the relationship between the value drivers and are tenable. As the technology space is continuously evolving, one could expect these value drivers to be configured differently over a period of time.

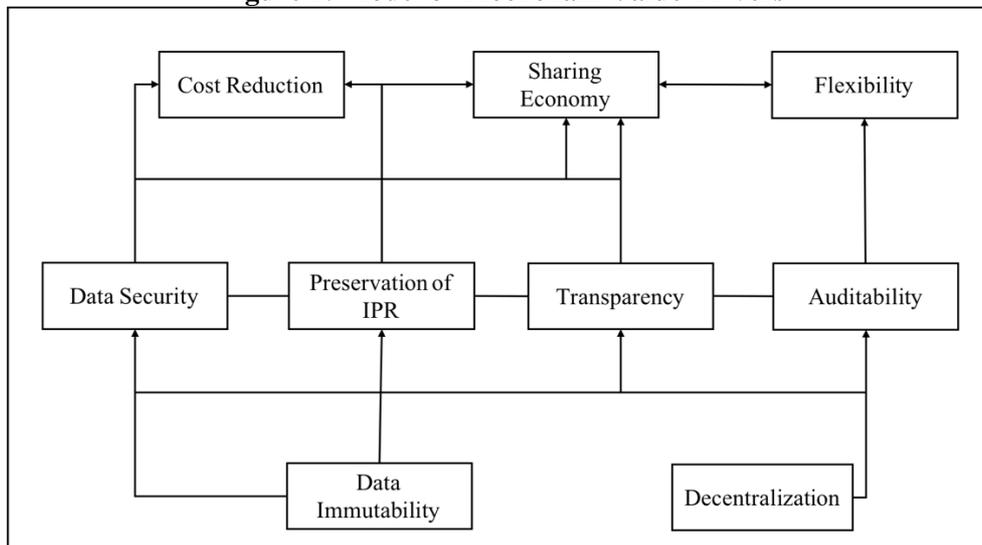
Results show that *Decentralization* and *Data Immutability* are the main value drivers for guiding the adoption of blockchain. *Decentralization* brings in transparency and trust in the system, thereby, facilitating the emergence of a sharing economy. Moreover, if the system is decentralized, auditing is much more convenient. Blockchain with its decentralization has a built-in auditability. Such a system can be very flexible in terms of its usage and applications. Decentralization also makes data secure when compared to centralized systems, since there is no single point of failure. Date security ultimately helps in reduction of cost.

*Data Immutability* is the second fundamental value driver of blockchain. This value driver is much celebrated by blockchain enthusiasts as they claim it to be the missing holy grail of the internet. Results show that data immutability shall help preserve intellectual property which is a major concern over traditional internet. It helps in bringing overall transparency, reduction in costs and ultimately make sharing economy a scalable reality. *Transparency*, *auditability*, *preservation of intellectual property rights* and *data security* all complement each other either directly or indirectly. However, they are all outcomes of data immutability and decentralization.

We can also interpret the model in terms of fundamentals, intermediates and super-ordinate values of blockchain adoption. The value drivers at the bottom of the model can be considered as fundamentals. These fundamentals are the base on which all blockchain applications are designed. The value drivers at the top of the model can be regarded as the super-ordinate values. These goals are only possible by combination of other value drivers. In between fundamentals and super-ordinate vales lies the intermediate goals of blockchain adoption. Many a times, organizations have these goals in mind when they invest in blockchain technology. For instance, in Sharma, Moon, and Park (2017), while designing smart mobility network, the primary value being explored from blockchain is of data

security. Similarly, preservation of IPR is the goal of music industry while adopting blockchain (Crosby, Nachiappan., Pattanayak, Verma and Kalyanaraman, 2016). However, the promise of performance from blockchain will be fulfilled when super-ordinate values of ultimate cost reduction (nano-transactions), proliferation of sharing economy and flexible business applications (plug-n-play solutions) becomes a reality.

**Figure 2: Model of Blockchain Value Drivers**



These results have several implications for organizations. In order to adopt blockchain technology, organizations need to assess their business models in terms of need for decentralization and data immutability. In cases where value can be derived from any of the two fundamental value drivers, firms should set clear intermediate goals. The medium-term impact assessment of blockchain adoption can be designed on the basis of intermediate values. Once the technology is in place the real business value can be accrued if the organization moves in the direction of super-ordinate goals.

## CONCLUSION

Through this study an attempt was made to reduce the complexity associated with the adoption of blockchain technology. The study helped in identifying generic value drivers of blockchain technology from the extant literature. By adopting ISM methodology, the study proposed a model of blockchain value drivers and explored their interlinkages. By adopting a qualitative approach an attempt is made to present a generic strategic framework for organizations to successfully adopt blockchain technology.

## Limitations and Future Research Directions

Though the study has taken generic value drivers into account, generalizations across industries should be done with caution. It would be appropriate to use this model as an initial framework for adopting blockchain technology. Organizations themselves will be better suited to frame specific strategy. Moreover, the study takes into account opinions of a limited number of experts. In order to increase the validity more experts from different domains can be invited. In future industry specific frameworks can be developed such as for blockchain adoption in healthcare, supply-chain, governance, finance, etc. Further the strength of relationships can be explored by using other methodologies.

## REFERENCES

- Alam, M., 2016. Why the auto industry should embrace Blockchain. *CarTech*. Retrieved from <http://www.connectedcar-news.com/news/2016/dec/09/why-auto-industry-should-embrace-blockchain/>.
- Anantamula, V.S. and Kanungo, S., 2010. Modeling enablers for successful KM implementation. *Journal of knowledge management*, 14(1): 100-113.
- Andreas, M., 2014. Antonopoulos. The Blockchain. *Mastering Bitcoin*.
- Atzori, M., 2015. Blockchain technology and decentralized governance: Is the state still necessary?.
- Beck, R., Czepluch, J.S., Lollike, N. and Malone, S., 2016, May. Blockchain-the Gateway to Trust-Free Cryptographic Transactions. In *ECIS*: 153.
- Buterin, V., 2015. Visions, Part 1: The Value of Blockchain Technology. Ethereum Blog. Retrieved from <https://blog.ethereum.org/2015/04/13/visions-part-1-the-value-of-blockchain-technology/>.
- Crosby, M., Nachiappan., Pattanayak, P., Verma, S., Kalyanaraman, V., 2016. BlockChain Technology: Beyond Bitcoin. *Applied Innovation Review* (2).
- Davidson, S., De Filippi, P. and Potts, J., 2016. Economics of blockchain.
- Gartner, 2017. Gartner's Hype Cycle for Emerging Technologies, 2017 Adds 5G And Deep Learning For First Time. <https://www.forbes.com/sites/louiscolumnbus/2017/08/15/gartners-hype-cycle-for-emerging-technologies-2017-adds-5g-and-deep-learning-for-first-time/#948a95150430> (accessed 20 May 2018)
- Government of Dubai, 2016. Dubai Museum of the Future Foundation announces the launch of Global Blockchain Council <http://mediaoffice.ae/en/media-center/news/17/2/2016/dubai-museum-of-the-future-foundation-announces-launch-of-global-blockchain-council.aspx> (accessed 20 May 2018).
- Gupta, V., 2017. A brief history of blockchain. *Harvard Business Review*, 28.
- Iansiti, M. and Lakhani, K.R., 2017. The truth about blockchain. *Harvard Business Review*, 95(1): 118-127.
- Kanungo, S. and Jain, V., 2007. General Systems Theory: a guiding framework for IS research. *AMCIS 2007 Proceedings*: 141.
- Kshetri, N., 2018. 1 Blockchain's roles in meeting key supply chain management objectives. *International Journal of Information Management*, 39: 80-89.
- Marsal-Llacuna, M.L., 2017. Future living framework: Is blockchain the next enabling network?. *Technological Forecasting and Social Change*.
- Mills, D., Wang, K., Malone, B., Ravi, A., Marquardt, J., Chen, C., Badev, A., Brezinski, T., Fahy, L., Liao, K., Kargenian, V., Ellithorpe, M., Ng, W., Baird, M., 2016. Distributed ledger technology in payments, clearing, and settlement, *Washington: Board of Governors of the Federal Reserve System*, <https://doi.org/10.17016/FEDS.2016.095>.
- Mougayar, W., 2016. *The business blockchain: promise, practice, and application of the next Internet technology*. John Wiley & Sons.
- Sharma, P.K., Moon, S.Y. and Park, J.H., 2017. Block-VN: A distributed blockchain based vehicular network architecture in smart City. *Journal of Information Processing Systems*, 13(1): 84.
- Sharples, M. and Domingue, J., 2016, September. The blockchain and kudos: A distributed system for educational record, reputation and reward. In *European Conference on Technology Enhanced Learning*: 490-496. Springer, Cham.
- Swan, M., 2015. *Blockchain: Blueprint for a new economy*. " O'Reilly Media, Inc."

Tapscott, D. and Tapscott, A., 2016. *Blockchain revolution: how the technology behind bitcoin is changing money, business, and the world*. Penguin.

Waller, R.J., 1975. Application of interpretive structural modeling to priority-setting in urban systems management. *Portraits of complexity*, 9: 104-108.

Warfield, J.N., 1973. Intent structures. *IEEE Transactions on Systems, Man, and Cybernetics*, (2): 133-140.

Zalan, T., 2018. Born Global on Blockchain. *Review of International Business and Strategy*, (just-accepted): 00-00.

## APPENDIX

### Final Structural Self-Interaction Matrix

DRIVERS	9	8	7	6	5	4	3	2
1	O	X	X	A	V	O	O	X
2	X	O	A	O	X	V	V	
3	A	O	O	O	O	X		
4	O	A	O	X	A			
5	O	X	O	O				
6	A	X	O					
7	V	X						
8	X							

### Initial Reachability Matrix

	D1	D2	D3	D4	D5	D6	D7	D8	D9
D1	1	1	0	0	1	0	1	1	0
D2	1	1	1	1	1	0	0	0	1
D3	0	0	1	1	0	0	0	0	0
D4	0	0	1	1	0	1	0	0	0
D5	0	1	0	1	1	0	0	1	0
D6	1	0	0	1	0	1	0	1	0
D7	1	1	0	0	0	0	1	1	1
D8	1	0	0	1	1	1	1	1	1
D9	0	1	1	0	0	1	0	1	1

### Final Reachability Matrix

	D1	D2	D3	D4	D5	D6	D7	D8	D9
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<b>D1</b>	1	1	*1	*1	1	*1	1	1	*1
<b>D2</b>	1	1	1	1	1	*1	*1	*1	1
<b>D3</b>	0	0	1	1	0	*1	0	0	0
<b>D4</b>	0	0	1	1	0	1	0	0	0
<b>D5</b>	0	1	*1	1	1	0	0	1	*1
<b>D6</b>	1	0	*1	1	0	1	0	1	*1
<b>D7</b>	1	1	*1	*1	*1	*1	1	1	1
<b>D8</b>	1	*1	*1	1	1	1	1	1	1
<b>D9</b>	0	1	1	*1	*1	1	0	1	1

### Level Partitioning

#### *Iteration-1*

Factors	Reach ability set	Antecedent Set	Intersection Set	Level
<b>1</b>	1,2,3,4,5,6,7,8,9	1,2,6,7,8	1,2,6,7,8	
<b>2</b>	1,2,3,4,5,6,7,8,9	1,2,5,7,8,9	1,2,5,7,8,9	
<b>3</b>	3,4,6	1,2,3,4,5,6,7,8,9	3,4,6	<b>I</b>
<b>4</b>	3,4,6	1,2,3,4,5,6,7,8,9	3,4,6	<b>I</b>
<b>5</b>	2,3,4,5,8,9	1,2,5,7,8,9	2,5,8,9	
<b>6</b>	1,3,4,6,8,9	1,2,3,4,5,6,7,8,9	1,3,4,6,8,9	<b>I</b>
<b>7</b>	1,2,3,4,5,6,7,8,9	1,2,7,8	1,2,7,8	
<b>8</b>	1,2,3,4,5,6,7,8,9	1,2,5,6,7,8,9	1,2,5,6,7,8,9	
<b>9</b>	2,3,4,5,6,8,9	1,2,5,6,7,8,9	2,5,6,8,9	

#### *Iteration-2*

Factors	Reach ability set	Antecedent Set	Intersection Set	Level
<b>1</b>	1,2,5,7,8,9	1,2,7,8	1,2,7,8	
<b>2</b>	1,2,5,7,8,9	1,2,5,7,8,9	1,2,5,7,8,9	<b>II</b>
<b>5</b>	2,5,8,9	1,2,5,7,8,9	2,5,8,9	<b>II</b>
<b>7</b>	1,2,5,7,8,9	1,2,7,8	1,2,7,8	
<b>8</b>	1,2,5,7,8,9	1,2,5,7,8,9	1,2,5,7,8,9	<b>II</b>
<b>9</b>	2,5,7,8,9	1,2,5,7,8,9	2,5,7,8,9	<b>II</b>

#### *Iteration-3*

Factors	Reach ability set	Antecedent Set	Intersection Set	Level
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<b>1</b>	1,7	1,7	1,7	<b>III</b>
<b>7</b>	1,7	1,7	1,7	<b>III</b>

**List of Value Drivers and their level in ISM**

S. NO	Code	Value Driver	Level in ISM
<b>1</b>	D1	Decentralization	III
<b>2</b>	D2	Transparency	II
<b>3</b>	D3	Cost Reduction	I
<b>4</b>	D4	Flexibility	I
<b>5</b>	D5	Preservation of Intellectual Property Rights	II
<b>6</b>	D6	Sharing Economy	I
<b>7</b>	D7	Data Immutability	III
<b>8</b>	D8	Auditability	II
<b>9</b>	D9	Data Security	II

**Canonical Matrix**

<b>Drivers</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>9</b>	<b>1</b>	<b>7</b>
<b>3</b>	1	1	1	0	0	0	0	0	0
<b>4</b>	1	1	1	0	0	0	0	0	0
<b>6</b>	1	1	1	0	0	1	1	1	0
<b>2</b>	1	1	1	1	1	1	1	1	1
<b>5</b>	1	1	0	1	1	1	1	0	0
<b>8</b>	1	1	1	1	1	1	1	1	1
<b>9</b>	1	1	1	1	1	1	1	0	0
<b>1</b>	1	1	1	1	1	1	1	1	1
<b>7</b>	1	1	1	1	1	1	1	1	1

## **The Impact of Human Capital on Access to Financial Services for SMEs: Does Gender matter? A Comparative study of Botswana and Tanzania**

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**Abstract:** This paper aims to analyze gender differences in the impact of human capital on access to financial services for SMEs. The specific objective is to determine male and female differences in the impact of human capital on access to financial services for SMEs. Data for comparative purposes was collected from Gaborone, Botswana and Dar es Salaam, Tanzania which serve as the study areas. The sample size is 115 SMEs in the manufacturing sector. This study is a research-in-progress and applies a quantitative approach. Data was analyzed using descriptive statistics and findings reveal differences and similarities in gender between Botswana and Tanzania.

**Keywords:** human capital, financial services, SMEs, gender differences

### **INTRODUCTION**

The development of SMEs and entrepreneurship has been renascent in countries that have radically reduced poverty (Naude, 2013; Edoho, 2015). Herrington and Kelley (2012) highlighted the positivity and optimistic sentiment towards entrepreneurship as a whole in various countries in Africa. Literature on African entrepreneurship indicates small enterprises in Botswana employ 15 to 24 (Boubekeur, 2016). In Tanzania, according to Financial Sector Deepening Trust (FSDT), only 2.9% of all small businesses had five or more employees (FSDT, 2012). Though the foci of the latest literature on African entrepreneurship are about the much improved development, it is important to not make sweeping generalisations without considering firm specific capabilities, strategies and management (Tvedten, Hansen & Jeppesen, 2014).

Women entrepreneurship is vital for economic advancement of numerous economies and is positively related to local development of developing countries (De Vita, Mari & Poggesi, 2013; Tuzun, Takay, Batum & Ciftici, 2015). The rate of female entrepreneurial activity in developing countries is 45.5% (Global Entrepreneurship Monitor, 2010). The burgeoning literature is focused on the struggles that women face in starting up and managing their enterprises; the hindrances and all the issues that women have to contend with naturally. Another area of focus is the motivational factors that drive women to venture into entrepreneurship. The gender differences in these motivations are noted by Rey-Marti, Porcar and Mas Tur (2015).

A study by Asah, Fatoki and Rungani (2015) done in South Africa showed that there is a positive correlation between managerial skill and performance of the firm. Further, it has been shown that increased education positively impacts firm growth (Akinboade, 2015). The aspect of tacit and explicit knowledge in HC has limited research in developing countries and even fewer in relation to access to Financial Services (FS) in terms of ease of access such as online transactions. Therefore, to contribute to knowledge, this study aims to analyze gender differences in the impact of HC on access to FS for SMEs by considering the digital era aspect related to ease of access to FS through online transaction and banking.

## LITERATURE REVIEW

### Theoretical Literature Review

The theory selected for this paper is the Human Capital Theory (HCT). The HCT was first developed by Gary Becker in 1964 (Blaug, 1976). HCT draws on the neoclassic economic model and assumes that capital investments on individuals are education, job training and health (Udehn, 2002; Hodgson, 2007; Tan, 2014). It is been proven that in general a higher level of education correlates with higher income (Becker, 1994; Hartog & Maassen, 2007). Health and nutrition is an area of such investment though much of the literature has focused on the investment in education because it is thought that education has a bearing on the former (Sweetland, 1996).

Studies in the field of business have laid interest in the capacity of HC for organisational success (Iyere & Aibieyi, 2014; Ngatno, Apriatni & Widayanto, 2016). Iyere and Abibieyi (2014) used HCT to study HC in relation to definitions, approaches and management dynamics. Ngatno et al (2016) applied HCT for examining HC in connection with entrepreneurial capital and SMEs performance by looking at the mediating effect of competitive advantage. This study applies HCT to guide the analysis of gender differences in the impact of HC on access to FS for SMEs.

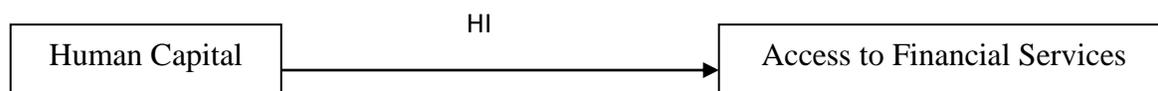
### Empirical Literature Review

According to various studies, SMEs that are least likely to apply for finance rarely do (Cowling, Liu & Zhang, 2016). After the financial crisis of 2008/2009 period, there was an increase in the amount of regulations for banks which some scholars argued decreased the incentive for banks to lend money (Udell, 2015). This further comes to bear in considering that the likelihood of negative or zero growth decreases with the age of an enterprise (Akinboade, 2015). In Botswana, Rametse and Huq (2013) revealed that push more than pull factors are what motivate most women to venture into entrepreneurial activities. The motivations for women as SMEs include creation of employment opportunities and improvement of household income (Okurut & Ama, 2013). On the other hand, in Tanzania, a majority of SMEs women (68%) have primary education and only 0.2% had university/college education (Mori & International Labour Organization, 2014).

A previous study in Tanzania mentioned that there is very limited knowledge on financial management by SMEs (Richard & Mori, 2012). Several studies (Okurut & Ama, 2013; Rametse & Huq, 2013; Sharma, 2013; Udell, 2015; Akinboade, 2015; Cowling, Liu & Zhang, 2016; Swai, Ndanshau & Lwiza, 2016; Agolla, Makara & Monametsi, 2017; Mkwizu, Wilbard, Mbilinyi & Maliva, 2018) researched on various issues related to SMEs and access to finance, whereby most have concentrated on growth, regulations, bank portfolio, banking innovations, industrial products and women in SMEs. There is less literature on HC in terms of tacit and explicit knowledge in relation to FS measured by ease of access through online banking and online transaction. Hence, this study fills the literature gap with a specific objective of determining male and female differences in the impact of HC on access to FS for SMEs. In HC, this study looks at tacit and explicit knowledge, and in FS, this study is interested on ease of access such as online banking and transactions.

### Conceptual Framework

The conceptual framework in Figure 1 for this paper is guided and developed from the theoretical and empirical literature review. The independent variable is human capital while the dependent variable is access to financial services. The hypothesis shows the relationship of variables which this study tests. The developed hypothesis tests the influence of human capital on access to financial capital for SMEs.



**Figure 1:** Conceptual Framework

**Source:** Literature Review

## METHODOLOGY

Quantitative approach was used to describe and test gender differences in the impact of HC on access to FS. The study areas are Gaborone in Botswana, and Dar es Salaam in Tanzania. Stratified random sampling was used due to geographical distribution of the sampled SMEs. Krejcie and Morgan (1970) helped to determine the sample size for the respondents which were 115 for Gaborone and 115 for Dar es Salaam. This study is a work-in-progress. Therefore, this paper provides preliminary analysis of data from Botswana only based on descriptive statistics and t-test analysis since the data collection from Tanzania is still on-going. However, this study provides preliminary comparison of respondents' data from Botswana and Tanzania but findings are not conclusive pending completion of data collection from Tanzania. The demographic items were adopted and customized from Per and Benson (2003), Hung, Liou, Chiu and Chiu (2009), Robb (2013), and Mori and ILO (2014). Measurement statements for HC as the independent variable were adopted and customised from (Pishghadam, Noghani & Zabini, 2011; Hung et al., 2009). HC statements (6 statements) are from the perspectives of tacit and explicit knowledge. The dependent variable of Access to FS was measured using ease of access with statements (6 statements) which consider digital era in relation to online transaction and banking. The measurement items on access to FS were adopted and customized from studies by Per and Benson (2003), Arora (2010), Robb (2013) and Bank for International Settlements (2015).

Reliability was done using Cronbach's Alpha in order to test internal consistency of variables. An alpha value of .70 or above indicates that the questions are reliable (Saunders, Lewis & Thornhill, 2012). On the other hand, Pallant (2011) mentioned that for alpha .70 and above for less than 10 items is difficult to obtain a high alpha. Therefore, the use of corrected item-total correlation by removing low values of less than .3 can increase the alpha to .70 or above (Pallant, 2011). For this study, results from Botswana statistics show Cronbach's alpha for 2 items (work experience; years of experience as owner manager in the business) of HC as .877 which is acceptable after the application of corrected item-total correlation from Pallant (2011). The other items for HC had low values of less than .3 and therefore were removed to obtain a reliability score of .70 and above. The Cronbach's alpha value from Botswana statistics indicated that FS had .905 and the value is acceptable.

## ANALYSIS

The findings (See Tables 1, 2, 3, 4, 5, 6 and 7) indicate that a majority of respondents from Botswana (34.8%) are aged 21 to 30 years, female (52.2%) and from the manufacturing sector, above 5 years of operating business (46.1%), sole proprietors (58.3%), not registered (51.3%), and size of business is 2-4 employees (85.2%).

**Table 1: Age distribution from Botswana**

Age	Frequency	Percent	Valid Percent	Cumulative Percent
21-30	40	34.8	34.8	34.8
31-40	30	26.1	26.1	60.9
41-50	25	21.7	21.7	82.6
51-60	20	17.4	17.4	100.0
Total	115	100.0	100.0	

Source: Field data (2018)

**Table 2: Gender distribution from Botswana**

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	55	47.8	47.8	47.8
Female	60	52.2	52.2	100.0
Total	115	100.0	100.0	

Source: Field data (2018)

**Table 3: Sector distribution from Botswana**

Sector	Frequency	Percent	Valid Percent	Cumulative Percent
manufacturing	115	100.0	100.0	100.0

Source: Field data (2018)

**Table 4: Years of Operating Business from Botswana**

Year of Operation Business	Frequency	Percent	Valid Percent	Cumulative Percent
no answer	9	7.8	7.8	7.8
less a year	11	9.6	9.6	17.4
1-2 years	14	12.2	12.2	29.6
2-5 years	28	24.3	24.3	53.9
above 5 years	53	46.1	46.1	100.0
Total	115	100.0	100.0	

Source: Field data (2018)

**Table 5: Type of Business from Botswana**

Type of Business	Frequency	Percent	Valid Percent	Cumulative Percent
no type	3	2.6	2.6	2.6
sole proprietor	67	58.3	58.3	60.9
partnership	8	7.0	7.0	67.8
limited liability company	37	32.2	32.2	100.0
Total	115	100.0	100.0	

Source: Field data (2018)

**Table 6: Registration Status from Botswana**

Registration Status	Frequency	Percent	Valid Percent	Cumulative Percent
registered (formalized)	56	48.7	48.7	48.7
not registered (not formalized)	59	51.3	51.3	100.0
Total	115	100.0	100.0	

Source: Field data (2018)

**Table 7: Size of Business in terms of number of employees from Botswana**

Size of Business	Frequency	Percent	Valid Percent	Cumulative Percent
no employees	1	.9	.9	.9
2-4 employees	98	85.2	85.2	86.1
11 or more employees	16	13.9	13.9	100.0
Total	115	100.0	100.0	

Source: Field data (2018)

In Table 8, the t-test using independent samples test for Botswana show that Levene's test results of variances between male and female on FS are significantly different and hence cannot be assumed they are equal for FS 1 (.003), FS 2 (.003), FS 3 (.002), FS 4 (.011), and FS 6 (.012). However, for FS 5 (.553), the variance between male and female are not significantly different and this suggests that the male and female are assumed to be equal for statement FS 5. For the t-test results using sig (2-tailed) show that FS 1, FS 2, FS 3 and FS 5 have significant values of  $p < 0.05$  hence significantly different while F S 4 and FS 6 have significant values of  $p > 0.05$  and therefore not significantly different.

**Table 8: Independent Samples Test for Botswana**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FS 1	Equal variances assumed	9.064	.003	2.637	113	.010	.88636	.33614	.22041	1.55231
	Equal variances not assumed			2.622	107.790	.010	.88636	.33810	.21617	1.55656
FS 2	Equal variances assumed	9.064	.003	2.637	113	.010	.88636	.33614	.22041	1.55231
	Equal variances not assumed			2.622	107.790	.010	.88636	.33810	.21617	1.55656
FS 3	Equal variances assumed	9.678	.002	2.778	113	.006	.91667	.32994	.26300	1.57033
	Equal variances not assumed			2.760	107.132	.007	.91667	.33207	.25838	1.57496
FS 4	Equal variances assumed	6.700	.011	-1.273	113	.206	-.09091	.07143	-.23243	.05061
	Equal variances not assumed			-1.218	54.000	.229	-.09091	.07464	-.24055	.05873
FS 5	Equal variances assumed	.354	.553	2.139	113	.035	.75455	.35273	.05573	1.45336
	Equal variances not assumed			2.137	111.701	.035	.75455	.35304	.05502	1.45407
FS 6	Equal variances assumed	6.530	.012	1.216	113	.227	.43939	.36145	-.27671	1.15550
	Equal variances not assumed			1.219	112.965	.225	.43939	.36035	-.27452	1.15331

Source: Field data (2018)

The findings in Table 9 indicate that a majority of respondents from Botswana (81.8%) and Tanzania (54.5%) are females compared to males. Further findings show differences between Botswana and Tanzania in terms of years of operation, type of business, registration status and size of business.

**Table 9: Demographic information of respondents (Comparison of Botswana and Tanzania)**

Demographic Information	Botswana	Tanzania
Age	41-50 years (36.4%)	41-50 years (36.4%)
Gender	Female (81.8%), Male (18.2%)	Female (54.5%), Male (45.5%)
Sector	Manufacturing	Manufacturing
Year of Operation	Above 5 years (72.7%)	2-5 years (81.8%)
Type of Business	Sole Proprietor (63.6%)	Partnership (72.7%)
Registration Status	Not registered (54.5%)	Registered (100%)
Size of Business	2-4 employees (81.8%)	5-10 employees (72.7%)

**Source:** Field data (2018)

Descriptive statistics for HC revealed that for Botswana, a majority of respondents are high school (54.5%), teamwork (63.6%) with work experience (63.6%) and years of experience of above 10 years (63.6%) and are full time in business (100%). For Tanzania, most respondents have a Masters' education (54.5%), teamwork (100%), have work experience (54.5%), and years of experience above 10 years (54.5%) and work in business full time (100%).

Furthermore, findings for FS which was measured using ease of access revealed majority of percentages on Strongly Disagree (SD) and Strongly Agree (SA) for the statements between Botswana (BW) and Tanzania (TZ) as follows: I have access to online banking (SD-BW 72.7%, TZ 36.4%) and (SA-BW 27.3%, TZ 63.6%), I have ease of transaction using online banking (SD-BW 72.7%, TZ 9.1 %) and (SA- BW 27.3%, TZ 72.7%), I use online banking to access bank statements for my business (SD-BW 81.8%, TZ 9.1 %) and (SA- BW 18.2%, TZ 90.9%), I use email to communicate business products and services to my friends & family members (SD-BW 72.7%, TZ 0 %) and (SA- BW 27.3%, TZ 81.8%), I refer friends and family members to my business website/social media account frequently (SD-BW 63.6%, TZ 0 %) and (SA- BW 36.4%, TZ 90.9%). From the descriptive statistics results , it is evident that there are differences between Botswana and Tanzania in relation to access to FS. This further suggests that more respondents from Tanzania have access to FS compared to Botswana.

## CONCLUSION

The aim of this paper was to analyze the impact of human capital on access to financial services for SMEs and whether gender matters for the comparative study between Botswana and Tanzania. The specific objective of this paper was to analyze the impact of human capital (measured by tacit and explicit knowledge) on access to financial services (measured by ease of access) for SMEs and whether male and female matters for the comparative study between Botswana and Tanzania.

The findings showed that although there are more females than males as SMEs, there are more female SMEs in Botswana compared to Tanzania who are mainly characterized as sole proprietors, above 5 years of operation, not registered and employ 2 to 4 employees. Further findings on human capital indicate that majority of female SMEs for Botswana had high school education, and Tanzania had Masters' education. The results of most female SMEs who are University graduates for Tanzania differ from a previous study by Mori and ILO (2014). The findings imply that there are differences and similarities in gender between Botswana and Tanzania.

The findings of access to financial services showed that most female SMEs from Tanzania in terms of ease of access to financial service, the following statements were strongly agreed, “I have access to online banking”, “I have ease of transaction using online banking”, “I use online banking to access bank statements for my business”, “I have a mobile phone I use for business”, “I use email to communicate business products and services to my friends and family members”, and “I refer friends and family members to my business website/social media account frequently”. This means that there is ease of access to financial services using online methods for female SMEs in Tanzania compared to Botswana.

## References

Agolla, J.E., Makara, T., & Monametsi, G. 2017. Impact of banking innovations on customers’ attraction, satisfaction and retention: A case of banks in Botswana. 14<sup>th</sup> World congress of Academy for Global Business Advancements. Eldoret, Kenya, 23-25 November, 2017.

Akinboade , O. A. 2015. Determinants of SMEs growth and performance in Cameroon’s central and littoral provinces’ manufacturing and retail sectors. *African Journal of Economic and Management Studies*, 6(2): 183-196. Retrieved from <https://doi.org/10.1108/AJEMS-03-2013-0033>. Accessed on 2 April 2018.

Arora, D.T. 2010. Measuring Financial Access. Retrieved from [https://www.griffith.edu.au/\\_\\_data/assets/pdf\\_file/0009/227988/2010-07-measuring-financial-access.pdf](https://www.griffith.edu.au/__data/assets/pdf_file/0009/227988/2010-07-measuring-financial-access.pdf). Accessed 15 February 2018.

Asah, F., Fatoki, O.O., & Rungani, E. 2015. The impact of motivations, personal values and management skills on the performance of SMEs in South Africa. *African Journal of Economic and Management Studies*, 6(3): 308-322. Retrieved from <https://doi.org/10.1108/AJEMS-01-2013-0009>. Accessed on 2 May 2018.

Bank for International Settlements. 2015. Financial inclusion indicators. Retrieved from <https://www.bis.org/ifc/publ/ifcb38.pdf>. Accessed 3 February 2018.

Becker, G. S. 1994. *Human Capital: A theoretical and empirical analysis with special reference to education* (3<sup>rd</sup> Eds.) (pp. 15-28). The University of Chicago Press.

Blaug, M. 1976. The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey. *Journal of Economic Literature*, 14(3): 827-855. Retrieved from <http://www.jstor.org/stable/2722630>. Accessed on 4 April 2018.

Boubekeur, S. 2016. Private sector development program in Botswana: how SMEs are facing challenges. Retrieved from [http://idev.afdb.org/sites/default/files/documents/files/Article%20from\\_EMQ2\\_\\_Botswana\\_WEB%206.pdf](http://idev.afdb.org/sites/default/files/documents/files/Article%20from_EMQ2__Botswana_WEB%206.pdf). Accessed 10 May 2018.

Cowling, M., Liu, W., & Zhang, N. 2016. Access to Bank finance for UK SMEs in the wake of the recent financial crisis. *International Journal of Entrepreneurial Behaviour & Research*, 22(6): 903-932.

De Vita, L., Mari, M., & Poggesi, S. 2013. Women entrepreneurs in and from developing countries: Evidences from the literature. *European Management Journal*, 32(3): 451-460. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0263237313001047>. Accessed on 8 May 2018.

Edoho, F.M. 2015. Entrepreneurialism: Africa in transition. *African Journal of Economic and Management Studies*, 6(2). Retrieved from <https://doi.org/10.1108/AJEMS-03-2015-0038>. Accessed on 10 April 2018.

Financial Sector Deepening Trust (FSDT). 2012. National Baseline Survey Report. Retrieved from <http://www.fsd.tz/>. Accessed 28 February 2018.

Global Entrepreneurship Monitor. 2010. Report. Retrieved from <https://www.gemconsortium.org/report/47109>. Accessed 10 May 2018.

Hartog, J., & Maassen, V. D. B. H. (Eds.). 2007. *Human capital : advances in theory and evidence*. Retrieved from <https://ebookcentral.proquest.com>. Accessed 10 February 2018.

Herrington, M. & Kelley, D. 2012. *African entrepreneurship: Sub-Saharan African regional report, Global Entrepreneurship Monitor*, Babson College, Babson Park, MA.

Hodgson, G. M. 2007. Meanings of Methodological Individualism. *Journal of Economic Methodology*, 14 (2), 211-226.

Hung, Y-C., Liou, C-C., Chiu, C-L., & Chiu, S-C. 2009. Research on measuring human capital factors. An example of household sewing machine industry in Taiwan. Technology Management Seminar, Taiwan. Retrieved from <http://www.myacme.org/ACMEProceedings09/p39.pdf>. Accessed 10 February 2018.

Iyere, J.A., & Aibieyi, S. 2014. Human capital: Definitions, approaches and management dynamics. *Journal of Business Administration & Education*, 5(1): 55-78.

Kerjice, R.V., & Morgan, D.W. 1970. Determining sample size for research activities. *Education and Psychological Measurement*, 30: 607-610.

Mori, N., & International Labour Organization (ILO). 2014. Women's Entrepreneurship Development in Tanzania: Insights and Recommendations. Retrieved from [http://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/---ifp\\_seed/documents/publication/wcms\\_360426.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_360426.pdf). Accessed 10 May 2018.

Mkwizu, K.H., Wilbard, J.G., Mbilinyi, D.B., & Maliva, N.S. 2018. Factors influencing consumers' convenience shopping of industrial products: A study of Kinondoni district. *Business Management Review*, 21(1): 23-33.

Naudé, W. 2013. *Entrepreneurship and economic development: Theory, evidence and policy*. St. Louis: Federal Reserve Bank of St Louis. Retrieved from <https://search.proquest.com/docview/1698648140?accountid=12834>. Accessed 12 February 2018.

Ngatno, Apriatni, E.P., & Widayanto. 2016. Human capital, entrepreneurial capital and SMEs performance of traditional herbal industries in central Java, Indonesia: The mediating effect of competitive advantage. *Archive of Business Research*, 3(4): 9-25.

Okurut, F.N., & Ama, N.O. 2013. Assessing factors that affect women and youth micro entrepreneurs in Botswana. *International Journal of Academic Research in Economics & Management Sciences*, 2(1): 306-332.

Pallant, J. 2011. *SPSS Survival Manual: A step by step guide to data analysis using SPSS*. Retrieved from [http://eunacal.org/metodakerkimi/wp-content/uploads/spss/SPSS\\_Survival\\_Manual\\_4th\\_Edition.pdf](http://eunacal.org/metodakerkimi/wp-content/uploads/spss/SPSS_Survival_Manual_4th_Edition.pdf)

Per, D., & Benson, H. 2003. The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3): 301-331.

Pishghadam, R., Noghani, M., & Zabini, R. 2011. The construct validation of a questionnaire of Social and Cultural Capital. *English Language Teaching*, 4(4): 195-203.

Rametse, N., & Huq, A. 2013. Women student's aspirations in starting their business in Botswana. 6<sup>th</sup> International Business and Social Sciences Research, Dubai, UAE, 3-4 January, 2013. ISBN 978-1-992069-18-4

Rey-Marti, A., Porcar, A. T., & Mas-Tur, A. 2015. Linking female entrepreneurs' motivation to business survival. *Journal of Business Research*, 68(4): 810-814. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0148296314003877>. Accessed 2 April 2018.

Robb, A. 2013. Access to capital among young firms, minority-owned firms, women-owned firms and high-tech firms. Retrieved from [https://www.sba.gov/sites/default/files/files/rs403tot\(2\).pdf](https://www.sba.gov/sites/default/files/files/rs403tot(2).pdf). Accessed 2 February 2018.

Richard, E.M., & Mori, N.G. 2012. SMEs access to financial services: Bankers' Eye. *Chinese Business Review*, 11(2): 217-223.

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students*. (6<sup>th</sup> ed.) Harlow Pearson Education.

Sharma, Y. 2013. Women entrepreneurs in India. *IOSR Journal of Business & Management*, 15(3): 9-14.

Swai, T., Ndanshau, M.O., & Lwiza, D.R.V.B. 2016. Commercial banks portfolio holdings: Does Size and Ownership Matter? Evidence from Tanzania. *The African Journal of Finance & Management*, 25(2).

Sweetland, S. 1996. Human Capital Theory: Foundations of a Field of Inquiry. *Review of Educational Research*, 66(3), 341-359. Retrieved from <http://www.jstor.org/stable/1170527>. Accessed 15 March 2018.

Tan, E. 2014. Human capital theory: A holistic Criticism. *Review of Educational Research*, 84(3): 411-445.

Tvedten, K., Hansen, M.W., & Jeppesen, S. 2014. Understanding the rise of African business: In search of business perspectives on African enterprise development. *African Journal of Economic and Management Studies*, 5(3): 249-268. Retrieved from <https://doi.org/10.1108/AJEMS-11-2012-0077>. Accessed on 15 March 2018.

Tuzun, I. K., Takay, B. A., Batur, U., & Ciftci, S. 2015. A research on women entrepreneurship in turkey. Retrieved from <https://search.proquest.com/docview/1717432540?accountid=12834>. Accessed 15 March 2018.

Udehn, L. 2002. *Methodological Individualism: Background, history and meaning*. London, Routledge.

Udell, G.F. 2015. Issues in SME Access to Finance. *European Economy*, (2): 61-74.

## Structural Equation Modeling of Factors Influencing Innovative Behavior of Production Employees in Thai Animal Feed Manufactures

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### ABSTRACT

This study aims to develop a structural equation model to explain factors influencing innovative behavior of production employees in Thai animal feed manufactures. The researcher collected data from 382 senior managers of animal feed manufacturing companies. The result showed that innovative atmosphere (IA) had direct influence on innovation-stimulating leadership behavior. Innovative atmosphere had direct influence on innovation behavior. Contact outside the organization had direct influence on innovation-stimulating leadership behavior and innovative behavior. Innovation-stimulating leadership behavior had direct influence on innovation behavior. Organizational innovation had direct influence on intrinsic motivation and intrinsic motivation had direct influence on innovative behavior. The model of innovative behavior from factors promoting innovative behavior could explain the innovative behavior by 75.3%. Therefore, the leader should support the exploration and discovery behavior of the idea that would create novel things to the organization. This would enhance competitiveness of domestic animal feed manufacture.

**Keywords;** structural equation modeling, innovation, innovative behavior, animal feed manufacture

### INTRODUCTION

Animal feed is used as raw material for animal husbandry which is used as a raw material in the food industry. As a result, the impact that affects the animal feed industry pass on to livestock industry and the food industry as well.

In the past, raw materials for feed production in Thailand have been imported from countries such as the United States, Argentina, Brazil, India, China, etc. and its price has continued to rise steadily over time based on the world market mechanism. For example, from 1999 to 2017, the average price of imported fish meal has increased from 25.72 baht per kilogram to 65.27 baht per kilogram and the average price of imported soybean meal increased from 7.47 baht per kilogram to 14.57 baht per kilogram (Thai Feed Mill Association, March 2018).

Meanwhile, the wholesale price of animal feed in the Bangkok metropolis did not increase based on raw material prices because the government has taken measures to control the price of animal feed.

Higher prices of raw materials for feed production also affects the profitability and survival of the company as it can be seen from the closure of some aquaculture farms. It also affects the daily lives of people in the country and the export competitiveness for animal feed, animal products and processed food of Thailand is reduced.

For this reason, to strengthen the innovation in the Thai animal feed industry which will resulted in lower operating costs, increase the competitiveness of domestic feed companies and the ability of Thai exporters, this paper aims to develop the structural equation model of factor influencing the innovative behavior of production employee in Thai animal feed manufacture, to examine the correlation of the developed structural equation model of factor

influencing the innovative behavior of production employee in Thai animal feed manufacture by empirical information and to study the direct and indirect influence as well as the total influence factor to the innovative behavior of production employee in Thai animal feed manufacture.

### **LITERATURE REVIEW AND RESEARCH FRAMEWORK**

After reviewing the literature related to innovation behavior, a research framework was developed. Factors include in a structural equation model in this research are as follows.

#### **Innovation Behavior**

Businesses need to stay ahead of the competition to meet the unlimited expectations of their customers. Innovation is one solution that has been mentioned. However, innovation in practice does not occur easily for businesses because organizations cannot manage their employees to be able to create new things or to behave in the way that facilitates innovation (De Jong, 2007). De Jong and Den Hartog (2008) explained that the innovation behavior means behavior of individuals which aim to innovate or to introduce new ideas that are useful for producing new products, services, and work processes. For this kind of behavior Roger (1959) states that it cannot be enforced. But it can be encouraged.

The observed variables of the innovation behavior can be synthesized as 3 variables which are Idea Exploration, Idea generation, Implementation Trial/Application (Parker, Williams and Turner, 2006; Hartjes, 2010). In addition, it was found that the variables that have direct effect on innovation behavior include: Innovation-Stimulating Leadership behavior (Gumusluoglu and Ilsev, 2009; Hartjes, 2010; Slåtten, Svensson, and Sværi, 2011), Intrinsic Task Motivation, External work Contacts and Innovative Climate (+) (Hartjes, 2010; Slåtten, Svensson, and Sværi, 2011).

#### **Innovative Climate**

Innovative climate is the collective perception of members of the organization on the working environment as well as the characteristics of the group that the member has involved whether the atmosphere is conducive to creativity and development. Every organization could create the working climate that stimulate the participation and determination of staffs or related staffs which would result in the innovation in the organization (De Jong, 2007, Hartjes, 2010). The observed variables of the innovation climate can be synthesized as 3 variables which are Support for innovation, Participative Safety and Striving for excellence (De Jong, 2007; Hartjes, 2010; Acikgoz and Gunsul, 2011).

#### **Innovation-Stimulating Leadership behavior**

Innovation-Stimulating Leadership behavior has been defined differently by many researchers (Stoll and Temperley, 2009). Innovation-Stimulating Leadership behavior can be defined as characteristics of leaders that could trigger the followers to be more initiative as well as support the followers' idea and innovation to create new outcomes, processes or products that would benefit to person, team and organization including providing resource, consulting and recognizing the important of innovation.

Based on the study of relevant research and literature, the observed variables of the Innovation-Stimulating Leadership behavior can be synthesized as 3 variables which are Providing Resource, Consulting and Recognizing of the importance of innovation (De Jong, 2007; Gumusluoglu and Ilsev, 2009; Hartjes, 2010). In addition, it was found that the variables that have direct effect on Innovation-Stimulating Leadership behavior include External work Contacts (Parker, Williams and Turner, 2006; De Jong and Den Hartog, 2008; Gumusluoglu and Ilsev, 2009) and Innovative climate (Denti and Hemlin, 2012).

#### **External work Contacts**

Lincoln and Miller (1979) defined External work Contacts as connection with a person, group or organization outside the organization. The external work contact would add up the external viewpoint and novel theory to improve products or processes that would lead to the organizational innovation.

In general, organizations need to interact outside the organization with 4 groups which are Customer, Supplier, Knowledge institutes and Competitor (De Jong, 2007; Gumusluoglu and Ilsev, 2009). Therefore, the observed variables of the external work contact are Customer, Supplier, Knowledge institutes and Competitor.

#### **Intrinsic Task Motivation**

Motivation was generated by intrinsic or extrinsic driving to achieve each person demand. Motivation would drive person working even though they faced the problems or obstacles to create new things. Woolfolk (1995) explained that Intrinsic Task Motivation is an internal condition of a person who is motivated to behave in a directional and continuous manner to achieve the goals set by the motivators.

The observed variables of the Intrinsic Task Motivation can be synthesized as 2 variables which are intrinsic motivation and interested in working with new problems. In addition, it was found that the variables that have direct effect on Intrinsic Task Motivation is Innovative Organization (Eisenberger and Rhoades, 2001).

#### **Innovative Organization**

National Innovation Agency (2006) explained that innovative organization can have two different meanings which are being an organization that originates innovation or being an organization that supports their internal personnel to innovate. The observed variables of Innovative Organization consists of 4 variables which are Open communication, Prioritization of staffs, Supporting from board and Seeking for knowledge to improve innovation process (Hay Group, 2005; Chen and Aryee, 2007; Wei and Wang, 2011; Byrd, 2012).

After the researcher reviewed the literature, relevant research and theories, the researcher would like to present the conceptual framework for this research as follows.

Based on the conceptual framework of this research, the research hypotheses are proposed as follows.

- H1: Innovative Climate has direct effect on Innovation-Stimulating Leadership behavior
- H2: Innovative Climate has direct effect on Innovation Behavior
- H3: External work Contacts has direct effect on Innovation-Stimulating Leadership behavior
- H4: External work Contacts has direct effect on Innovation Behavior
- H5: Innovation-Stimulating Leadership behavior has direct effect on Innovation Behavior
- H6: Innovative Organization has direct effect on Intrinsic Task Motivation
- H7: Intrinsic Task Motivation has direct effect on Innovation Behavior

### RESEARCH METHODOLOGY

For the questionnaire, it consists of 8 parts. Part 1 is about general information such as gender, age, current job position, working experience and education. Part 2 is about information of companies respondents work for such as business type, number of staffs and workers and company profile.

The content validity of the questionnaire was tested by asking 5 professionals in animal feed manufacturing and research field. Then the item-objective congruence (IOC) was calculated. It was found that every question have IOC higher than 0.5 (Vanichbuncha, 2009). After that a sample of 30 persons was collected for a pilot study and the reliability of the questionnaire was calculated using Cronbach's alpha coefficient. It is equal to 0.974 which was higher than the criterion level of 0.6 (Nunnally, 1978).

Population in this research were 450 animal feed companies that received the Good Manufacturing Practice (GMP) which dispersing in 6 regions in Thailand (Divisions of Animal Feed and Veterinary Products Control, 2015). The sample size is determined based on the data analysis method which is structural equation modeling (SEM). Costello and Osborne (2005) suggested that 20 samples per variable is recommended for best practices in factor analysis and SEM. As there are 19 manifest variables. Therefore, a sample of 380 managers or production managers was taken using stratified sampling. The sample size in each province was divided proportionately to population of each province, and then random sampling was used to randomly select the samples from each province.

Statistical analysis of sample was performed to determine the sample distribution via descriptive statistics including frequency and percentage. To determine the distribution and dispersion of manifest or observed variable that would use to develop the structural equation modeling, descriptive statistics was performed including mean, standard deviation, skewness, kurtosis and Pearson's product-moment correlation coefficient analysis using SPSS. Finally, factors influencing innovative behavior of production employees in Thai animal feed manufactures was analyzed using AMOS.

### RESULTS

The general information results revealed that there were 382 factory managers and/or production managers in animal feed manufacturing company. Most of them, 99.48%, were male production managers who had the age around 41-50 years old (40.48%). There were 55.24% of them had working experience less than 10 years, and 43.98% had working experience during 11-20 years. The educational level for most of them was bachelor degree (71.47%). 3.14% of the surveyed company had 1-50 staffs. All companies were standardized by Good Manufacturing Practice: GMP, and 100% Thai shareholder.

#### Evaluation of measurement model

It was found that the goodness-of-fit indices of all latent variables satisfied all the criteria with  $\chi^2 / df < 2$ , GFI > 0.90, AGFI  $\geq$  0.90, CFI > 0.95, SRMR < 0.05, RMSEA < 0.05 (Schumacker and Lomax, 2010).

**Table 1: Results from CFA of the adjusted measurement model**

Latent Variable	Item	Standardized factor loadings	Standard Error (SE)	Critical Ratio
Innovation Behavior (IB) (CMIN/df = 1.264, GFI = 0.979, AGFI = 0.956, CFI = 0.995, RMSEA = 0.026, SRMR = 0.027)	Idea Exploration	0.991	-	-
	Idea generation	0.955	0.103	10.516
	Implementation	0.888	0.117	9.522
	Trial/Application			

Innovation-Stimulating Leadership behavior (IL) (CMIN/df = 0.885, GFI = 0.990, AGFI = 0.973, CFI = 1.000, RMSEA = 0.000, SRMR = 0.024)	Providing Resource	0.889	-	-
	Consulting	0.950	0.078	13.328
	Recognizing of the importance of innovation	0.842	0.080	10.628
Innovative Climate (IA) (CMIN/df = 1.464, GFI = 0.983, AGFI = 0.960, CFI = 0.996, RMSEA = 0.035, SRMR = 0.032)	Support for innovation	0.887	-	-
	Striving for excellence.	0.953	0.075	13.839
	Participative Safety	0.946	0.073	14.197
External work Contacts (CO) (CMIN/df = 1.325, GFI = 0.983, AGFI = 0.955, CFI = 0.996, RMSEA = 0.029, SRMR = 0.029)	Customer	0.906	-	-
	Supplier	0.896	0.077	12.872
	Knowledge institutes	0.953	0.067	13.252
	Competitor	0.922	0.071	15.477
Intrinsic Task Motivation (IM) (CMIN/df = 1.369, GFI = 0.983, AGFI = 0.962, CFI = 0.995, RMSEA = 0.031, SRMR = 0.032)	intrinsic motivation	0.956	-	-
	interested in working with new problems	0.727	0.099	8.906
Innovative organization (OI) (CMIN/df = 1.332, GFI = 0.977, AGFI = 0.949, CFI = 0.995, RMSEA = 0.030, SRMR = 0.027)	Open communication	0.920	-	-
	Prioritization of staffs	0.883	0.091	10.237
	Supporting from board	0.969	0.118	10.600
	Seeking for knowledge to improve innovation process	0.958	0.108	10.551

### Evaluation of structural model

The structural equation model of innovative behavior model in viewpoint of factory managers or production managers in animal feed manufacturing company was correlated to the empirical data. The statistical values evaluating the correlation of model to the empirical data were CMIN/df=1.144, GFI=0.973, AGFI=0.946, CFI=0.998, IFI=0.998, NFI=0.984, RMSEA=0.019 and RMR=0.026 which passed all the criteria.

Moreover, the results from the data analysis shows that all hypotheses are supported (table 2). The hypothesis testing found that innovative atmosphere (IA) has direct influence on innovation-stimulating leadership behavior (IL) and innovative behavior (IB) with statistical significant level at 0.001 (p-value < 0.001). Contact outside the organization (CO) has direct influence on innovation-stimulating leadership behavior (IL) and innovative behavior (IB) with statistical significant level at 0.05 (p-value < 0.05). Innovation-stimulating leadership behavior (IL) has direct influence innovative behavior (IB) with statistical significant level at 0.001 (p-value < 0.001). Organizational innovation (OI) has direct influence intrinsic motivation (IM) with statistical significant level at 0.001 (p-value < 0.001) and intrinsic motivation (IM) had directly influence innovative behavior (IB) with statistical significant level at 0.05 (p-value < 0.05).

**Table 2: Path coefficient and hypothesis testing from structural equation model**

Hypothesis	Relationship			Standardized factor loadings	S.E.	C.R.	Support Hypothesis
H1	IA	→	IL	0.826***	0.056	14.599	Yes
H2	IA	→	IB	-0.565***	0.098	-4.050	Yes
H3	CO	→	IL	0.108**	0.059	2.222	Yes
H4	CO	→	IB	0.356**	0.101	3.071	Yes
H5	IL	→	IB	0.705***	0.092	5.455	Yes
H6	OI	→	IM	0.968***	0.045	18.887	Yes
H7	IM	→	IB	0.392**	0.126	3.050	Yes

Note: \*\* = significant at the 0.05 level, \*\*\* = significant at the 0.01 level

### CONCLUSION

This study aims to develop a structural equation model to explain factors influencing innovative behavior of production employees in Thai animal feed manufactures. After collecting data from 382 senior managers of animal feed manufacturing companies and analyzing the data, it was found that all hypotheses are accepted. Innovative climate and external work contacts have direct effect on innovation-stimulating leadership behavior. Innovative climate, external work contacts, innovation-stimulating leadership behavior and intrinsic task motivation have direct effect on innovation behavior and innovative organization has direct effect on intrinsic task motivation.

The implications from this research can be divided into two parts:

### **Recommendations for animal feed companies**

In order for workers in animal feed companies to be innovative, it starts with their companies itself. The company has to set their goal to be an innovative company and to create environment that support innovation. The work atmosphere has to be flexible and all support are fully provided to workers. Moreover, getting information or knowledge from outside the organization is one of the factors that will make leaders and staffs to have new ideas which different from the same ideas and processes found throughout the organization all the time. Importantly, what is necessary is that the leaders in the organization need to stimulate and support innovation. Some specific recommendations for animal feed companies are:

1) To communicate the vision, mission, values of the organization and the company's innovation policies is important and necessary to determine the direction and perception of personnel in the organization to carry out activities that promote the development of innovative behavior.

2) Role of leadership at each level should be clearly defined. They should be mentors to their staffs and directly responsible for promoting employee innovation including recruiting and developing new leaders for the next level to promote personnel innovation behavior of the organization.

3) There should be a consultant team responsible for creating the right atmosphere that support the development of innovatovve behavior of personnel in the organization.

### **Recommendations for future research**

Interested researchers may:

1) Study new variables related to the innovation behavior of personnel. For example, by including variables related to economic condition and work progress of the personnel.

2) Use the structural model developed in this research to apply with companies in other industries. Because from existing research, it was found that the pattern of human behavior would be similar in every industry.

3) Collect data over a period of time because the animal feed business is subject to seasonal sales and production, promoting and supporting innovative behaviors may change over period of time.

### **REFERENCE**

- Acikgoz, A. and Gunsel, A. (2011). The effects of organizational climate on team innovativeness. *Procedia Social and Behavioral Sciences*, 24, 920-927.
- Angsuchoti, S., Wjitwanna, S., & Pinyopanuwat, R. (2008). *Statistics for social science and behavioural science: How to use LISREL*. Bangkok, Thailand: Mission Media. [in Thai]
- Byrd, M. (2012). *The anatomy of the innovative organization: a case study of organizational innovation within a military structure*. Doctoral Dissertation. Faculty of the USC Rossier School of Education. University of Southern California.
- Chen, Z. X. and Aryee, S. (2007). Delegation and employee work outcomes: an examination of the cultural context of mediating processes in China. *Academy of Management Journal*, 50(1), 1-36.
- Costello, A. B. and Osborne, J. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation*, 10(7), 1-9.
- De Jong, J. P. J. and Den Hartog, D. (2008). Measuring innovative work behavior. *Creativity and Innovation Management*, 19(1), 23.
- De Jong, J. P. J. (2007). *Individual innovation: the connection between leadership and employees' innovative work behavior*. Zoetermeer: EIM
- Denti, L. and Hemlin, S. (2012). Leadership and innovation in organization: a systematic review of factors that mediate or moderate the relationship. *International Journal of Innovation Management*, 16(3), 1-20.
- Divisions of Animal Feed and Veterinary Products Control. (2015). *Statistical data*. Retrieved 5 May 2015, from <http://afvc.dld.go.th/index.php/component/content/article/9-uncategorised/154-2016-06-20-06-09-41>
- Diamantopoulos, A. and Siguaw, A. D. (2000). *Introducing LISREL: A guide for the uninitiated*. London, UK: Sage.
- Eisenberger, R., and Rhoades, L. (2001). Incremental effects of reward on creativity. *Journal of Personality and Social Psychology*, 81, 728-741.
- Fornell, C. and Larcker, D. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18, 382-388.
- Hartjes, B.J.G. (2010). *Aligning employee competences with organizational innovation strategy: a case study at B.V. Twentsche Kabelfabriek*. University of Twente.
- Hay Group. (2005). *The innovative organization: lessons learned from most admired companies*. Retrieved 25 April 2018, from [https://www.haygroup.com/downloads/es/Hay\\_Insight\\_Selections\\_April\\_2005.pdf](https://www.haygroup.com/downloads/es/Hay_Insight_Selections_April_2005.pdf)
- Lale Gumusluoglu and Arzu Ilsev. (2009). Transformational Leadership and Organizational Innovation: The Roles of Internal and External Support for Innovation. *Journal of Product Innovation Management*, 26(3), 264-277.

- Lincoln, J. R. and Miller, J. (1979). Work and friendship ties in organizations: a comparative analysis of relational networks. *Administrative Science Quarterly*, 24, 181-199.
- National Innovation Agency. (2006). *Dynamic of innovation*. Bangkok: National Innovation Agency. [in Thai]
- Nunnally, J. C. (1978). *Psychometry theory*. New York, NY: McGraw-Hill.
- Parker, S. K., Williams, H. M., and Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91(3), 636-652.
- Rogers, C.R. (1959). A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework. In S. Koch (ed.). *Psychology: A study of science*. N.Y.: McGraw Hill.
- Schumacker, R. E. and Lomax, R. G. (2010). *A Beginners Guide to Structural Equation Modeling*. Routledge: New York.
- Slåtten, T., Svensson, G. and Sværi, S. (2011). Service quality and turnover intentions as perceived by employees: Antecedents and consequences. *Personnel Review*, 40(2), 205-221.
- Stoll, L. and Temperley, J. (2009). Creative leadership teams. *Journal of Management in Education*, 23(1), 12-18.
- Thai Feed Mill Assosication. (March 2018). *Monthly Livestock Price*. Retrieved 25 April 2018, from <http://www.thaifeedmill.com/%E0%B8%A3%E0%B8%B2%E0%B8%84%E0%B8%B2Price/tabid/78/Default.aspx>. [in Thai]
- Vanichbuncha, K. (2009). *Statistics for research (6th edition)*. Bangkok: CU Printing House. [in Thai]
- Wei, Y. and Wang, Q. (2011). Making sense of a market information system for superior performance: the roles of organizational responsiveness and innovation strategy. *Industrial Marketing Management*, 40(2), 267-277.
- Woolfolk, A. E. (1995). *Motivation and Personality (2nd edition)*. Bangkok: We Learn. [in Thai]

# Performance and Significance of Infrastructure Mutual Funds in India

May 31, 2018

## 1 Introduction:

The infrastructure sector has got a crucial importance in the economic development, modernisation and urbanisation of a nation. This sector is responsible for propelling overall development in India. The prominent decisions have been taken on infrastructure development since liberalisation by the government for building world class infrastructure in the country. The policy initiatives have attracted private and foreign investors, which gave rise to launch of infrastructure funds. Infrastructure sector does not pertain only to construction industry, it also comprises of road, ports, shipping, railways, inland water transport, urban development, power, new and renewable energy, railways and telecommunication sectors etc ("Infrastructure Policy & Finance Division, Department of Economic Affairs, MoF, GoI", 2018). With the focus on infrastructure development, construction industry become the second strong industry after agriculture in India with rapid growth ("Seminar on Construction Industry: Accelerating Infrastructure Development in India, FICCI, Federation House", 2012).

According to the World Bank's Logistics Performance Index (LPI) 2016, India jumped 19 positions and stood at 35th position among 160 participant countries. The Construction Development sector, which includes housing, construction development projects, townships and built up infrastructure received US\$ 24.67 billion between 2000 and 2017 in the form of Foreign Direct Investment (FDI) as reported by Department of Industrial Policy and Promotion (DIPP). The growth of core industries (coal, crude oil, natural gas, refinery products, fertilisers, steel, cement and electricity) of infrastructure sector is shown in the figure 1. There is overall 4.8% growth in index during 2016-17 financial year. In FY 2016-17, the high growth registered activities were export cargo, highway construction, power generation, import cargo and cargo at ports with 10, 9.8, 6.6, 5.8, 5.3 percent respectively. The index growth by steel, electricity, natural gas, refinery products and crude oil was 6.2, 4.9, 4.3, 1.8 and 0.2 percent for the financial year 2016-17 ("Infrastructure Development in India: Market Size, Investments, Govt Initiatives | IBEF", 2018).

Mutual Fund is that innovative financial investment which assures certain regular return to the investors. They are preferred choice of investment because of its features like diversification of assets, availability from less amount of investment, tax benefits and professional management. There is a significant progress of mutual funds industry across the globe. In India, the evolution of Mutual Fund sector is categorized into four phases.

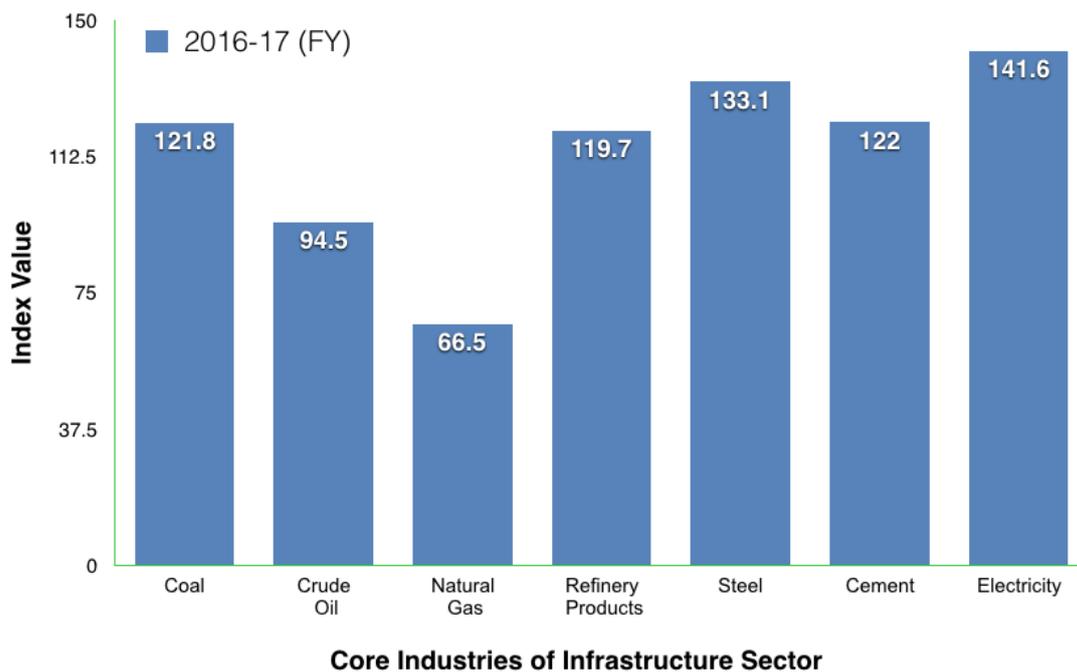


Figure 1: Index Performance of Core Industries of Infrastructure Sector

Figure 1. Index Performance of Core Industries of Infrastructure Sector is compiled by researcher from IBEF website, retrieved from <https://www.ibef.org/industry/infrastructure-sector-india.aspx> Copyright 2010-2018 by India Brand Equity Foundation.

The first phase (1963-1987), witnessed the formation of United Trust of India (UTI) under the parliament act, under the governance of Reserve Bank of India (RBI). Later the UTI was delinked from RBI and Industrial Development Bank of India (IDBI) replaced RBI. The public sector banks, Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC) entered the mutual fund sector in the second phase (1987-1993). After the Narasimhan committee report the private and foreign investments entered the sector during the third phase (1993-2003). The governance of all the mutual funds except UTI is taken up by Securities Exchange Board of India (SEBI) under mutual fund regulation act 1993 and currently under the revised regulations in 1996. In the fourth phase (since 2003), the UTI bifurcated into two separate entities. One entity under UTI undertaking with Rs 29,835 Crores of Asset Under Management (AUM), governed by the Government of India. The other entity is sponsored by the SBI, PNB, BOB and LIC under the purview of SEBI Mutual Funds regulation ("History - Mutual Fund Industry in India | Unit Trust of India", n.d.).

The AUM of the Indian Mutual Fund Industry is Rs 23.21 trillion by the end of April 2018. The AUM has increased seven times in the span of 10 years, from Rs 3.26 trillion in 2007 (end of first quarter) to Rs 22.79 trillion in 2017 (November) ("Indian Mutual Fund industry's Avg. Assets Under Management (AAUM) stood at Rs 23.21 Lakh Crore (INR 23.21 Trillion)", n.d.). The growth of AUM of mutual fund industry in India is shown in figure 2. The sector mutual funds or sector funds are vital segment of mutual fund industry.



Figure 2: Growth of AUM of Mutual Fund Industry in India

*Figure 2.* Growth of AUM of Mutual Fund Industry in India is compiled by researcher from AMFI website, retrieved from <https://www.amfiindia.com/research-information/mf-history> Copyright 2013 by AMFI.

The actively managed funds which have objective to invest in a particular sector or segment of the economy are Sector Funds. Their focus is very narrow and they concentrate on a particular sector to pick the stocks. The stocks they pick will belong to the same sector but different companies within the sector.

The infrastructure funds may invest in infrastructure sector related stocks, bonds and both. The infrastructure sector comprises of road, ports, shipping, railways, inland water transport, urban development, power, new and renewable energy, railways and telecommunication sectors etc. Thus major advantage of infrastructure funds over other sectoral funds is the diversification it allows. India being the emerging economy with increasing population, needs impeding focus on infrastructure sector. The government of India, has been taking appropriate initiatives to develop the infrastructure sector like huge budget allocations, liberalising rules and regulation for the entry of private and foreign investors, technological advancements and public private partnerships etc. As per the recent amendment made in February 2017, mutual funds are allowed to invest in hybrid securities units of Real Estate Investment Trust (REIT) and Infrastructure Investment Trust (InvIT). The cumulative FDI inflows reached US\$ 24.54 billion from 2000-2017 in the Construction Development sector, which includes townships, built-up infrastructure and construction development projects (Securities and Exchange Board of India, 2017). Considering the current scenario, developments and statistics, the study on significance and performance of infrastructure funds in India is worth while.

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## 2 Literature Review:

The mutual fund industry has attracted not only investors but also researchers and academicians. The studies related to performance of mutual funds are available in plenty, while studies related to sector funds and particularly infrastructure funds are scarce. The focus of sector funds is narrow as they invest only in the certain sector related stocks or bonds. Infrastructure funds have exhibited healthy returns of 14.47% over other sector funds in yearly return during 2017 (Dhanorkar, 2017). These funds have an edge of exposure to theme across industries covered under infrastructure sector.

Research paper assessed the significance of Australian infrastructure funds. The paper identified the importance of the motivational and risk related factors for the fund managers. Considering the current global credit crisis, development of infrastructure sector is discussed. The study conducted a survey of 32 infrastructure fund's managers in which 21 are listed funds and 11 are unlisted funds. The current global credit crisis uncertainty to all asset classes including infrastructure sector. But for long term, the infrastructure funds are strong prospects, in Australia and other nations, developed and emerging markets (Newell & Wen Peng, 2008).

The study by Kaushik, Saubert & Saubert (2014) analysed 115 actively managed healthcare mutual funds over the period of 11 years from 2000 to 2011. The findings are that healthcare funds outperform the passive index on an average by 2.97% per year approximately after controlling the effects like market risk premium, growth and size premiums, and momentum. The study also concluded that the trend of over and under performance is not persistent over the subsequent periods. Rather, under and over-performances are mean reverting.

The significance and performance of infrastructure in India are assessed by risk-adjusted performance and portfolio diversification. The study considered listed infrastructure companies in India from 2002 to 2009. It was found that the Indian infrastructure delivers strong risk-adjusted returns compared with the infrastructure sectors in the Asia-Pacific region. Similarly, the Indian stocks perform better in terms of risk-adjusted returns when compared with global stocks. The benefits of portfolio diversification were also very much evident in Asia-Pacific and global infrastructure context. The study observed that the Indian infrastructure showed a high degree of robustness during the global financial crisis, though some loss of portfolio diversification were evident. It also identified that the implications for infrastructure in India and the future structural impediments to the continued development (Singhal, Newell & Nguyen, 2011).

The study by Tiwari & Anand (2001), analyzed the performance of 607 actively managed stock sector funds which are listed on the CRSP Survivor-Bias Free US Mutual Fund Database for the period of 10 years from 1990 to 2000. The study used five-factor model and a portfolio regression for controlling bias in performance measurement. The three main findings of the study are 1) Sector funds neither outperform nor underperform their benchmarks. 2) No evidence of persistence in sector fund performance. 3) Sector fund investors do not possess the ability to pick the winning sector funds or winning sectors of the stock market.

The study by Kaushik (2007) analyzes the sector fund's performance across different stages of business cycles. The sample of 1,488 sector funds over the period 15 years from 1990 to 2005 is considered. It is found that the sector funds perform different across

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different stages of business cycles. The average difference between recession and expansion cycles ranged from 2.75 to 3.78 percent per year. It is also found that the sector funds exhibit different timing effects across recessions and expansions. The differential effect is observed in fund flows and buy turnover ratio across business cycles. While the sell turnover trading has a negative effect on performance of fund.

As discussed in the earlier papers, the mutual fund performance analysis is done based on risk and return parameters where the return and risk are output and input parameters. But, portfolio risk is indeed a non-separable output and the absence of it in output will effort to causes a reduction in portfolio return. This view is covered in the paper by Sinha (2016), which used a non-parametric undesirable output model for performance evaluation of 27 sectoral mutual fund schemes for the period of 3 years i.e, from July 2010 to June 2013. The results show the stability of mean efficiency scores across the time period considered. It is also found that the fund inefficiency emerged mostly from input end.

The crucial aspect for institutional investors is the performance of infrastructure funds compared to other assets classes and portfolio diversification based on risk-adjusted framework. There is quite a literature available on the performance aspect of infrastructure funds with respect to different markets like the USA, China, Australia, Europe, the UK (Finkenzeller et al. 2010; Peng and Newell 2007; Newell et al. 2009; Newell and Peng 2008; Oyedele 2014). The paper by Theire and Moor (2016) dealt with review of the characteristics of infrastructure, an investment class. It covers the studies on performance of infrastructure funds which covered the aspects like risk and return characteristics ranging across different sectors, different regions, and development stages.

From the literature reviewed, it is lucid that the performance of infrastructure funds and the sector mutual funds have been dealt in terms of risk return aspects, employed conditional and unconditional measures. In this paper we will attempt to study the performance of infrastructure funds using the attributes of the funds in addition to the risk, reward parameters and try to understand the relationship between the attributes of infrastructure fund on infrastructure fund performance. The study also attempts to understand the persistence in the performance of mutual funds.

### **3 Methodology:**

Regression analysis is a widely used predictive modelling technique. It is used for assessing the relationship between dependent and independent variables. The analysis results in signifying the relationship and strength of the impact of independent variables on dependent variable (Pedhazur & Kerlinger, 1973). This study employ regression analysis for understanding the effect of fund attributes on the performance of infrastructure funds and persistence of performance of the infrastructure funds. Regression analysis has quite widely used in the performance analysis of mutual funds right from the seminal papers (Malkiel, 1995; Jain & Wu, 2000; Grinblatt, Titman & Wermers, 1995; Sharpe, 1966; Henriksson, 1984).

The regression analysis is conducted on the sample of 18 Indian infrastructure funds which are operative in 5 years time period from 2013 to 2017. The regression is applied for understanding the impact of the attributes of the mutual fund on the performance of the infrastructure fund and persistence on the performance of infrastructure funds. For

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this regression model the fund attributes are considered as the input parameters while the Net Asset Value (NAV) of the fund is considered the output parameter. To understand the persistence of the performance infrastructure fund, apart from the attributes of the fund, past performance is also considered as input parameter.

$$\text{lm}(Y \sim \text{model})$$

where

Y : set of dependent variables

model : formula for chosen mathematical model

This study considers the fund attributes age of the fund (calculated using launch date of fund), risk parameters which include sharpe ratio, treynor ratio, jensen's alpha, systematic risk (beta), expenses of the fund (total expense ratio), past performance (previous year's performance i.e., 2013 to 2016) as input parameters to study the performance of infrastructure funds.

### 3.1 Data:

The sample considered for the study consists of open-ended as well as closed ended 18 infrastructure mutual fund schemes operating in India during the period of 5 years i.e., 1-01-2013 to 31-12-2017. The data initially collected contained 23 schemes but only 18 were operative for the period considered for the study. These funds are Lipper funds, domiciled in India collected from Thomson Reuters database.

## 4 Results and Conclusion:

The study carried out regression analysis, a predictive model technique to understand the impact of the fund attributes on the performance of infrastructure funds. The fund attributes considered are past performance, age of the fund, systematic risk, sharpe ratio, treynor ratio, Jensen's alpha, total expenses as input parameters and current NAV is considered the output parameter. The below is the equation used to carry out the regression analysis.

$$l \leftarrow \text{lm}(y\$NAV \sim y\$X2017 + x\$X2016 + x\$X2015 + x\$X2014 + x\$X2013 + x\$'Total.Expense.Ratio' + x\$'age.1' + x\$'Beta.1.Year' + x\$'Alpha.1.Year' + x\$'Treynor.Ratio.1.Year' + x\$'Sharpe.Ratio.1.Year')$$

As per the analysis given in figure 3, the sample is symmetrically distributed by considering the residual scores and with median of 0.05. The performance model of Indian infrastructure funds is a significant model with reasonably less p value. The R<sup>2</sup> value of 0.913 explains that, in the model 91.3% of variance is expected on the response variable by the predictor variable. The age of the fund is a significant variable which has impact on the performance of the infrastructure fund with value less than 0.001. The treynor ratio and the sharpe ratio are parameters which have significant impact on the performance of infrastructure fund with values 0.011 and 0.045 respectively. The past performance persistency is not lucid from the model and might require a large sample set to reach a conclusion.

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Residuals:
      Min       1Q   Median       3Q      Max
-8.9659 -2.4809  0.0501  2.5848  8.1606

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -93.4770    33.8347  -2.763  0.03273 *
y$X2017        -0.5557     0.4102  -1.355  0.22429
x$X2016        -0.3518     0.4412  -0.797  0.45557
x$X2015        -0.2263     0.6894  -0.328  0.75383
x$X2014         0.1817     0.2539   0.716  0.50109
x$X2013        -1.5965     0.6632  -2.407  0.05278 .
x$Total.Expense.Ratio 21.0473     8.6047   2.446  0.05006 .
x$Age.1         0.7765     0.1315   5.907  0.00105 **
x$Beta.1.Year  -16.2773    14.3430  -1.135  0.29973
x$Alpha.1.Year   74.0540    44.5569   1.662  0.14757
x$Treynor.Ratio.1.Year 26.5397     7.3213   3.625  0.01103 *
x$Sharpe.Ratio.1.Year -524.9442   208.5321  -2.517  0.04545 *
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 7.247 on 6 degrees of freedom
Multiple R-squared:  0.9136,    Adjusted R-squared:  0.7551
F-statistic: 5.765 on 11 and 6 DF,  p-value: 0.0214

```

Figure 3: Regression Analysis of Infrastructure Fund

The figure 4, represents the normal distribution of the residual scores from the model obtained by regression analysis conducted on the 18 infrastructure funds from 2013 to 2017 period.

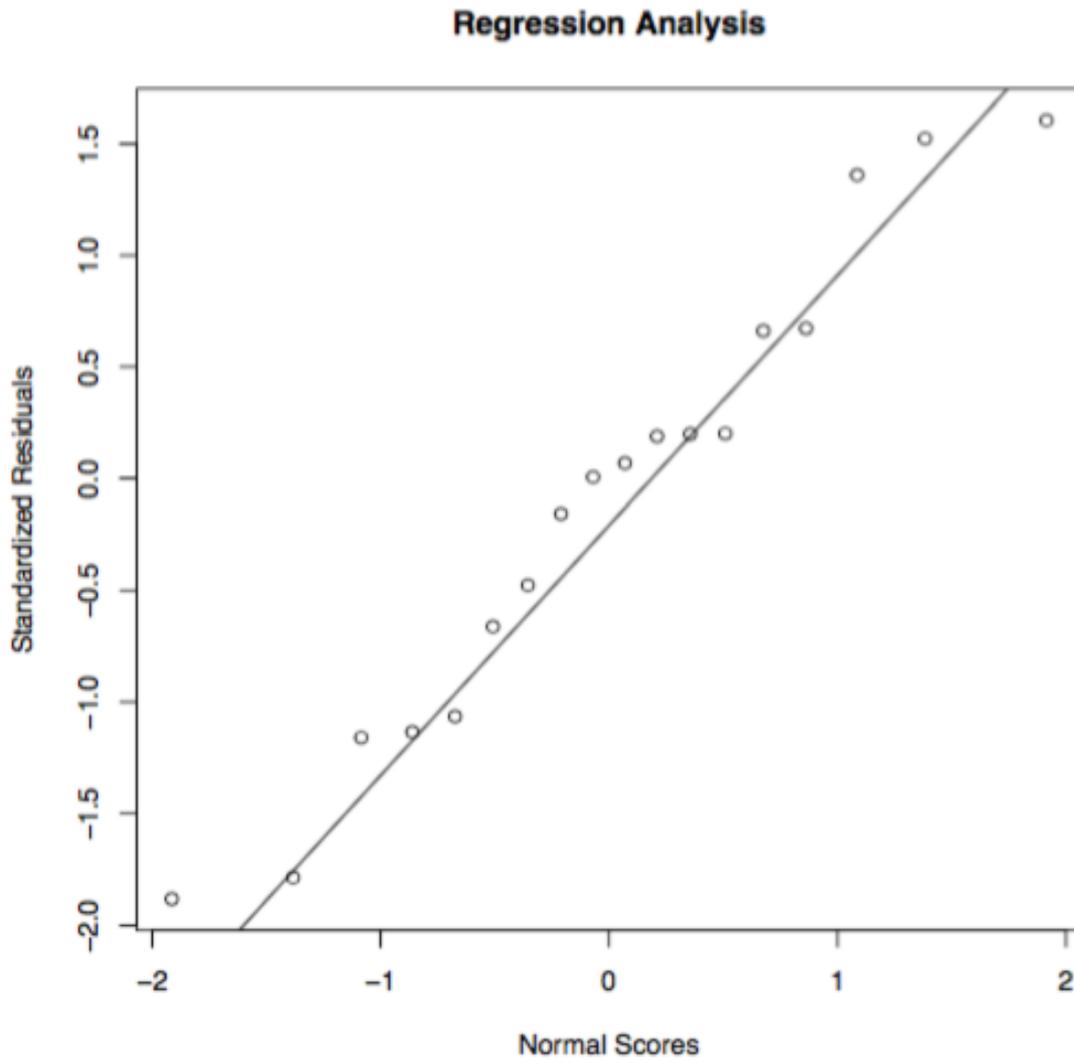


Figure 4: Distribution of Scores

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## 5 References

- Amfiindia.com. (n.d.).History - *Mutual Fund Industry in India | Unit Trust of India*. [online] Available at: <https://www.amfiindia.com/research-information/mf-history> [Accessed 10 Dec. 2017].
- Bamidele Oyedele, J. (2014). Performance and significance of UK-listed infrastructure in a mixed-asset portfolio. *Journal of European Real Estate Research*, 7(2), 199-215.
- Bitsch, F., Buchner, A., & Kaserer, C. (2010). Risk, return and cash flow characteristics of infrastructure fund investments.
- Choi, W. W. (2008). Sector funds (Order No. 3328540). Available from ABI/INFORM Collection. (304504052). Retrieved from <https://search.proquest.com/docview/304504052?accountid=145616>
- Dhanorkar, S. (2017). Why infrastructure mutual funds are a good bet for long term investors now. Retrieved from <https://economictimes.indiatimes.com/wealth/invest/why-infrastructure-mutual-funds-are-a-good-bet-for-long-term-investors-now/articleshow/59081983.cms>
- Finkenzeller, K., Dechant, T.,& Schafers, W.: Infrastructure: a new dimension of real estate? An asset allocation analysis. *J. Prop. Invest. Financ.* 28(4), 263-274 (2010)
- Grinblatt, M., Titman, S., & Wermers, R. (1995). Momentum investment strategies, portfolio performance, and herding: A study of mutual fund behavior. *The American economic review*, 1088-1105.
- Henriksson, R. D. (1984). Market timing and mutual fund performance: An empirical investigation. *Journal of business*, 73-96.
- Indian Mutual Fund industry's Avg. Assets Under Management (AAUM) stood at Rs 23.21 Lakh Crore (INR 23.21 Trillion). Retrieved from <https://www.amfiindia.com/indian-mutual>
- Infrastructure Development in India: Market Size, Investments, Govt Initiatives, IBEF. (2018). Retrieved from <https://www.ibef.org/industry/infrastructure-sector-india.aspx>
- Infrastructure Policy & Finance Division, Department of Economic Affairs, MoF, GoI. (2018). Retrieved from <https://dea.gov.in/divisionbranch/infrastructure-and-energy-division#Infra>
- Jain, P. C., & Wu, J. S. (2000). Truth in mutual fund advertising: Evidence on future performance and fund flows. *The journal of finance*, 55(2), 937-958.
- Kaushik, A. (2007). Essays on actively managed mutual funds (Order No. 3271898). Available from ABI/INFORM Collection. (304848143). Retrieved from <https://search.proquest.com/docview/304848143?accountid=145616>
- Kaushik, A., Saubert, L. K., & Saubert, R. W. (2014). Performance and persistence of

- 
- performance of healthcare mutual funds. *Financial Services Review*, 23(1), 77.
- Malkiel, B. G. (1995). Returns from investing in equity mutual funds 1971 to 1991. *The Journal of finance*, 50(2), 549-572.
- Newell, G., & Wen Peng, H. (2008). Assessing the significance of motivating factors and risk factors in infrastructure funds management. *Pacific Rim Property Research Journal*, 14(4), 399-411.
- Newell, G., Wing Chau, K., & Kei Wong, S. (2009). The significance and performance of infrastructure in China. *Journal of Property Investment & Finance*, 27(2), 180-202.
- Pedhazur, E. J., & Kerlinger, F. N. (1973). Multiple regression in behavioral research. New York: Holt, Rinehart and Winston.
- Securities and Exchange Board of India. (2017) (pp. 1-235). Mumbai. Retrieved from <http://www.sebi.gov.in/reports/annual-reports/aug-2017/annual-report-2016-17-35618.html>
- Seminar on Construction Industry: Accelerating Infrastructure Development in India, FICCI, Federation House. (2012). Retrieved from <http://fikki.in/events-page.asp?evid=20991>
- Singhal, S., Newell, G., & Nguyen, T. K. (2011). The significance and performance of infrastructure in India. *Journal of property research*, 28(1), 15-34.
- Sinha, R. P. (2016). Benchmarking of Indian Sectoral Mutual Funds-A Non-Separable Undesirable Output Model. *International Journal of Financial Management*, 6(4), 42.
- Sharpe, W. F. (1966). Mutual fund performance. *The Journal of business*, 39(1), 119-138.
- Thierie, W., & De Moor, L. (2016). The characteristics of infrastructure as an investment class. *Financial Markets and Portfolio Management*, 30(3), 277-297.
- Tiwari, A., & Anand, M. (2001). Sector fund performance. Henry B. Tippie College of Business, University of Iowa, Iowa City. Working paper.
- Wen Peng, H., & Newell, G. (2007). The significance of infrastructure in Australian investment portfolios. *Pacific Rim Property Research Journal*, 13(4), 423-450.

# Total Interpretive Structural Modelling (TISM) of Enablers of a Value-Based Healthcare Organization

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**Abstract** - Payers and providers are moving towards a closer alignment due to the continuous pressure of reducing the healthcare costs, improving the quality and implementing value-based payments. For enhancing care delivery, controlling the cost of care and working together to improve the health of the various population segments, population health management is a very important strategy and value-based care will drive those strategies. At present, the healthcare organizations are using the traditional model “fee-for-service” that needs to be replaced by “value-based care” for delivering a high quality coordinated care to the patient, thus improving his/her overall health. This shift will pose great challenges to the providers, but certain initiatives can be taken up for helping the providers to incorporate these shifts in their operational and financial areas. The technologies like data analytics and automation can be adopted for better tracking of population healthcare outcomes which will ultimately help in delivering better quality healthcare to the patients.

Many organization are moving towards the path of value-based healthcare and reimbursement, but not many have been successful. In fact, this is one of the biggest challenges which the healthcare executives are facing. Thus, there exists a need of developing a model detailing the most important factors responsible for implementing a value-based healthcare organization. The proposed framework will be explaining the roles which the various enablers play in implementing the value-based healthcare.

## I. INTRODUCTION

For understanding the current state of value-based healthcare, it is important that we examine the problems to which is needs to respond to in the global healthcare industry. Over the time, the healthcare costs have increased considerably in the developed countries. Even though in some past years the costs have been controlled a little but still the overall trend shows a tremendous increase. In fact, in the developing countries, the cost numbers are even more. And it doesn't seem quite possible for the developing countries to replicate the care delivery model which is used in the developed countries. Despite of the increasing costs, the medical practices, healthcare

outcomes and healthcare costs also vary a lot across the providers within and between the countries. There isn't really any correlation between the amount of money invested and the healthcare outcomes delivered. A tremendous amount of money is being invested in the research and development in the healthcare sector, but the innovations aren't clear and many times, the most deserving innovations are not appropriately rewarded. And systems which spend the most money, doesn't always deliver the best quality healthcare services. There has also been a realization of misalignment of incentives driving the different stakeholders in the healthcare industry. Due to this, many behaviors are not working as expected when seen from the patient's perspective and even considering the system which is ultimately leading to mistrust, inefficiency and frustration. The people working in the healthcare industry are among the most caring and committed people, but the evolving local rules, regulatory frameworks, resources, constraints and regulatory frameworks have led to inconsistent responses and thus misaligned behaviors.

The problem needs to be addressed holistically taking into consideration the fact that the healthcare professional will give their best services in the available resources. It is very essentially to fundamentally align all the stakeholders towards a common objective of improving the healthcare outcomes being delivered to the patients at a given cost and for achieving this, the stakeholders should be given the necessary autonomy, tools and accountability.

There are three broad areas in which the value-based healthcare system can be explained –

1. Three underlying principles of value-based care delivery are –
  - a. Measuring the health outcomes most important to the patient throughout the care cycle systematically along with the costs.
  - b. Identifying clearly the population segments which have been defined. Also, to identify the health outcomes and costs for these segments.
  - c. For improving the value for every population segment, customized interventions specific to segments needs to be developed.
2. The key enablers of value in healthcare are basically are responsible for supporting and facilitating the orientation of the healthcare

systems around the three underlying principles mentioned above. If these enablers are aligned, they will accelerate the progress of implementation of value-based healthcare.

3. The transition to value-based healthcare can either be hindered or accelerated by the policies that are responsible to shape the healthcare sector's regulatory and legal environment.

## II. KEY ENABLERS OF VALUE IN HEALTHCARE

The enablers if aligned with each other can help in accelerating the progress towards a value-based healthcare system and their misalignment can be a hindrance to that progress. Therefore, it is important that all the enablers are aligned to accelerate the process of making the healthcare system in-line with the above three underlying principles. Following are the key enablers of value in healthcare –

### 1. *Patient Engagement*

In today's time, it is extremely important that patient's opinions and views are considered actively while assessing the quality of care being delivered to them. The concept of just delivering care to the patient without asking for their feedback is no longer. It is imperative that patients are actively involved for determining the effectiveness of a treatment in improving their quality of life. This information is being stored in the form of Patient reported outcome measures (PROMs) which are used by the healthcare systems for accessing the effectiveness. In addition to this, patients are also asked to fill questionnaires which also contribute to the care quality assessment. Going a step ahead, patients inputs are actively being sought for designing the care pathways and for defining the preferred indicators and outcomes which will further be used for forming a basis for the provider's pay and incentives. To have effective patient engagement, it is imperative that the appropriate systems for recording the patient's inputs and measuring their level of satisfactions with the healthcare outcomes are in place. The healthcare leaders also need to take a step ahead in mobilizing and assessing the capabilities and assets of patients and caregivers so that they can have an active role in the care. And undoubtedly, the patients can also play a very important role in research and teaching. So, basically, informed patients can make better choices which will ultimately lead to improved healthcare outcomes.

### 2. *Health Informatics*

The evidence-based approach "Value-based healthcare" has informatics as its most critical enablers. For routinely collecting, sharing and analyzing healthcare outcomes for each population segment, a strong informatics infrastructure is required. This system will in-turn can support the many functions like tracking and analyzing the health outcomes in a systematic manner, calculating risk adjustment factors and relevant cost of care corresponding to every segment. The system needs to have excellent analytics capability along with a robust IT architecture.

In the recent years, the health informatics systems have progressed not many countries are completely digitized. Many places still use paper. And places where EMRs are being used to capture the treatment and diagnostic data for the patients are not including standardized and structured data on patient health outcomes. In addition to this, the data from the EMRs cannot be trusted since it doesn't have a rigorous validation mechanism. A lot of data from the EMRs has been marked as erroneous thus making it completely impossible to use it for any kind of assessments and measurements.

The various stakeholders in the healthcare industry are making use of various databases like EMRs, financial reporting systems, registry databases, biobanks and lab data which lack interoperability. Due to absence of system and semantic interoperability, combining the datasets with high accuracy is nearly impossible, therefore it is isn't quite possible to draw any meaningful inferences or discover any new knowledge from those data sets.

Another obstacle to this enabler is the that the healthcare data is growing at a considerable rate which requires that more people need to spend their time in developing and implementing the analytics approaches to draw inferences. But not many people having the desired data science skill set are available in most of the healthcare organizations.

Lastly, the various regulatory and legal restrictions also to some extent hamper the development of the informatics infrastructure in many countries. The rigid data privacy laws can stop the sharing of data making it the tracking of individual patient's data across multiple systems nearly impossible.

### 3. *Benchmarking, research and tools*

Data has always been proven to be an extremely powerful asset. Once the health systems are ready for tracking and sharing the health outcomes data

on a routine basis, it will be possible to drive innovation and research in healthcare. Clinicians will thus be able to identify the therapies or interventions which have been most effective for a population segment by having a look at this highly granular data made available to them. Therefore, we could have a dynamic learning environment on a global level to identify and adopt practices which are superior more quickly.

a. *Benchmarking*

Identification of variations in health outcomes across regions is possible if the detailed information is collected in a systematic manner. It will also allow the desired stakeholders to analyze the root causes of these variations and to conclude some best practices which are responsible for producing best outcomes. This process is being used all over the world to identify the effective treatments and innovations and then propagating the same to other regions of the world to reduce the variations and improve the health outcomes.

With benchmarking, it would become easier to identify the best practices and remove inefficient interventions. It will also help in demonstrating the impact of breakthrough innovations on the various health outcomes.

b. *Research*

Instead of just using the health outcomes databases to identify and share the best practices, the clinicians can use the variations in the health outcomes as a base towards a more precise diagnosis which will ultimately improve the effectiveness and efficiency of the treatment. And to have a high quality clinical research, one needs to have a high-quality healthcare system in place.

c. *Decision support tools*

The future calls for development of algorithms that can help clinicians in identifying the clinical interventions that will prove to be the most effective in individual cases. These algorithms will be developed by researchers by analyzing the large databases of all the patients for every disease. Thus, health outcomes can greatly be improved by defining the right intervention at the right time and at the right place. These algorithms will become a very important tool used by clinicians to manage complex patients.

4. *Degree of integration to the circumstance*

Indicators like quality-of-life, etc. are measured to calculate value. Patients who are suffering from multiple chronic diseases should preferably be

provided care at home or near home so that they are encouraged to take of themselves and have a more independent life. However, integrated care units are used wherever this is not possible for providing the complete care to the patient. Therefore, it is important to adapt the degree of integration as per the circumstance. Not all patients can be dealt with in the same way and no single system can achieve that. The most suitable approach will be decided by numerous factors like the patient itself, the disease segment, his/her social group and geography as well to some extent. So, basically there are three levels of integration –

- Focus clinics – These clinics will be specialized in one health condition, therefore will be better in delivering care to patients having a single problem. Also, they will be able to provide fast and efficient care since they have an expertise in a focus area.
- Embedded structures – This is mainly used by regional hospitals which have limited services. They supplement their care by working with the most suitable providers by using integrated and shared pathways.
- Coordinated care – In certain areas where it is known that there exist problems with continuity of care, the coordinated care is very important. Coordinated care is also used for the patients requiring long term treatments and for the elderly people.

5. *Organizational and clinical governance*

For any organization to be truly successful, governance of the factors leading to its success is very important. In case of value-organization, the focus on value needs to be maintained and planned accordingly to achieve excellence. The commitment of the various stakeholders is extremely towards a common goal is equally important – one needs to have a share objective towards which the various integrated units will work. In many cases, subordinate boards have lesser autonomy as compared to the system boards with more focus on patient safety and quality. One of the thumb rules of effective value-based organizations is centralizing authority and decentralizing decision making; such that the granular decisions are taken care of by the suitable subordinate boards. An example could be that system board would be responsible for setting up the policies for system's quality and strategic direction and subordinate board would be responsible for taking decisions related to medical staff, etc.

Huge variations can be seen in the clinical governance based on the structural formality and relationships in the integrated care network. Healthcare professionals are abiding more closely to the rules and guidelines due to increased individual autonomy, thus developing a culture of continuous accountability and improvement. Healthcare professional will be more aware about the need to deliver care across the care continuum and not just a single condition. They will also get into the habit to measure and monitor the healthcare outcomes since different providers will be working closely to address to the needs of a particular patient segment.

#### **6. *New contractual arrangements***

For shaping the healthcare delivery systems, contracts should be used for assuring value since they are a very powerful tool. However, they would need some adaption based upon the requirements like level of coordination and outcomes needed. Providers will have no other option than complying to the new contractual arrangement, thus leading the way towards a more outcome-based and patient-based approach. So, if there is a health system who is directed towards a patient centric approach, then contracts can help in binding them to that approach by providing them bonuses and incentives for desired behaviors instead of blindly reimbursing costs. This will ultimately lead to a better quality of care with focus on the patient's overall well-being.

Now is the time to move towards contracts that will be rewarding value. Providers can be generating unrequired interventions in case the actions are being rewarded just to increase their income. Therefore, the focus needs to shift towards the quality of care or having a population-based payment method so that providers take a step towards preventive care and in the process reducing the healthcare costs. Using capitation will be effective when the system is measuring the outcomes otherwise the providers might just refer the cost patients to some other type of care which would again divert them from the basic objective of providing high quality care. In addition to this, providers maybe even feel an extra pressure because of the budget constraints due to capitation which can prove quite challenging when it comes to the treatment of diseases like cancer. Even though moving to contracts that support value-based care makes a lot of sense, but a quick transition can prove extremely dangerous for all the clinics or hospitals since their income will be considerably reduced. Therefore, there is a need

of a proper transition period for this change to be happily and properly absorbed in the system.

#### **7. *Information transparency***

For building a value-based healthcare system, it is important that the healthcare cost and quality data are readily available, and this data needs to be highly reliable. Different segments within the healthcare industry, respond to transparency different -

- From the consumer perspective, this data is required for them to take better care related decisions.
- From the physician perspective, they are responsible for the type and quality of care they deliver to their patients. To achieve that, physicians now need to know the various health outcomes, the variations or any kind of best practices they can adopt for delivering a better-quality care.
- From the payer and provider perspective, transparency is slowly becoming important since with the gradual shift towards value-based healthcare systems, it is important that these two parties work in close collaboration with each other.
- From the healthcare organization perspective, information sharing between the various units related to care quality is extremely important because this will help them in learning from the mistakes of the other units. At present, there is a lack of transparency in many hospitals and the culture has the biggest impact. These challenges can be overcome by using the right technology and processes and gradually we can make the systems more transparent to allow for the quality and outcomes data to flow seamlessly within various units.

One needs to find out the best practices, variations in health outcomes and any insights from the existing cases – all this requires collection of data from various disparate sources, therefore, getting the walls down of the organization is becoming more important. This would require the leaders to drive a cultural and organizational change wherein everybody is appropriately involved in the process of improving the healthcare outcomes and delivering better quality care.

#### **8. *Public policy***

Public policy is one of the most important enablers impacting the transition to a value-based healthcare system since healthcare sector in addition to being large and complex, is also highly regulated. At present, it is difficult for the

stakeholders to achieve the goal for value-based healthcare system since the current system has a lot of risks and disincentives associated with it. Therefore, the Government would play an extremely important role to provide and enable the incentives for a value-based healthcare system. Based on the goals, the Government should set the rules and setup the legal and regulatory framework that will let the competition and cooperation to unfold. The Government should focus on the following five priorities –

- The systematic tracking of health outcomes should be made mandatory since it will form the basis of any value-based healthcare organization. Standards for data collection and transparency also should be set.
- Guidelines for data integrity, anonymization and security need to be established to ensure optimum patient privacy. A trade-off should be maintained between privacy and data sharing.
- Government needs to set rules and regulations which will help in encouraging cooperation and coordination across the care pathways. The policies should be robust enough to protect against the conflict of interest as well while still maintaining the focus on value.
- Longitudinal payment models supporting the improvement in healthcare outcomes should be encouraged and established.
- There should also be regulations for making all the desired stakeholders more accountable and made responsible for contributing considerably to the improvement of healthcare outcomes.

## 9. *Value-based payments*

Healthcare providers and suppliers can either be compensated through direct payments or reimbursements and they can either be an enabler or obstacle of value-based care. As per the current scenario, three serious barriers are posed by the current payment approaches to the value-based care delivery model –

- Instead of providing incentivizing the providers for improving the healthcare value, the current payment mechanisms are disincentivizing them in many cases.
- In cases where the payment mechanisms aren't really discouraging the healthcare value improvement, still a basic disconnect exists between the way providers are being paid and the health outcomes they have delivered. This disconnect is also true for the

traditional payment approach of fee for a service which most of the times leads to overtreatment.

- The incentives in the current approach of compensation and reimbursement are not aligned at all due to separation of costs and benefits. Furthermore, the current approach doesn't take into picture a holistic view of the complete care cycle during payments. Therefore, the systems can't make the required trade-offs for improving the health outcomes.

So, it's a need of the hour that healthcare systems start focusing on value-based payments. It is important that the type of payment fits a population segment needs. However, it is quite impossible that a particular form of value-based payment fits for all the solutions.

## 10. *Innovations in organizing care delivery*

For improving the health outcomes and managing the cost optimally, it is necessary that the healthcare organizations create multidisciplinary teams which can work in coordination throughout the care cycle, but this isn't an easy task. Value-based healthcare goes much beyond the individual initiatives, thus making it imperative for the organizations to rethink their care delivery and provider networks. Alignment of the system goals and care pathway designs needs to be done within and across the entire care chain.

Organization of most care delivery networks is around functions. The provider organizations are mainly divided into primary, secondary, tertiary and quaternary care which helps patient in finding the most appropriate care based on their condition. The focus of the primary care is disease prevention and basic population health along with taking care of the chronic illness. Then, patients are referred to secondary, tertiary or quaternary care centers based on their condition and its severity. So, basically, various departments exist within a hospital and despite of their interactions, every department has its own budget and its own performance indicators. Such a structure made sense in the past but at present, it is highly dysfunctional. The optimization of full care pathway and management of costs in an integrated way has become a big challenge due to these specialized and separate independent units. Performance can be tracked for the individual care units, but no unit ever takes responsibility of the entire care chain of the patient.

For encouraging coordination across the full cycle of care, new roles and organizational structures are being put in place by some organizations. New

organization structures for encouraging the multidisciplinary coordination and integration across the entire chain is also being adopted by many organizations. There has also been seen a shift from medical specialty-based organizations to the ones based on specific population segments and conditions. The top management should thus have a focus of delivering improved health outcomes with high-quality of care to the patients, instead of just focusing on compliance with the clinical budgets.

### III. APPLICATION OF TISM METHODOLOGY

To develop the TISM model, some brainstorming sessions were conducted with the domain experts. Furthermore, the various challenges, barriers, enablers and strategies were looked at to identify the main set of elements. A hierarchical structure of the interest variables is developed in TISM and TISM is just an extension of ISM. A directed graph is developed for the complex system using TISM which helps in transforming the poorly articulated mental models into systematic ones so that they can be used for numerous interpretations. This is an innovative qualitative

modeling technique that has been used by researchers in various fields of investigation (Nasim 2011; Prasad and Suri 2011; Wasuja et al. 2012; Srivastava and Sushil 2013; Dubey and Ali 2014).

Below is a brief description of the various steps used during the development of a model using TISM –

**Step I: Identify and define elements.** The first and foremost step in the TISM modelling is identifying and defining the elements for which we need to model the relationships. The elements used for modelling in this study are the enablers related to the implementation of value-based healthcare systems in organizations. These elements have been identified with the help of current literature and some expert interviews.

**Step II: Define contextual relationship.** The definition of contextual relationship between the variables of interest is imperative for developing the configuration. The contextual relationship identified over here is “enabler A will influence or enhance enabler B”. An example could be “enhanced patient engagement will enhance health informatics”.

Table 1: Elements, Contextual relationship and Interpretation

Element no.	Elements	Contextual relation	Interpretation
E1	Patient Engagement	Enabler E1 will influence/enhance enabler E2	How or in what way enabler E1 will influence/enhance enable E2?
E2	Health informatics		
E3	Benchmarking, research & tools		
E4	Degree of integration to the circumstance		
E5	Organizational & clinical governance		
E6	New contractual arrangements		
E7	Information transparency		
E8	Public policy		
E9	Value-based payments		
E10	Innovations in organizing care delivery		

**Step III: Interpretation of relationship.** The interpretation of contextual relationships between the variable of interest is sought in traditional ISM but it doesn't really interpret how that relationship works. However, TISM can provide that interpretation. In context of this study, the interpretation would be “In what way enabler A will influence or enhance enabler B?”. (Table 1). It will help achieve in-depth knowledge.

**Step IV: Interpretive logic of pair-wise comparison.** Creation of an “Interpretive Logic – Knowledge Base” for pair-wise comparison of the elements is done. In this, a comparison of the ith element needs to be made independently with all the other elements from (i-1)th to the nth element. There will be  $n(n-1)/2$  paired comparisons in case there are n elements. It is possible the each pair of the elements (I,j) has two directional links (i-j) or (j-i), therefore, the knowledge base will

consist of  $n(n-1)$  rows. Each of the (i-j) link could have an entry code “Yes” (Y) or “No” (N) and incase the code is “Yes”, then we need to interpret it further. The interpretive knowledge base for enablers is shown in Appendix I. The total number of pair-wise comparisons in this case is  $(10 * 9)/2 = 45$  and the total number of rows is  $10 * 9 = 90$  for the knowledge base (Sandbhor and Botre 2014).

**Step V: Reachability matrix and transitivity check.** Preparation of a reachability matrix is done by replacing all the “Y”s with “1”s and all the “N”s with “0”s from the interpretative logic-knowledge base. Transitivity rule (if A is related to B and B is related to C, the A will be related to C) is checked for the matrix so formed. Restructuring of the knowledge base as Y is done for each of the transitive links found and “Transitive” is mentioned. If these transitive entries have notable interpretation, then that is mentioned with those transitive links.

**Step VI: Level partition on reachability matrix.** For understanding the placement of the elements, the process of partitioning the elements based on elements is done, just as it is done in ISM (Wafield 1974b; Saxena et al. 2006). For all the elements, the reachability, antecedent and intersection set is created and put into a table. For the top-level element, its reachability set will only have the element itself, and any other element which is present on the same level or basically the other element which it can reach. The antecedent set will consist of the element itself and other elements which might help to achieve it. Therefore, intersection of the reachability set, and the antecedent set will be the same as the reachability set if the element is present at the top level. The top-level elements which satisfy this condition are removed from the element set and the same steps are repeated for several iterations until all the TISM levels are figured out. The levels are further represented in the form of a digraph and TISM model.

Table 2: Reachability Matrix

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
E1	1	0	0	0	0	0	0	0	0	0
E2	1	1	0	0	1	1	1	0	1	1
E3	1	1	1	1	1	1	1	1	1	1
E4	0	0	0	1	0	0	0	0	0	1
E5	0	1	0	1	1	1	1	0	1*	1*
E6	1	0	0	1	1	1	1	0	1	1
E7	1	1	0	1	1*	1*	1	0	1*	1*
E8	1*	1	1*	1	1	1*	1*	1	1*	1*
E9	0	0	0	0	0	0	0	0	1	1
E10	0	0	0	1*	0	0	0	0	1*	1

Table 3: Partitioning the Reachability matrix into different levels

Variables	Reachability set	Antecedent set	Intersection set	Level
<b>Iteration – 1</b>				
<b>E1</b>	<b>1</b>	<b>1, 2, 3, 6, 7, 8</b>	<b>1</b>	<b>I</b>
E2	1, 2, 3, 5, 6, 7, 9, 10	1, 2, 7, 8	1, 2, 7	
E3	1, 3, 4, 5, 6, 7, 9, 10	2, 3, 7, 8	3, 7	
<b>E4</b>	<b>4, 10</b>	<b>3, 4, 5, 6, 7, 8, 10</b>	<b>4, 10</b>	<b>I</b>
E5	4, 5, 6, 7, 9, 10	2, 3, 5, 6, 7, 8	5, 6, 7	
E6	1, 4, 5, 6, 7, 9, 10	2, 3, 4, 5, 6, 7, 8, 10	4, 5, 6, 7, 10	
E7	1, 2, 4, 5, 6, 7, 9, 10	2, 3, 5, 6, 7, 8	2, 5, 6, 7	
E8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	8	8	
<b>E9</b>	<b>9, 10</b>	<b>2, 3, 5, 6, 7, 8, 9, 10</b>	<b>9, 10</b>	<b>I</b>
<b>E10</b>	<b>4, 9, 10</b>	<b>2, 3, 4, 5, 7, 8, 9, 10</b>	<b>4, 9, 10</b>	<b>I</b>
<b>Iteration – 2</b>				
<b>E2</b>	<b>5, 7</b>	<b>5, 7, 8</b>	<b>5, 7</b>	<b>II</b>

E3	3, 5, 7, 8	3, 7, 8	3, 7, 8	
<b>E5</b>	<b>5, 7</b>	<b>3, 5, 6, 7, 8</b>	<b>5, 7</b>	<b>II</b>
<b>E6</b>	<b>5, 7</b>	<b>3, 4, 5, 6, 7, 8</b>	<b>5, 7</b>	<b>II</b>
<b>E7</b>	<b>5, 7</b>	<b>5, 6, 7, 8</b>	<b>5, 7</b>	<b>II</b>
E8	3, 5, 7, 8	8	8	
<b>Iteration – 3</b>				
<b>E3</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>III</b>
<b>E8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>III</b>

**Step VII: Developing digraph.** As per the levels obtained in the step above, the elements are arranged in a graph and the directed links between them are also represented as per the reachability matrix. An arrow from pointing from i to j is drawn to represent the relationships between the elements j and i. The less significant transitive links are eliminated from the initial digraph after careful examination of their interpretation from the knowledge base. Only the transitive links having a significant interpretation are retained.

**Step VIII: Interaction Matrix.** All the interactions are presented by “1” to convert the final digraph to a binary interaction matrix. The entries with “1” are further replaced by relevant interpretation taken from the knowledge base.

**Step IX: Total interpretive structural model.** TISM is derived from the information made available through the digraph and the interaction matrix. The digraph nodes are restored with the element interpretation available. The same is done for the significant links as well finally leading to the formation of a total interpretive structural model.

#### IV. RESULTS AND DISCUSSIONS

The TISM model of enablers of value-based healthcare organization shows that public policy is the most important driving factor and it greatly impacts all other enablers as well. Public policies will be responsible for creating a suitable regulatory and legal framework that will remove the barriers, therefore enabling value-based care. Both patient-centric delivery model and enablers of value-based healthcare will be influenced a lot by the various policies. Public policy will help in standardizing the measurement of outcomes and information transparency amongst the various vendor and provider groups. It will enable the patients and innovators to access the quality data in addition to maintaining the patient integrity. For achieving wellness and prevention of diseases, incentives can be provided so that healthcare outcomes

and individual efficiency can be improved. Apart from public policy, benchmarking, research and tools will also play a significant role in implementation of value-based care. With the help of this, the clinicians will be able to measure variations in the healthcare outcome and thus make an informed decision about the best practices to be used for providing a complete coordinated care to the patient. However, this can only be achieved if there exists transparency between the care providers and the contractors with respect to the outcomes of patient care. This transparency will further help in developing a better governance system in which the authority is centralized but the decision making is decentralized. The new contractual arrangements will also contribute significantly to value-based care as the contracts can be designed around giving rewards and bonuses to the providers for providing quality healthcare instead of volume-based care. The providers will thus be more focused and interested in knowing the healthcare outcomes of the various population segments along with the treatment alternatives so that they can choose the best one to provide a coordinated care to the patient they are dealing with. For getting all the information about the healthcare outcomes, it is important that the cultural and organizational barriers are removed within the organization so that quality data is collected systematically because one can work on improving the visible outcomes, but nothing really can be done for the outcomes that are not visible. This would also include the inputs from the patients in the form of the questionnaires they fill with respect to the quality of care delivered. All the data available will therefore help in defining contracts for driving innovations in the care delivery pipeline and also for implementing the value-based payment models.

A value-based healthcare organization will therefore have the following key characteristics –

##### **1. Patient engagement –**

Patients are an extremely important part of the care cycle since the entire care cycle revolves around them. So, it is needed that the patients understand various things like his/her condition, treatment alternatives, type of care being received, etc. so that he/she can

make an informed decision towards a treatment alternative.

### 2. *Definition and measurement of outcomes* –

Data is a key component in every organization. If an organization has precise data available, then by making use of its analytics capability it can design strategies for its success. Similarly, for a value-based organization, it is imperative that the organization and cultural barriers are lowered so that data is shared within the departments and collected on a routine basis for performing analytics on the same.

### 3. *Contracting* –

Contracts are a way to assure value. It is often difficult for organizations to maintain a patient-centric approach, so the contracts can keep organizations in a check by providing incentives/rewards to the providers on the basis of quality of care delivered instead of the volume of care delivered.

### 4. *Coordinated care* –

For delivering quality care to all the patients, one cannot just have a single system in place. Based upon the condition of the patient, his/her social group and geography, the approach of treating the patient can be decided. So, different levels of integration shall be available to deal with the various patients separately.

### 5. *Governance* –

For a value-based organization to be successful, it is extremely important that all the outcomes are measured, and quality is ensured at all levels within the organization. For achieving this, clinical and organization governance need to be in place.

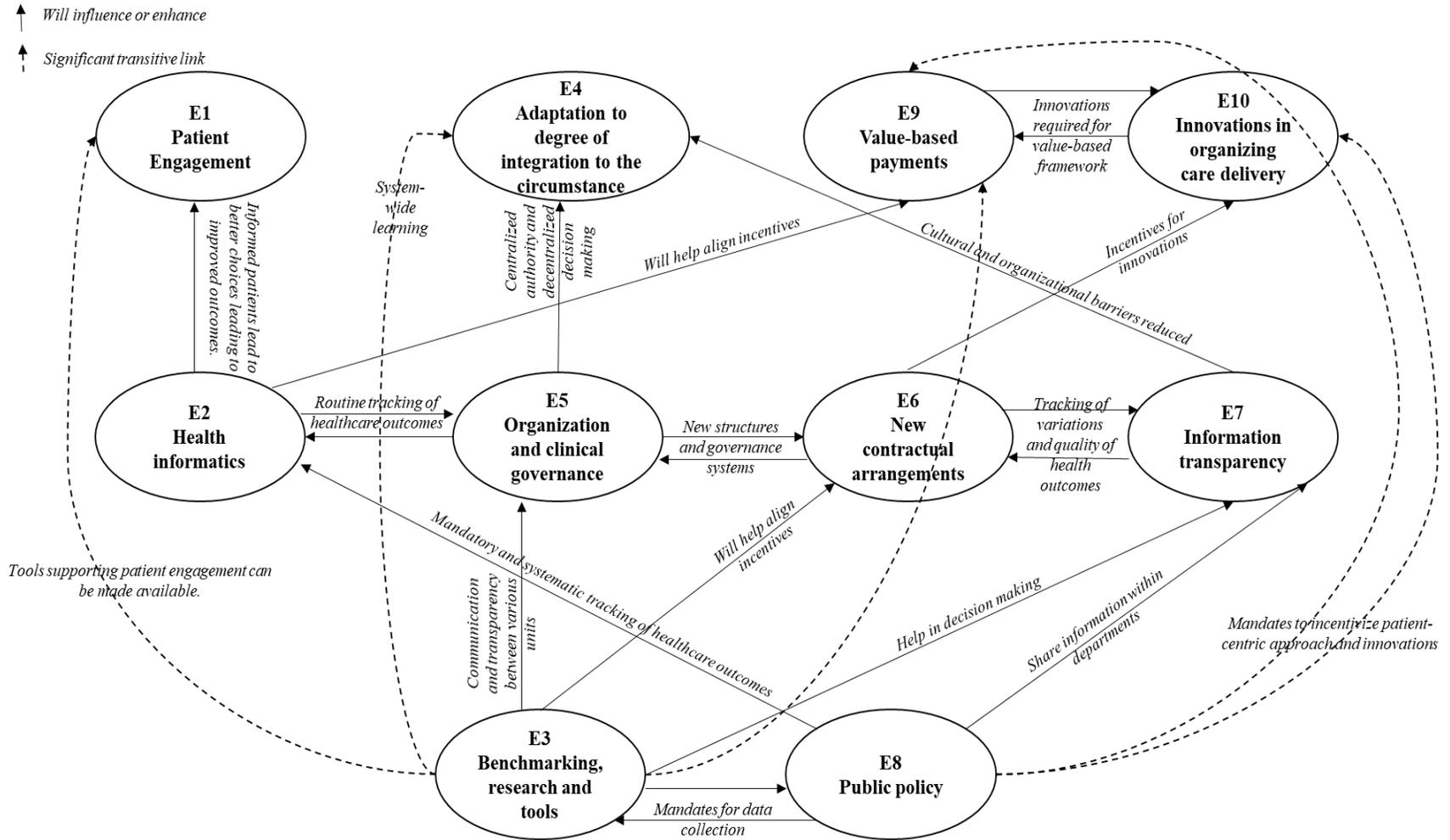
## V. CONCLUSION

Becoming a value-based organization isn't an easy task – there are lot of challenges and barriers involved in the same. As per the analysis, the landscape change would be driven by the payers, but it is essential that providers also change their approach to patient and outcome-centric. Every organization that wants to become value-based should support the need of defining and measuring the healthcare outcomes which would ultimately help in developing new contractual arrangements, governing the changes and enhancing the patient engagement. Furthermore, for ensuring a common understanding of the requirement and readiness to work together, the alignment of objectives of patients, providers and payers is extremely important. This can be kept in check by governance and contracts that will be reward or penalize the right or wrong behavior of the providers. One should also understand that it is impossible to have such a big change in one night, therefore necessary provisions should be put in place to help the

providers in adapting to the new targets and ensuring that their income doesn't fall drastically. The hospitals in no way should fail because of this change because one cannot risk the care sector at all. In addition to this, the contracts which are in place should be evolved slowly giving sufficient time for the stakeholders to adapt to it. In fact, to ensure significant improvements in the care delivery, the incentives or rewards should constitute to be a big chunk of the payments. All this is ultimately achievable, if the relevant and necessary data is made available at the right time for business analytics to draw various insights which would contribute in some way or the other to the various enablers of a value-based organization.

## REFERENCES

1. The road to value-based care. (2018). Deloitte Insights. Retrieved from <https://www2.deloitte.com/insights/us/en/industry/life-sciences/value-based-care-market-shift.html>
2. How to Get Started with a Population Health Management Program. HealthITAnalytics. Retrieved from <https://healthitanalytics.com/features/how-to-get-started-with-a-population-health-management-program>
3. Value-Based Care Drives Progress in Population Health Management. HealthPayerIntelligence. Retrieved from <https://healthpayerintelligence.com/news/value-based-care-drives-progress-in-population-health-management>
4. Top 2017 challenges healthcare executives face: Page 4 of 5 | Managed Healthcare Executive. Managedhealthcareexecutive.com. Retrieved from <http://www.managedhealthcareexecutive.com/managed-healthcare-executive/news/top-2017-challenges-healthcare-executives-face?page=0,3>
5. Value-based care: A new, patient-centered approach to health care - The Health Section. The Health Section. Retrieved from <https://news.aetna.com/2017/10/value-based-care-new-patient-centered-approach-health-care/>
6. Value-Based Care Analytics: Leveraging Data Insights to Enhance Reimbursement and Quality. Nthrive.com. Retrieved from <https://www.nthrive.com/blog/value-based-care-analytics-leveraging-data-insights-to-enhance-reimbursement-and-quality>
7. Value in Healthcare laying the foundation for health system transformation. World Economic Forum. Retrieved from [http://www3.weforum.org/docs/WEF\\_Insight\\_Report\\_Value\\_Healthcare\\_Laying\\_Foundation.pdf](http://www3.weforum.org/docs/WEF_Insight_Report_Value_Healthcare_Laying_Foundation.pdf)
8. Creating value-based healthcare organizations - KPMG. KPMG. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/nz/pdf/October/whatworksasstrongastheweakestlink-kpmg-nz.pdf>
9. Population Health Management - EY. Health Industry Post. Retrieved from [http://www.ey.com/Publication/vwLUAssets/Health\\_Industry\\_Post\\_population\\_health\\_management/%24FILE/Health\\_Industry\\_post.pdf](http://www.ey.com/Publication/vwLUAssets/Health_Industry_Post_population_health_management/%24FILE/Health_Industry_post.pdf)
10. The four steps of population health management. Optum. Retrieved from [https://www.optum.com/content/dam/optum/resources/whitePapers/WhitePaper\\_FourSteps.pdf](https://www.optum.com/content/dam/optum/resources/whitePapers/WhitePaper_FourSteps.pdf)



## **Praxial Interlanguage Education (PIE): Developing Corporate Social Responsibility in International Higher Education**

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### **Abstract**

The following working paper reports on practitioner-based classroom research from a Human and Organization Development (HOD) perspective that places students' classroom thinking and experiences at the center. Its significance corresponds with improving classroom instruction for ESL business students at a Thai International College that supports their learning and development in an interlanguage. Positioned as an *insider*, the research practitioner used his own research model, Praxial Interlanguage Education (PIE) to collect data during a full semester (16 weeks, 48 hours) of regular classroom instruction. The PIE model combines Participatory forms of Action Research with Heuristic Mindful Inquiry to engage students subjectively, intersubjectively, and objectively with the academic content. Students engaged the course content through classroom discussions, reflective journal writing, and other classroom activities at individual, joint, and collective levels. The qualitative analysis started with data sensitization, using open, axial, selective, and theoretical coding based on Tomasello's Interdependence Hypothesis (Tomasello, 2016). In early analysis, the data indicates that many students lack the necessary experience, and levels of development to fully grasp the key course topics; *altruism*, *human flourishing*, selfishness, and *greed*. Nevertheless, through classroom *contemplation*, *compassion*, and *contingency* students begin a process of learning and development that has the potential for significant meaning-making and transformation.

### **Introduction**

There have been valid criticisms directed at International Higher Education, specifically those concerning unsuitable teaching approaches that neglect the problematic nature of learning in an interlanguage context. Nevertheless, critical feedback helps institutions and instructors improve classroom instruction which in turn helps interlanguage students learn and develop in a second language. Towards instructional improvement, international instructors must be reminded that students' learning experiences vary, and conducting research into those experiences is a necessary function that is crucial for improving classroom instruction. Moreover, conducting Participatory Action Research (PAR) in conjunction with coursework can help improve students' ability to grasp abstract academic content, and help students overcome language barriers and cultural inclinations. In the process of inquiry, students focus on their attention, reflect on their understanding, develop self-awareness, and receive collective feedback that helps students construct authentic meanings with potential to transform (Palmer & Zajonc, 2010).

In support of my interlanguage students at an International College in Thailand, I opened learning spaces for inquiry, reflection, and collaboration in which students could make sense of

their environment, and construct their own meanings. This, I determined could be facilitated through classroom forms of Participatory Action Research (PAR) when combined with knowledge explored at the *subjective*, the *intersubjective*, and the *objective* levels (Sherman & Torbert, 2000). Moreover, classroom forms of Action Research can be combined with experiential learning to create activities that use students' *executive functioning* to produce qualitative data (Kolb & Kolb, 2017). Furthermore, the data can be used to improve classroom instruction, enabling international institutions and instructors to bridge the gap between theory and practice using integrative approaches that are interdisciplinary and convergent (Palmer & Zajonc, 2010).

Likewise, Business Education is constantly critiqued, and must also find ways to balance individual, institutional, and societal needs (Parker, 2018). In *Shut Down the Business School*, a recently published book on business education, Parker suggests that while higher education struggles, business schools thrive at the expense of bettering society (2018). He adds that business schools have produced a generation of unreflective managers who are generally interested in their own personal benefits with business ethics and corporate social responsibility acting as "window dressing" (Parker, 2018). Parker, a business instructor in the UK, further complains that business schools teach students how to get money from ordinary people and keep it for themselves, effectively teaching that greed is acceptable (Parker, 2018). This is not a new argument, or even original, but it is becoming commonplace even as business education increases its popularity.

On the other hand, Byrne suggests that morality and ethical behavior are thoroughly covered in business education, overly so (2018). Byrne, an editor-in-chief of *Poets and Quants*, a website devoted to business education, claims that business schools have been proactive using experiential learning for leadership development, pushed collaborative projects, and internationalized the business curriculum (Byrne, 2018). While it is not clear if Byrne has ever taught in higher education, he is surely a *cheerleader* for the business school industry, and willing to overlook obvious flaws that Parker described. Nevertheless, whether critic or cheerleader, opinions vary, and with no serious opposition to business education little will change until individual institutions and instructors decide to make their own changes. This in effect leaves the responsibility for curriculum change to individual institutions and instructors.

In the case of Thailand, Higher Education has made its own proactive efforts to improve curriculum through Thailand's Quality Assurance which considers learning outcomes in five different domains:

1. **Ethical and Moral Development:** developing ethical responsibility;
2. **Knowledge:** having the ability to understand, recall and present information;
3. **Cognitive skills:** having the ability to apply knowledge and understand concepts;
4. **Interpersonal skills and responsibility:** having the ability to; -work effectively in groups, and exercise leadership;
5. **Analytical and communication skills:** having the ability to decipher and communicate information effectively in oral and written form (OHEC, 2006).

And while many of my colleagues seem hesitant to use these five domains, arguing the domains may minimize the value of the academic content, the need to use the domains is great. Nonetheless, using these five domains has allowed me to combine experiential learning with

mindful classroom inquiry that covers the curriculum, engages my students, and fits fluidly with action based research. From my teaching experiences I have created Praxial Interlanguage Education (PIE), a model I use for combining *insider* classroom research, the five domains, and executive functions while covering the course requirements. Furthermore, PIE integrates student learning, development, and the potential for transformation using contemplation at the individual level, compassion at the joint level, and contingency at the collective level. Finally, PIE helps students explore and improve their individual, joint, and collective intentionality (Sherman & Torbert, 2000).



Figure 1 The scope of Praxial Interlanguage Education

## Literature Review

Known as “people’s science”, Participatory Action Research (PAR) generates and constructs knowledge through a dialogical process with the people being researched, and not in connection to Cartesian or Kantian rationality, (Fals-Borda & Rahman, 1999). Through praxis, academic knowledge is mixed with popular knowledge to obtain a more accurate picture of the context being researched to foster improvement and change (Fals-Borda & Rahman, 1999; Sherman & Torbert, 2000). In this manner, *participative science* can impact local and world problems while linking social inquiry with social action which can result in transformations at different levels from curriculum to individuals, teaching, and science (Sherman & Torbert, 2000). This can be beneficial for business education where emphasis should be placed on human development rather than material wealth (Sherman & Torbert, 2000). Designed for community research that includes education, PAR can be used in classrooms to explore issues concerning teaching, learning, and curriculum by collecting subjective, intersubjective, and objective data during classroom experiences.

PAR has had partnerships with Higher Education for decades, mainly to train teachers and educational leaders in areas of instructional design, praxis achievement, and transformative learning (Mezirow, Taylor, & Associates, 2009). With links to PAR, Transformative Learning is generally associated with teaching that results in change, and the ways in which typically adult students view their world. Generally speaking, transformative learning takes place through

dialogical or communicative learning as learners examine their experiences from a critical perspective (Mezirow, Taylor, & Associates, 2009). Based on his original grounded theory to transformative learning, Mezirow identified 10 phases in transformative learning; (1) a disorienting dilemma; (2) self-examination; (3) critical assessment of assumptions; (4) transformation coming from disorientation; (5) exploration of new roles and relationships; (6) planning action; (7) gaining knowledge and skills for the plan; (8) trying out new roles; (9); building competence and self-confidence in new roles; (10) solidifying new life. These 10 phases can easily be used by students to explore their own experiences in relation to the academic content.

In an attempt to simplify Transformative Learning, Mezirow & Taylor identified three core elements in transformative learning: (1) individual experience; (2) critical reflection; (3) and dialogue, but over the years it has expanded to include; a holistic orientation; awareness of context; and authentic practice (Mezirow, Taylor, and Associates, 2009). This allows for transformative learning to be actualized in the classroom, opening corridors for instructors to design activities suitable for any context. For example, if instructors are to overcome claims of “window dressing” in areas of corporate social responsibility and ethics, we need to find ways of effectively engaging our students that are transforming. Accordingly, we may turn to Csikszentmihalyi, the author of *Flow*, and *Good Business: Leadership, Flow, and the Making of Meaning*, to help students construct authentic meanings. Csikszentmihalyi writes that many people are ashamed of their work, and that firms use populations to satisfy owners’ greed at the expense of working conditions, the stability of communities, and the condition of our environments (2004). Highly provocative, Csikszentmihalyi is the Distinguished Professor of Psychology and Management at Claremont Graduate University, who has written extensively on happiness, and is considered one of the world’s leading researchers on positive psychology.

Likewise, instructors may open corridors to ethical and moral issues, using spiritual approaches. Towards this end, Singer and Ricard encourage individuals to rethink economic systems and actions on an individual and global level (2015). In *Caring Economics: Conversations on Altruism and Compassion Between Scientists, Economists, and the Dalai Lama*, various authors claim that there are movements around the world of young people, scholars and activists who are calling for a more caring and equitable economy through compassion and humanitarianism (Singer & Ricard, 2015). According to psychologist Tim Kasser, people with materialistic values often lack empathy, have fewer friends, and poorer health, while capitalist economies seem to function best when people advance their own desires (Singer & Ricard, 2015). There is the implication that economics is actuated by self-interest, but what actually constitutes human flourishing varies from person to person. Using Heuristic Inquiry, students can begin their own process of self-discovery (Moustakas, 1992).

In addition, participatory forms of Action Research (PAR), along with Transformative Learning, act as guides for teachers and students to explore academic topics as they relate to their own unique experiences. For students, this is invaluable, giving students the needed time to reflect on the core concepts, from self-interest to humans’ natural interdependence and our need to feel connected (Singer & Ricard, 2015). With regard to young business students, it’s essential that instructors understand students’ attraction to wealth and money, and educators’ responsibility to equip students with self-reflexivity, care for others, and a socially constructed self (Tennant, 2012). Moreover, through the research of Piaget, Erikson, and Kegan, instructors can gain a better understanding of students’ limitations, and the difficult stages they go through

in a fast changing world (Illeris, 2014). For instance, according to Erikson's Psychosocial Theory of Development, university students struggle with their identity, social role, and expectations in ways that can be debilitating (Illeris, 2014). While Kegan a professor at Harvard Graduate School of Education sees connecting students' roles to their long term aspirations to foster engagement, motivation, and common ground that helps students make sense of their environment (Kegan, 1995).

Without fostering engagement and common ground, students may construct limited and incomplete understandings that don't reflect current cognitive science (Tomasello, 2016). These misunderstandings reflect a reductive view that doesn't include a thorough view of individual ontogeny and human phylogeny by casting human cooperation as *selfishness* (Tomasello, 2016). So flawed is this misconception that Tomasello proposed the Interdependence Hypothesis, a two-step human process that includes intersubjective or joint collaboration to cultural-level or collective intentionality that evolved to solve social problems (Tomasello, 2016). Essentially, this strikes a chord against misunderstood implications of *Survival of the fittest*, and the self-driven interests of corporate success (Singer & Ricard, 2015). Moreover, recent embodied or enactive cognitive theories reinterpret *Survival of the fittest* to *Survival through collaboration* that demonstrates an integrated approach to business education that encourages Corporate Social Responsibility (McGuire, 2014). If business instructors are not proactive in this area, there is a risk that students will learn to associate survival most often with selfishness at the detriment of altruism, resulting in a misunderstanding of the two (Csikszentmihalyi, 2004).

This leads to another area that is often missed or overlooked in business teaching contexts, that deals with the concept of *contingency*. Since publishing his bestselling book on organizational learning, *The Fifth Discipline: The Art and Practice of the Learning Organization*, Senge (1990) has embraced a holistic worldview based on autopoiesis (Senge, 2004). In reference to Humberto Maturana, Senge writes, "when we forget our contingent view of reality, we lose our capacity to live together" (Senge, 2004, p. 203). Most people associate *contingency* with an alternate plan, as in a plan "B", but in philosophy the concept relates to *Truth*, whether *Truth* is found or made, creating a conflict between the individual and community (Rorty, 1989). For Rorty, community, as the voice of contingent human artifacts should be our guide towards solidarity (Rorty, 1989). For others, such as Van Lier, *contingency* is the *glue* for social interaction, classroom discourse, and language pedagogy in which we find meaning from Complexity theory (Van Lier, 2014). Finally, *contingency* is one of the foundations of Buddhist philosophy, rendered in pali as *paticcasamuppada*, commonly translated as dependent origination, or dependent arising. Using this sense, everything in existence is dependent of something else, rendering the importance of Corporate Social Responsibility.

## Method

My research interests and goals, along with my positionality within the classroom helped me determine a methodology that was heuristically based (Moustakas, 1992). Moreover, it was crucial for me to integrate my intellectual interests with my working and social context which required that I identify my "knowledge values", and determine the significance of my research (Bentz & Shapiro, 1998). In practice, I situated myself between disciplines which allowed me to perform my teaching and research in line with my courses, assuring that my topic and approach merged personally and existentially (Bentz & Shapiro, 1998). Accordingly, my professional

practice has been inspired by the influential works of John Dewey, Kurt Lewin, Lev Vygotsky, Paulo Freire, and significant others, whose work I respect and adhere to. Therefore, I chose to design a method that would allow me, as *insider* practitioner, to ethically research my classroom in order to improve my instruction by exploring the experiences and voices of students in my classrooms (Kolb & Kolb, 2017; Van Lier, 2014).

While *insider* research has advantages and disadvantages, with important ethical considerations, it essentially allowed me to collect data and construct knowledge from classroom activities without compromising teaching and research (Atkins & Wallace, 2012). To advance my praxis, I collected students' writings from classroom discussions, and journal writings which will eventually be sensitized along with additional data to be organized, interpreted through the use of *open*, *axial*, *selective*, and *theoretical* coding (Gilgun, 2014). Furthermore, the data was collected from regular classroom activities that asked students to reflect on the academic content from their own particular perspective, and their classmates. Essentially, the data was much more than just students' opinions, it was a process that included *subjective*, *intersubjective*, and *objective* knowledge which led to student meaning-making. Using the PIE model, research converged on three areas; individual intentionality involving contemplation, joint intentionality involving compassion, and collective intentionality involving contingency.

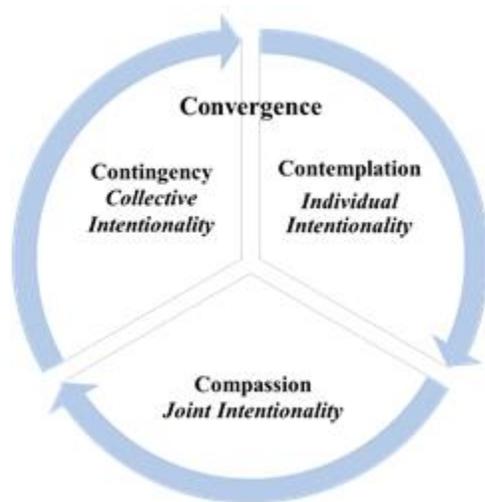


Figure 2 The Main Converging areas of Praxial Interlanguage Education

During the term students were given space to explore concepts centered on Corporate Social Responsibility that included altruism, human flourishing, wealth, and social responsibility. At times we used Paulo Freire's Problem-posing in which students were given a prompt, typically a photo that represented one of the concepts (Freire, 2011). From the prompt, students followed the five problem-posing steps: Describe the context; identify issues; personalize the issues; consider causes; and give alternatives (Freire, 2011). As students' progress through the steps they become more familiar with the concepts, and are able to understand them through their own life experiences, and with the aid of collaboration (Garrison, 2016). Shared thinking helps students make sense of their experiences, even if they have limited experiences but can relate to others experiences (Garrison, 2016). Accordingly, for many of the students in this research, they had few experiences with altruism, wealth, and social responsibility, and relied on others input.

## Analysis

Research into my students' social dimensions of thinking required a certain type of analysis not used in other types of research. Specifically, I sensitized the data using *Open*, *Axial*, *Selective*, and *Theoretical* Coding (Gilgun, 2014). Using open coding I initially examined the data looking for identifiable concepts. I then used *Axial* coding to make connections between identified concepts. This was followed up by *Selective* coding used in relation to the theoretical foundation, which was centered on Tomasello's, *Interdependence Hypothesis* (Tomasello, 2016). As a reminder, while the data here was not initially used to create theory but to improve instruction, it can be used for theory construction as the study progresses. Therefore, I was looking for examples of learning, development, and transformation as they related to Corporate Social Responsibility and the *Interdependence Hypothesis*.

As an *insider* teaching these students, I had a deeper level of understanding that focused on their words, processes, and meanings. Analysing the data was done throughout the research, as it unfolded which allowed the research to be fluid and contingent on the students' experiences. As the term and study progressed, the analysis changed and adapted as the study evolved, and interpretations emerged. Sensitizing students' experiences produced low-level text-based categories that came from class discussions, and initial readings. Middle-level categories were sensitized and conceptualized as the study and term progressed. Finally, high-level, theoretical constructs began to appear in regard to Tomasello's Interdependence Hypothesis, those related to altruistic helping, and mutualistic collaborating (Tomasello, 2016).

Currently, I'm entering the final stage of the analysis by establishing trustworthiness, dependability, and credibility through mine and the participants' validation (Anderson & Braud, 2011). This I believe is possible due to a clearly established worldview that values knowledge construction from participants' voices. Moreover, a thorough document examination has demonstrated a consistency among the voices that relates to confirmability. Furthermore, my prolonged engagement with the students, and being sufficiently familiar with the context through persistent emic observation provided scope. Finally, triangulating different sources and methods, specifically the subjective, intersubjective, and objective is demonstrating data, interpretations, and meanings that converge on similar findings.

## Conclusion

We humans have "limited and fallible cognitive and emotional capacities" that lead to false perceptions and misunderstandings, while having the ability to reconstruct such misunderstandings "to achieve growth of meaning and enriched possibilities for human flourishing" (Johnson, 2015, p. 1). This is especially true for students at International Colleges who struggle with meaning-making in an interlanguage. Nonetheless, this requires self-awareness at a deep level of *human flourishing* that is typically outside the realm of higher education. More often, student development is overlooked in Higher Education in favor of coursework that reflects academic content that has easily measurable outcomes. To overcome this, I recently opened *space* during class instruction for my students to conduct semi-structured

inquiry into Corporate Social Responsibility using a self-designed form of Participatory Action Research (PAR) that I call Praxial Interlanguage Education (PIE).

Through PIE, students produced a plethora of relevant data that was collected data regular classroom activities that allowed students the time and space to engage academic content through reflection and collaboration. The data indicated that students explored altruism, human flourishing, wealth, and social responsibility for the purpose of constructing their own knowledge from reflection, self-awareness, and collaboration. Furthermore, that data demonstrates that many of my students were not at a stage of development that recognized the importance of *human flourishing*, *lifelong learning*, and *social responsibility*. For example, many believed human flourishing depended on acquired wealth, while few of them were concerned with the needs of society. It is because of this that I am compelled to design classroom activities that allow my students to explore their own thoughts and experiences, and construct their own meanings after collaborating with others.

Therefore, while higher education focuses on academic outcomes, teachers must fill the void by designing classroom activities that open corridors for inquiry that is reflective and collaborative. Such activities can help students develop moral and executive functions that arise from experiential learning (Kolb & Kolb, 2017). These moral and executive functions help students acquire lifelong learning and social responsibility traits that can develop throughout their careers. Even though it is difficult to open corridors for inquiry, topics such as Corporate Social Responsibility require the effort, especially in interlanguage classrooms where cultural norms are diverse and fluctuate among individuals. According to Tomasello's Independence Hypothesis, living socially leads to human flourishing (Tomasello, 2016).

## References

- Anderson, R., & Braud, W. (2011). *Transforming self and others through research: Transpersonal research methods and skills for the human sciences and humanities*. Albany, NY: SUNY Press.
- Bentz, V. M., & Shapiro, J. J. (1998). *Mindful Inquiry in Social Research*. Thousand Oaks, CA: SAGE Publications.
- Byrne, J. A. (2018, April 30). *MBA criticism*. Retrieved from <https://poetsandquants.com/tag/mba-criticism/>
- Csikszentmihalyi, M. (2002). *Flow: The classic work on how to achieve happiness*. London, UK: Random House.
- Csikszentmihalyi, M. (2004). *Good Business: Leadership, Flow, and the Making of Meaning*. New York: Penguin Books.
- Fals-Borda, O., & Rahman, M. A. (1999). Action and knowledge breaking the monopoly with participatory action-research. Enskede: TPB.
- Freire, P. (2011). *Pedagogy of the oppressed*. 30th anniversary edition translated by Myra Bergman Ramos. London, UK: Bloomsbury Publishing.
- Garrison, D. R. (2016). *Thinking collaboratively: Learning in a community of inquiry*. New York, NY: Routledge.
- Gilgun, J. F. (2014). *Chicago School Traditions: Deductive Qualitative Analysis and Grounded Theory (2 Vols)*. CreateSpace Independent Publishing Platform.
- Illeris, K. (2014). *Transformative learning and identity*. London, England: Routledge.
- Kegan, R. (1995). *In over our heads: The mental demands of modern life*. Boston, MA: Harvard University Press.
- Kolb, A. Y., & Kolb, D. A. (2017). *The Experiential Educator: Principles and Practices of Experiential Learning*. Kaunakakai, HI: EBLIS press
- McGuire, D. (2014). *Human resource development*. Los Angeles: SAGE.
- Mezirow, J., Taylor, E. W., & Associates. (2009). *Transformative learning practice: Insights from community, workplace and higher education*. San Francisco, CA: Jossey-Bass.
- Office of the Higher Education Commission (OHEC). (2006). National qualifications framework for higher education in Thailand: Implementation handbook.
- Moustakas, C. E. (1992). *Heuristic Research: Design, Methodology, and Applications*. Newbury Park: Sage Publications.
- Palmer, P. J., Zajonc, A., & Scribner, M. (2010). *The heart of higher education: A call to renewal*. San Francisco, CA: John Wiley and Sons.

- Parker, M. (2018). *Shut down the business school*. Place of publication not identified: Pluto Press.
- Rorty, R. (1989). *Contingency, irony, and solidarity*. Cambridge: Cambridge University Press.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Doubleday/Currency.
- Senge, P. (2004). *Presence: An Exploration of Profound Change in People, Organizations, and Society*. New York, NY: Doubleday/Currency.
- Sherman, F. & W. Torbert, eds. (2000), *Transforming social inquiry, transforming social action*, Boston MA: Kluwer Academic Publishers.
- Singer, T. and Ricard, M. (2015), *Caring Economics: Conversations on Altruism and Compassion between Scientists, Economists and the Dalai Lama*. Picador, New York, NY.
- Tennant, M. (2012). *The learning self: Understanding the potential for transformation*. San Francisco, CA: Jossey-Bass.
- Tomasello, M. (2016). *A natural history of human morality*. Cambridge, MA: Harvard University Press.
- Van Lier, L. (2014). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. New York, NY: Routledge.

**GOING HOME AND HELPING OUT?  
RETURNEES AS PROPAGATORS OF CSR IN AN EMERGING ECONOMY**

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**ABSTRACT**

This paper extends nascent work on returnees as agents of socio-economic change by examining whether and how they influence the corporate social responsibility (CSR) of privately held enterprises in an emerging economy. Integrating theory and research from the international business (IB) and CSR literatures, we argue that the scope and intensity of CSR practices implemented in such organizations will be directly and indirectly shaped by an owner-manager's education and/or training abroad. We examine our hypotheses using a test-retest design, with nationwide survey data collected in 2002 and 2004 on separate samples of privately owned firms in China. Our findings document the positive impact of education/training abroad on both the scope of social/environmental sustainability initiatives and the intensity of charitable donations. We also contribute evidence that an owner-manager's returnee status exerts direct effects on these indicators of CSR above and beyond indirect effects stemming primarily from the greater profitability and size of returnee-led firms.

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## INTRODUCTION

As more and more individuals return to their country of origin after being educated and/or trained abroad, countries such as China and India are increasingly being depicted as experiencing a ‘brain gain’ rather than a ‘brain drain’ (Li, Zhang, Li, Zhou, & Zhang, 2012). This form of cross-border mobility has piqued the curiosity of many IB scholars, resulting in a vibrant stream of research on the role that these skilled return migrants play in transforming the business environments of their home countries. Much of this work aligns with the field’s broader interest in the link between entrepreneurship and economic development (Kiss, Danis, & Cavusgil, 2012; Meyer & Peng, 2016), with numerous studies documenting the contributions made by returnees in regards to either new venture creation (e.g., Bai, Johanson, & Martin, 2017; Lin, Lu, Liu, & Zhang, 2016; Qin & Estrin, 2015; Qin, Wright, & Gao, 2017) and/or technological innovation (e.g., Dai & Liu, 2009; Kenney, Breznitz, & Murphree, 2013; Li et al., 2012; Liu, Lu, Filatotchev, Buck, & Wright, 2010).

Although the above-noted studies have revealed the important economic contributions made by returnees, much less is known about their role as potential propagators of more *socially-oriented* business practices. Indeed, very few studies have examined whether and how returnees impact CSR initiatives, in particular, within their home countries (notable exceptions being Luo, Chen, & Chen, 2016; Miska, Witt, & Stahl, 2016; Zhang, Kong, & Wu, 2016). Greater attention to this topic is not only of academic interest but also of practical importance. Given the generally lower levels of CSR within less developed regions (Ho, Wang, & Vitell, 2012), firms in such contexts are facing mounting pressure to show improvements in this regard (Li, Fetscherin, Alon, Lattemann, & Yeh, 2010). Other findings point to the economic benefits of doing so. Wang and Qian (2011), for instance, showed that corporate philanthropy improves the financial performance of firms in China, while Ghoul, Guedhami, and Kim (2017) demonstrated that CSR increases firm value more strongly in nations with weaker market institutions.

Against this backdrop, our study examines whether and how returnees influence the CSR practices of privately owned and operated firms in an emerging economy. Because private firms in such regions are increasing in number, and arguably possess greater discretion with respect to CSR (Zheng, Balsara, & Huang, 2014), they constitute an ideal setting for investigating the potential influence of an owner-manager’s education/training abroad. Notably, however, such organizations remain under-represented within CSR research set in emerging economies (Doh, Littell, and Quigley, 2015).

We suggest that emerging-economy firms led by returnees will tend to exhibit higher levels of CSR than those led by local owner-managers; specifically, a greater scope of sustainability initiatives (i.e., a higher number of distinct social/environmental activities) and a greater intensity of charitable donations (i.e., a larger amount donated relative to the capacity to donate). We posit both direct and indirect effects as underlying mechanisms, theorizing that the former stem from the distinctive human and cultural capital garnered through education/training abroad (e.g., Luo et al., 2016; Qin & Estrin, 2015; Riddle & Brinkerhoff, 2011; Wright, 2011), while the latter are attributable to documented differentials in the size, performance, and internationalization of returnee-led versus local-led firms (e.g., Dai & Liu, 2009; Filatotchev, Liu, Buck, & Wright, 2009; Li et al., 2012; Wright, Liu, Buck, & Filatotchev, 2008). We examine our hypotheses through a test-retest design, using nationwide survey data collected in 2002 and 2004 from separate samples of privately held firms in the largest emerging economy at the time: the People’s Republic of China. Our findings reveal support for both the direct and indirect effects of education/training abroad, contributing evidence that returnees are likely to act as important

propagators of CSR amongst the private enterprises that are becoming increasingly prevalent in emerging economies.

### **THEORETICAL FRAMEWORK**

We adopt the following commonly invoked definition of CSR: “actions that appear to further some social good, beyond the interests of the firm and that which is required by law” (McWilliams & Siegel, 2001: 117). Consistent with more recent conceptualizations (e.g., Bansal & Song, 2017; Markman, Russo, Lumpkin, Jennings, & Mair, 2016), we consider discretionary actions that address social and/or environmental concerns as CSR practices. Because organizations can address such concerns either directly, by actively participating in social/environmental sustainability initiatives, or indirectly, by donating money to charity (Zheng, Luo, & Maksimov, 2015), our study investigates both forms.

We call attention to ‘micro-foundational’ determinants of CSR (Aguinis & Glavas, 2012; Doh, 2017), specifically those at the owner-manager level of analysis. This emphasis is sensible in light of prior research that has documented the effects of organizational leaders, in general, upon CSR practice implementation (as summarized in Aguinis & Glavas, 2012; Bansal & Song, 2017). It is also reasonable considering that owner-managers constitute the key decision-makers within the privately held enterprises that constitute the focus of our study. Indeed, prior entrepreneurship research has shown how an owner-manager’s educational and work-related experiences can influence the organizational practices enacted within their firms (e.g., Baron, Hannan, & Burton, 1999; Cliff, Jennings, & Greenwood, 2006; Phillips, 2005). Below we elaborate our arguments pertaining to whether, why, and how a returnee owner-manager’s education/training abroad, in particular, is likely to exert both direct and indirect effects upon an emerging-economy firm’s CSR practices.

#### **Direct Effects of Education/Training Abroad on the CSR of Private Firms in Emerging Economies**

Our arguments pertaining to direct effects are premised on the oft-expressed contention that returnees possess distinctive human and cultural capital relative to those who have not received any education/training abroad (e.g., Filatotchev et al., 2009; Luo et al., 2016; Qin & Estrin, 2015; Riddle & Brinkerhoff, 2011; Wright, 2011). Consider the relative degree of CSR knowledge likely to be possessed by returnee versus local owner-managers. Data suggests that the majority of skilled return migrants to emerging economies received their host-country education/training from more economically-advanced countries (UNESCO, 2006),<sup>1</sup> which tend to be those in which CSR is more prevalent (Ho et al., 2012). As such, returnees to emerging economies are likely to possess greater CSR knowledge, on average, than their counterparts who have not been educated/trained abroad. While this outcome is almost axiomatic for returnees who went abroad specifically to learn about CSR practices, it is also plausible for those who left for more general education/training when such practices were emerging within their home country. Specifically, through their interactions with host-country individuals, organizations, and media, returning migrants from economically advanced countries are likely to have encountered—or at least heard or read about—various CSR initiatives. This greater exposure, even if attained vicariously, is likely to translate into greater awareness and understanding of such practices.

Returnees from more economically advanced nations are also likely to possess different beliefs about the nature and importance of a firm’s social/environmental obligations than their peers who have not received any education/training abroad. This contention is consistent with the broader argument that most expatriates are likely to become at least partially acculturated to their

host-country context (Berry, 2006; van Oudenhoven, 2006). As such, skilled migrants are likely to return with principles, values, and norms that diverge, at least to some degree, from those of their home country. Given that modern conceptions of CSR are more widely institutionalized within economically advanced countries (Ho et al., 2012), returnees from such regions are thus in a stronger position to have internalized the principles and values underlying such conceptions than their counterparts who have not been educated/trained outside of an emerging economy.

Extant research provides a solid empirical basis for anticipating that these individual-level differences in knowledge and beliefs are likely to translate into observable CSR differentials at the organizational level of analysis. As elaborated in recent reviews (Aguinis & Glavas, 2012; Bansal & Song, 2017), numerous studies have shown that the implementation of such practices is affected by the CSR knowledge possessed by key organizational members, their level of concern for certain social and/or environmental issues, and their values or ideologies more broadly. Emergent work within the returnee literature is also informative. Although not focused on CSR practices *per se*, Wang's (2015) analysis offers general evidence pertinent to the impact of knowledge differentials, documenting how the new knowledge shared by returnees can trigger changes to pre-existing practices within home-country organizations. Likewise, the findings from Riddle and Brinkerhoff's (2011) case study speak to the influence of belief/value differentials, illustrating how a returnee's acculturation to host-country norms regarding 'appropriate' business practices can inspire and enable the transformation of traditional home-country business practices. As for CSR more specifically, recent analyses of publicly traded companies in China have revealed positive associations between the proportion of directors with education and/or work experience abroad and corporate philanthropy (Luo et al., 2016) and CSR scores (Zhang et al., 2016).

Taken together, the preceding arguments and suggestive evidence lend support for the following direct-effects hypothesis:

**Hypothesis 1:** In an emerging economy, the greater **a)** scope of social/environmental sustainability initiatives, and, **b)** intensity of charitable donations anticipated for private enterprises led by individuals with education/training abroad will be directly related to the owner-manager's returnee status.

### **Indirect Effects Attributable to Differences between Returnee-led versus Local-led Firms**

Our arguments pertaining to the indirect effects of an owner-manager's education/training abroad are premised on theory and research that *organizational*-level factors also matter for CSR practice implementation (Aguinis & Glavas, 2012; Bansal & Song, 2017). We focus on three factors that organizational leaders can influence, that have been shown to differ across firms led by returnee versus local owner-managers, and that are known to make a difference to CSR. These factors are firm size, performance, and internationalization level.

Existing studies of returnees indicate that emerging-economy firms led by owner-managers with education/training abroad tend to be larger in size, employing more workers than those led by owner-managers without such experience (Filatotchev et al., 2009; Wright et al., 2008). There is also evidence that returnee-led firms tend to perform better than local-led firms over time, attaining higher sales and profit levels as they age (Li et al., 2012). As for the effects of firm size and performance on CSR, prior research has established that the implementation of such practices tends to be greater in larger and better-performing firms in general (Aguinis & Glavas, 2012; Bansal & Song, 2017). Moreover, studies set in China indicate that these relationships also exist within emerging-economy firms in particular (e.g., Luo et al., 2016; Marquis & Qian, 2014; Wang & Qian, 2011; Zhang et al., 2016; Zhang, Rezaee, & Zhu, 2009;

Zheng et al., 2014; Zheng et al., 2015). In light of this evidence, it seems likely that the greater employment levels and profitability anticipated for firms led by returnees will contribute to further increases in CSR above and beyond any direct effects arguably attributable to the owner-manager's education/training abroad.

With respect to internationalization, previous studies have shown that firms led by returnee owner-managers tend to be more export-oriented than those led by local owner-managers (Bai et al., 2017; Dai & Liu, 2009; Filatotchev et al., 2009). As for the relationship between internationalization and CSR, emergent evidence indicates that more highly internationalized MNEs from less institutionally developed countries tend to engage in greater CSR reporting (Marano, Tashman, & Kostova, 2017)—and that emerging-economy firms with investments from foreign partners tend to implement more sustainability initiatives (Zheng et al., 2015). A plausible explanation is that more export-oriented firms in emerging economies and/or those with greater foreign direct investment are likely to face greater stakeholder pressure to implement CSR initiatives (particularly if their customer and investors are from more economically advanced countries). Indeed, stakeholder pressure has been shown to be an influential determinant of CSR for organizations in general (Aguinis & Glavas, 2012; Bansal & Song, 2017) and for those in emerging economies in particular (Zheng et al., 2015). The implication for our theorizing is that the higher level of internationalization anticipated for returnee-led firms is likely to enhance CSR net of any direct effects stemming from an owner-manager's returnee status.

In sum, the additional considerations and evidence presented in this section suggest the following indirect-effects hypothesis:

**Hypothesis 2:** In an emerging economy, the greater **a)** scope of social/environmental sustainability initiatives, and, **b)** intensity of charitable donations anticipated for returnee-led firms will be indirectly attributable to the tendency for such organizations to be larger, more profitable, and, more likely to be internationalized than local-led firms.

## METHODS

### Research Design and Data Sources

We examined the above-noted hypotheses using a test-retest design. The data were collected through two nationwide surveys of privately held firms in China at the start of the new millennium, one conducted in 2002 and the other in 2004. The setting and timing of these surveys offered a number of advantages for our analysis. China's status as one of the world's largest emerging economies in the early 2000s (Jain, 2006), for instance, dovetailed nicely with the emerging-economy focus of our research. Because China was also touted as the recipient of the most returnees during the same time period,<sup>2</sup> the datasets were likely to contain sufficient, if not large, numbers of firms led by those with education/training abroad.

Arguably, the timing of the surveys also helped ensure a sufficient incidence of CSR practice implementation. This is because they were administered after modern versions of CSR had been introduced into China by foreign buyers and MNEs in the mid-late 1990s (Yin & Zhang, 2012; Zheng et al., 2014; Zu & Song, 2009), and after the country's access to the WTO in 2001 (an event signifying its commitment to more responsible business practices).<sup>3</sup> Relatedly, the fact that the surveys were conducted before 2006 arguably helped ensure sufficient *variation* in such practices. This is because it was in this year that the China Business Council for Sustainable Development first issued normative CSR standards and best practices (Marquis & Qian, 2014)—a manifestation of the Hu administration's general vision for a 'harmonious

society' that would balance economic growth with the need to address pressing social and environmental issues (Raynard, 2017).

The 2002 and 2004 surveys are part of a larger series known as the Chinese Private Enterprise Survey (CPES). Designed and administered by a consortium of governmental agencies, this data collection initiative has been implemented every two years since 1992. The focal surveys, however, are the only ones containing questions on the respondent's education/training abroad. The inclusion of these questions in 2002 and 2004, in addition to those about a firm's CSR initiatives, suggests that the potential impact of returnees on such initiatives—rather than just firm performance or innovation—was being considered in the time period. The inclusion of the CSR questions also enhances the validity of our claim that the early 2000s was a seminal period of change in China with respect to conceptions of an organization's socio-economic responsibility.

Although the versions of the datasets to which we had access did not contain the names of the participating firms, we noticed that the number of observations for each year matched the targeted number of new (rather than repeat) cases set by the survey administrators. While this detail suggests that the samples were comprised by independent observations, we nevertheless adopted the more conservative approach of analyzing the two years of data separately. Thus, our hypotheses are examined with test-retest analyses rather than with one set of analyses on pooled data.

### **Sample Characteristics**

The response rates to the 2002 and 2004 surveys were very high (89.6 and 82.1 percent respectively)<sup>4</sup>, resulting in 3258 and 3012 observations respectively. These completion rates are likely at least partially attributable to the fact that each survey was completed by the major shareholder of the private firm in the presence of a trained survey administrator. This data collection procedure is also likely to have enhanced the quality of data obtained.

In each survey year, the sampled firms were distributed across all 31 provinces, with the large majority being 10 years of age or less (82.1 percent in 2002 and 86.1 percent in 2004) and most comprised by 100 or fewer employees (63.7 percent in 2002 and 68.1 percent in 2004). As would be expected for China in the early 2000s, the largest proportion were in the manufacturing/construction sector (43.7 percent in 2002 and 41.3 in 2004). All major industries, however, had at least some level of representation within each survey year.

Almost all of the respondents (96.0 percent in 2002 and 97.0 percent in 2004) provided data on their shareholdings and position within the firm. The average percentage ownership reported by these individuals was very high (76.9 percent in 2002 and 66.6 percent in 2004). Moreover, the vast majority indicated that they were the firm's General Manager or CEO (96.0 percent in 2002 and 92.4 percent in 2004).<sup>5</sup> These findings provide reassurance that the individual-level characteristics reported by the respondents pertained to those of the firm's primary owner-manager. Further details on the sampled firms and the survey respondents are available upon request.

### **Measures**

***Dependent variables.*** Following Zheng et al. (2015), we operationalized direct CSR involvement by the extent to which a firm was actively involved in social and/or environmental sustainability initiatives (see also Montiel & Delgado-Ceballos, 2014; Zhang et al., 2016). Indicators of this variable were obtained from the owner-manager's responses to questions about the firm's participation in the China Guangcai Program during the year prior to the survey.<sup>6</sup> For our main measure, we selected the most face-valid indicator of a socially oriented initiative (i.e.,

whether the firm “conducted entrepreneurial activities in remote, poor, or minority areas”) and the most face-valid indicator of an environmentally oriented initiative (i.e., whether the firm “participated in forestation”). Because the response to each question was coded as either 1 if yes or 0 if no, our primary indicator of a firm’s *sustainability initiative scope* was measured by an ordinal scale ranging from 0 to 2.

We also followed Zheng et al. (2015) in operationalizing a firm’s indirect involvement in CSR by its commitment to corporate philanthropy. Although others have measured this construct by the total amount of charitable donations in a given year (e.g., Wang & Qian, 2011; Zhang et al., 2009), we contend that adjusting by an indicator of a firm’s capacity to donate arguably provides a better sense of the intensity of its commitment. Indeed, we note that Luo et al. (2016) adopted a similar scale-adjusted approach, measuring donations relative to sales. Because we consider owner’s equity to be a more appropriate indicator of a firm’s capacity to engage in philanthropy, our primary measure of *charitable donation intensity* divides the amount donated to charity reported for the year prior to the survey by the amount of owner’s equity reported for the same time period (with both values in million RMB).

**Explanatory variables.** For the main measure of our independent variable, we adopted the more inclusive approach evident in some prior work (e.g., Dai & Liu, 2009; Li et al., 2012; Luo et al., 2016; Zhang et al., 2016) by designating a respondent as a *returnee owner-manager* if he or she reported having spent any time outside of China for education and/or training prior to the survey.<sup>7</sup> While we acknowledge that others have specified a 24-month minimum abroad for classifying an individual as a returnee (e.g., Filatotchev et al., 2009; Liu et al., 2010; Wright et al., 2008), a relatively low number of respondents in each dataset met this cut-off (41 in 2002 and 47 in 2004). We therefore opted for the less restrictive measure to ensure adequate statistical power for the hypothesis-testing models that were run separately by survey year.

We operationalized the organizational-level variables associated with our indirect-effect arguments as follows. *Firm size* and *profitability* were respectively measured by the number of employees and amount of after-tax net income (in million RMB) reported for the year prior to the survey, with both values logged to reduce skewness. *Internationalization* was measured in one of two ways due to differences in the questions posed between the survey years. In the 2002 sample, this variable was coded 1 if the owner-manager indicated that the firm had utilized foreign direct investment, invested abroad, and/or exported since China’s access to the WTO (0 if not). In the 2004 sample, this variable was coded 1 if the owner-manager indicated that the firm had engaged in foreign economic cooperation, was making preparations to do so, or was planning such activity sometime in the next three to five years (0 if not).

**Control variables.** We controlled for several variables, at various levels of analysis, that were likely to be correlated with an owner-manager’s returnee status and/or the CSR indicators. Those at the individual level consisted of an *owner-manager’s age*,<sup>8</sup> *gender* (coded 1 if male, 0 if female),<sup>9</sup> membership in the Communist Party of China (*CPC member*),<sup>10</sup> and possession of a *college/university degree*.<sup>11</sup> Those at the organizational level consisted of *firm age*, a set of industry dummies (*manufacturing/construction, agriculture/mining, utilities/transportation, retail, service, and education/science*, with *other industry* serving as the holdout referent), and whether the firm was previously a state-owned enterprise (*former SOE*).<sup>12</sup> At the institutional level, we controlled for potential effects associated with geographical clusters (Wennberg & Lindqvist, 2010) by including a dummy variable for the *metro location* of Beijing, Shanghai, or Guangdong. Because these were the recognized centers of China’s political, economic, and socio-cultural development at the start of the new millennium, they were likely to possess

disproportionally high concentrations of both returnees and firms with CSR initiatives.<sup>13</sup> Consistent with Marquis and Qian (2014), we also included a *regional development level* indicator to account for likely variability in the incidence of CSR across the Chinese provinces. This final control was measured by the 23-item index developed by Fan, Wang, and Zhu (2011) that has been used in other research set in China (e.g., Wang, Hong, Kafouros, & Wright, 2012).

## RESULTS

### Key Descriptive Findings

Table 1 contains descriptive statistics and correlations for the separate survey years. Of the 2653 owner-managers in 2002 and 2595 owner-managers in 2004 who provided data on education/training abroad, 8.0 percent and 7.3 percent respectively were deemed returnees. Notably, these values fall in between the 6.0 and 11.1 percent incidence levels respectively reported by Zhang et al. (2016) and Luo et al. (2016) for returnee directors of publicly-traded Chinese companies between 2000 and 2012. The number of returnee-led firms in each sample (N=213 in 2002 and N=190 in 2004) was thus sufficient for testing our hypotheses separately by survey year. The relatively high incidence of statistically significant differences in the means/proportions across the two samples suggests analyzing the panels separately, rather pooling them, is a better starting point for our tests.

The correlations between the returnee status indicator and the focal theorized variables are positive and statistically significant in all but one case (that with charitable donation intensity in 2002). In 2002, the means for the returnee-led versus local-led firms indicate that the former scored 1.47 times higher on sustainability initiative scope (0.25 vs 0.17) and 1.50 times higher on charitable donation intensity (0.03 vs 0.02), as well as 1.34 times higher on firm size (195.63 vs 146.47), 1.33 times higher on profitability (1.53 vs 1.15), and 2.14 times higher on internationalization (0.15 vs 0.07). In 2004, the gaps between the two types of firms were even wider, for the most part, with those led by returnee owner-managers scoring 1.71 times higher on sustainability initiative scope (0.41 vs 0.24), 2.50 times higher on charitable donation intensity (0.10 vs 0.04), 1.59 times higher on firm size (255.47 vs 160.76), 2.21 times higher on profitability (3.33 vs 1.51), and 1.95 times higher on internationalization (0.43 vs 0.22). These descriptive findings (available on request) preview the following results of our more rigorous hypotheses-testing analysis.

----- insert Table 1 about here -----

### Hypotheses-Testing Results

Given our interest in the direct (H1a&b) and indirect (H2a&b) effects associated with an owner-manager's returnee status, we used structural equation modeling (SEM) in STATA 14.2 to simultaneously test both types of effects. Because the charitable donation intensity measure is left-censored at zero (32% and 31% of the cases in the 2002 and 2004 data respectively have this value), we integrated a Tobit model into the SEM to model this 'corner solution' dependent variable (Wooldridge, 2012: p583-584). Tables 2 and 3 present the respective results for the 2002 and 2004 survey years.

As indicated by the summary statistics at the bottom of Table 2, the 2002 findings reveal a positive and significant total effect for the returnee variable, net of the controls, on sustainability initiative scope ( $\beta=0.083$ ;  $p=0.019$ ) and charitable donation intensity ( $\beta=0.026$ ;  $p=0.022$ ). The more nuanced findings for sustainability initiative scope reported in columns 1 through 4 reveal positive and significant paths for the direct effect of the returnee variable ( $\beta=0.072$ ;  $p=0.040$ ) and its indirect effect through firm size ( $\beta=0.009$ ;  $p=0.031$ ), but insignificant indirect-effect paths through profitability ( $\beta=0.001$ ;  $p=0.654$ ) and internationalization ( $\beta=0.001$ ;

$p=0.746$ ). The more nuanced results for charitable donation intensity reported in columns 5 through 8 reveal a positive direct effect of the returnee variable that is close to the 5% significance level ( $\beta=0.021$ ;  $p=0.078$ ), a positive and significant indirect effect through firm size ( $\beta=0.005$ ;  $p=0.006$ ), a positive indirect effect through profitability that is close to the 5% significance level ( $\beta=0.002$ ;  $p=0.070$ ), and an insignificant indirect-effect path through internationalization ( $\beta=-0.0001$ ;  $p=0.860$ ). In sum, the SEM results for the 2002 survey lend support for H1a as well as some support for H1b, H2a and H2b.

----- insert Table 2 about here -----

As indicated by the SEM results summarized in Table 3, the retest using the 2004 survey data offers even stronger support for our hypotheses. The summary statistics at the bottom, for instance, indicate that the total net effect of the returnee variable is positive and highly significant for both sustainability initiative scope ( $\beta=0.184$ ;  $p=0.001$ ) and charitable donation intensity ( $\beta=0.108$ ;  $p=0.006$ ). The more nuanced findings for sustainability initiative scope presented in columns 1 through 4 reveal a positive and significant direct effect of the returnee variable ( $\beta=0.158$ ;  $p=0.003$ ), an insignificant indirect-effect path through firm size ( $\beta=0.006$ ;  $p=0.228$ ), a positive indirect-effect path through profitability that is close to the 5% significance level ( $\beta=0.012$ ;  $p=0.083$ ), and an insignificant indirect-effect path through internationalization ( $\beta=0.008$ ;  $p=0.156$ ). The total indirect effect of the returnee variable, however, is positive and highly significant ( $\beta=0.026$ ;  $p=0.002$ ). The more nuanced results for charitable donation intensity reported in columns 5 through 8 reveal a positive and significant direct effect of the returnee variable ( $\beta=0.080$ ;  $p=0.040$ ) as well as positive and significant indirect effects through firm size ( $\beta=0.012$ ;  $p=0.015$ ) and profitability ( $\beta=0.012$ ;  $p=0.013$ ). Although the indirect-effect path through internationalization is not statistically significant ( $\beta=0.003$ ;  $p=0.453$ ), the total indirect effect of the returnee variable is positive and highly significant ( $\beta=0.027$ ;  $p=0.000$ ). In sum, the retest results for 2004 lend support for H1a and H1b as well as some support for H2a and H2b.

----- insert Table 3 about here -----

### **Robustness Checks and Self-Selection Bias Assessment**

By implementing a test-retest design, we have been able to demonstrate the robustness of the findings pertinent to our hypotheses across the two survey years. As elaborated in the endnotes, several sensitivity checks further revealed that our hypotheses-testing results are robust with: a) survey respondents without the title of General Manager or CEO excluded; b) the control for college/university degree replaced by the respondent's estimated total years of schooling; and, c) one of the two moderately-correlated geographic controls (metro location) removed. As a final set of robustness checks (available on request), we re-ran our SEM analyses with alternative CSR measures; specifically, with a third indicator added to the index for sustainability initiative scope (i.e., participation in "marketplace development"), and, with sales rather than equity as the denominator for charitable donation intensity.<sup>14</sup> We were able to replicate all of the statistically-significant direct and indirect paths pertinent to our hypotheses in both survey years using the alternative measure of sustainability initiative scope. The results for the alternate measure of charitable donation intensity are also highly similar for the 2002 survey year, but those for 2004 are a little weaker (with only the indirect effect of the returnee indicator through firm size remaining statistically significant at the 5% level). When considered collectively, however, the findings from our numerous robustness checks offer further evidence of the positive associations between education/training abroad and CSR within private firms in an emerging economy.

We assessed potential self-selection bias using the non-parametric Propensity-Score Matching (PSM) method (Angrist & Pischke, 2008). In the first stage, we used a probit model to estimate the probability of education/training abroad by using all of the control variables as predictors. In the second stage, we used the PSM method to match the local owner-managers in the control group who had a similar predicted probability of being educated/trained abroad (but were not) with the returnee owner-managers in the treatment group who possessed this type of international experience. We then examined the coefficient for the returnee indicator in each second-stage model (run separately by survey year on the primary measures of our dependent variables), to assess whether owner-managers with education/training abroad tended to head firms with higher CSR levels relative to their 'matched' local counterparts. For the 2002 data, we observed a positive and significant relationship between the returnee indicator and sustainability initiative scope ( $\beta=0.087$ ;  $p=0.011$ ) and a positive relationship with charitable donation intensity that was close to the 5% significance level ( $\beta=0.014$ ;  $p=0.091$ ). For the 2004 data, we observed a positive and highly significant relationship between the returnee indicator and sustainability initiative scope ( $\beta=0.170$ ;  $p=0.003$ ) and a positive but insignificant relationship with charitable donation intensity ( $\beta=0.080$ ;  $p=0.340$ ). These findings help to attenuate concern about biases stemming from self-selection, and lend further support for the positive effects of education/training abroad on CSR within emerging-economy private firms.

### DISCUSSION

This paper was motivated by the desire to fill an important gap in the IB literature: the relative under-attention paid to returnees as potential propagators of social (rather than technological or economic) advances in emerging economies. To this end, we developed and tested theory pertaining to the direct and indirect effects of an owner-manager's education/training abroad for CSR. The findings from our test-retest analysis of nationwide survey data collected in 2002 and 2004 from separate samples of privately held firms in China offer three core sets of contributions and implications.

Most fundamentally, we provide evidence that private firms led by returnee owner-managers in an emerging economy tend to exhibit higher levels of CSR, on average, than those led by local owner-managers. We show that this is so not only for charitable donation intensity but also for an indicator that more strongly reflects an organization's commitment to CSR (Zheng et al., 2015): the scope of its active involvement in social/environmental sustainability initiatives. Evidence that education/training abroad heightens both manifestations within privately held firms of an emerging economy constitutes an important extension to related findings from recent studies of publicly traded firms in China (Luo et al., 2016; Zhang et al., 2016). A key reason is that private enterprises arguably possess greater discretion with respect to CSR practice implementation relative to those that are publicly traded (Zheng et al., 2014), which creates ambiguity as to whether education/training abroad will be influential in the former organizational contexts. The fact that we observed such influence is thus all the more notable. Indeed, our findings imply that governments seeking to initiate and/or expand CSR initiatives in emerging-economy contexts would be wise not to overlook owner-managers with education/training abroad as important early propagators of such practices.

We also contribute more nuanced evidence that education/training abroad exerts a *direct* impact on the CSR practices of private enterprises within an emerging economy; i.e., not only net of several controls at multiple levels of analysis but also above and beyond any indirect effects attributable to differences in the organizational characteristics of returnee-led versus local-led firms. More specifically, our results indicate that the direct effect of the returnee

variable accounts for over 70% of its total effect on each CSR measure across both survey years (i.e., 87% on sustainability initiative scope in 2002, 77% on charitable donation intensity in 2002, 85% on sustainability initiative scope in 2004, and 74% on charitable donation intensity in 2004). These findings buttress calls for increased attentiveness to returnees as agents of *socio-economic* change (Luo et al., 2016; Riddle & Brinkerhoff, 2011)—and for greater consideration of ‘microfoundational’ factors within CSR research (Aguinis & Glavas, 2012; Doh, 2017). They further imply that the predominant, institution-based focus of much research on emerging economies in general (Meyer & Peng, 2016) could be fruitfully extended by greater attention to individual-level considerations.

Our third core set of contributions and implications stems from the findings related to our argument that the greater CSR levels within emerging-economy enterprises led by returnee owner-managers will also be partially attributable to key differences in the organizational characteristics of their firms. We found the strongest support for indirect effects attributable to the greater profitability of returnee-led firms, as well as some support for the indirect effect of their larger firm size. These findings enhance understanding of the mechanisms underlying the observed associations between education/training abroad and CSR, suggesting that these relationships are not driven solely by the distinctive CSR-related knowledge and beliefs/values possessed by returnees. Instead, our findings indicate that they are partially attributable to the tendency for returnees to lead better-performing firms. Notably, however, while we found that the returnee-led firms tended to be more internationalized than the local-led firms, we did not find that this organizational-level differential accounted for significant differences in their CSR practices. We encourage further research to help make sense of these findings.

Another key next step for future research would be to investigate the extent to which the direct relationships observed between education/training abroad and CSR are attributable to the distinctive knowledge and/or distinctive values and beliefs of returnees, as we had theorized herein. Although such arguments are common within the returnee literature (e.g., Filatotchev et al., 2009; Luo et al., 2016; Qin & Estrin, 2015; Riddle & Brinkerhoff, 2011; Wright, 2011), they are rarely tested directly. It would be of especial interest to deepen understanding of how organizational leaders with greater knowledge and stronger beliefs about host-country conceptions of CSR are able to convince *home-country* stakeholders of the importance of implementing such initiatives—particularly if, as Raynard’s (2017) research suggests, some of these stakeholders are likely to have been imprinted by very different home-country conceptions of a firm’s socio-economic responsibilities. On a related note, we can also envision more nuanced analyses focused upon the *length* of a returnee’s education/training abroad. Given theory and evidence that the time spent away from one’s home country can act as both an enabler of—and barrier to—subsequent attempts to implement host-country practices (Oddou, Osland, & Blakeney, 2009; Wang, 2015), we especially encourage explorations of potential curvilinear or contingent effects.<sup>15</sup>

Our study’s limitations also point to directions for future research. One is the reliance upon data collected from pre-existing surveys. Although their nationally representative nature and very high response rates are notable strengths, the available data pertinent to some of our core constructs lacked richness. The primary and alternative indicators of sustainability initiative scope, for instance, were limited to a firm’s participation in activities associated with the China Guancai Program. Moreover, detailed information was not available for the extent of a firm’s involvement in these focal initiatives, such as the number of employees, amount of time, or budget devoted to each. The datasets also lacked measures of internally-oriented CSR initiatives,

such as those pertaining to product/process safety standards (Zheng et al., 2015) or employee welfare/rights (Maynard, 2017). The conclusions from our study are thus most applicable to externally-oriented CSR initiatives.

The primary measure of our independent variable (i.e., whether an owner-manager had been educated/trained abroad) also lacked nuance. Notably, for instance, we lacked information on where the education/training was received. As a result, our analysis was based on the assumption, supported by secondary data on the top destinations for Chinese students educated abroad in the early 2000s, that the sampled returnee owner-managers were highly likely to have returned from OECD countries. This assumption was important for our arguments pertaining to returnee owner-managers from such countries being more likely than local owner-managers to have been exposed to CSR practices, which tend to be more prevalent within such nations (Ho et al., 2012). The fact that we lacked host-country information implies, however, that our hypotheses tests are conservative. The direct and indirect effects associated with the returnee status indicator arguably would have been even stronger if only those with education/training in OECD countries had been deemed returnees. Indeed, this limitation may help explain why we did not find statistically significant support for all of our hypotheses.

It is also important to acknowledge potential limitations stemming from the fact that the survey data were collected from a single source. One is the possibility of common method bias, which might have resulted in inflated correlations between the explanatory and dependent variables. The fact that these were operationalized by very different measurement scales should help attenuate this concern. The reliance upon a single informant also raises the possibility of recall and/or social desirability bias, especially with respect to the CSR measures. The fact that these data were provided by the firm's primary owner-manager should minimize the former bias, whereas the relatively low mean scores observed for the dependent variables suggests that the data weren't egregiously affected by the latter bias.

Our reliance upon previously collected data from a single country also raises questions of generalizability, particularly in light of the recognized heterogeneity amongst countries with emerging economies (Meyer & Peng, 2016). In the early 2000s when the surveys were administered, however, China had just gained access to the WTO and was initiating its socio-economic transition. As part of that transition, informal *guanxi* and paternalistic methods were starting to be replaced by formal contracts and recognized CSR programs (Raynard, 2017; Yin & Zhang, 2012; Zheng et al., 2014). Our findings are therefore likely to generalize to other emerging economies with underdeveloped CSR and large numbers of returnees, including large nations such as India and Brazil as well as many smaller countries such as Vietnam, Nigeria, Ghana, Mexico, and Chile.

In conclusion, this study offers evidence that owner-managers of private enterprises in an emerging economy who have been educated/trained abroad play an important role in promulgating CSR during the early transition to more socially/environmentally-responsible business practices. This is a noteworthy finding given that institutional levers for encouraging CSR tend to be weak in such contexts during this transitional period. We hope that our work provides a helpful foundation for further research on the relationship between education/training abroad and CSR—and that it propagates even greater attention to returnees as agents of socio-cultural change more broadly.

## REFERENCES

- Aguinis, H., and Glavas, A., 2012. What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management*, 38(4): 932-968.
- Angrist, J.D., and Pischke, J.S., 2008. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press, Princeton, New Jersey, USA, 373p.
- Bai, W.S., Johanson, M., and Martin, O., 2017. Knowledge and internationalization of returnee entrepreneurial firms. *International Business Review*, 26(4): 652-665.
- Bansal, P., and Song, H.C., 2017. Similar but not the same: Differentiating corporate sustainability from corporate responsibility. *Academy of Management Annals*, 11(1): 105-149.
- Baron, J.N., Hannan, M.T., and Burton, M.D., 1999. Building the iron cage: Determinants of managerial intensity in the early years of organizations. *American Sociological Review*, 64(4): 527-547.
- Berry, J.W., 2006. Context of acculturation, in Berry, J.W. and Sam, D.L. (Eds.) *The Cambridge Handbook of Acculturation Psychology*, Cambridge University Press, 1<sup>st</sup> edition: 27-42.
- Cliff, J.E., Jennings, P.D., and Greenwood, R., 2006. New to the game and questioning the rules: The experiences and beliefs of founders who start imitative versus innovative firms. *Journal of Business Venturing*, 21(5): 633-663.
- Dai, O., and Liu, X.H., 2009. Returnee entrepreneurs and firm performance in Chinese high-technology industries. *International Business Review*, 18(4): 373-386.
- Doh. 2017. Presentation at a 2017 AIB Workshop in Dubai, UAE.
- Doh, J.P., Littell, B., and Quigley, N.R., 2015. CSR and sustainability in emerging markets: Societal, institutional, and organizational influences. *Organizational Dynamics*, 44(2): 112-120.
- Fan, G., Wang, X.L., and Zhu, H.P., 2011. *NERI INDEX of Marketization of China's Provinces 2011 Report*. Economic Science Press, Beijing, China, 428p.
- Filatotchev, I., Liu, X.H., Buck, T., and Wright, M., 2009. The export orientation and export performance of high-technology SMEs in emerging markets: The effects of knowledge transfer by returnee entrepreneurs. *Journal of International Business Studies*, 40(6): 1005-1021.
- Ghoul, S., Guedhami, O., and Kim, Y.T., 2017. Country-level institutions, firm value, and the role of corporate social responsibility initiatives. *Journal of International Business Studies*, 48(3): 360-385.
- Ho, F.N., Wang, H.M.D., and Vitell, S.J., 2012. A global analysis of corporate social performance: The effects of cultural and geographic environments. *Journal of Business Ethics*, 107: 423-433.
- Jain, S.C., 2006. *Emerging Economies and the Transformation of International Business: Brazil, Russia, India and China (BRICs)*. New horizons in international business, Edward Elgar Publishing, 566p. ISBN: 1847202985, 9781847202987
- Kenney, M., Breznitz, D., and Murphree, M., 2013. Coming back home after the sun rises: Returnee entrepreneurs and growth of high tech industries. *Research Policy*, 42 (2): 391-407.
- Kiss, A.N., Danis, W.M., and Cavusgil, S.T., 2012. International entrepreneurship research in emerging economies: A critical review and research agenda. *Journal of Business Venturing*, 27(2): 266-290.
- Li, H.Y., Zhang, Y., Li, Y., Zhou, L.A., and Zhang, W.Y., 2012. Returnees versus locals: Who

- perform better in china's technology entrepreneurship? *Strategic Entrepreneurship Journal*, 6(3): 257-272.
- Li, S.M, Fetscherin, M., Alon, I., Lattemann, C., and Yeh, K., 2010. Corporate social responsibility in emerging markets: The importance of the governance environment. *Management International Review*, 50(5): 635-654.
- Lin, D.M., Lu, J.Y., Liu, X.H., and Zhang, X.R., 2016. International knowledge brokerage and returnees' entrepreneurial decisions. *Journal of International Business Studies*, 47(3): 295-318.
- Liu, X.H., Lu, J.Y., Filatotchev, I., Buck, T., and Wright, M., 2010. Returnee entrepreneurs, knowledge spillovers and innovation in high-tech firms in emerging economies. *Journal of International Business Studies*, 41: 1183-1197.
- Luo, J., Chen, D., and Chen, J., 2016. Coming back and giving back: Returnee directors and corporate donations. In *76th Annual Meeting of the Academy of Management, AOM 2016* (pp. 219-224). Academy of Management. DOI: 10.5465/AMBPP.2016.215
- Marano, V., Tashman, P., and Kostova, T., 2017. Escaping the iron cage: Liabilities of origin and CSR reporting of emerging market multinational enterprises. *Journal of International Business Studies*, 48(3): 386-408.
- Markman, G.D., Russo, M., Lumpkin, G.T., Jennings, P., and Mair, J., 2016. Entrepreneurship as a platform for pursuing multiple goals: A special issue on sustainability, ethics, and entrepreneurship. *Journal of Management Studies*, 53(5), 673-694.
- Marquis, C., and Lee, M., 2013. Who is governing whom? Executives, governance, and the structure of generosity in large US firms. *Strategic Management Journal*, 34(4): 483-497.
- Marquis, C., and Qian, C., 2014. Corporate social responsibility reporting in China: Symbol or substance? *Organization Science*, 25(1): 127-148.
- McWilliams, A., and Siegel, D., 2001. Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26 (1): 117-127.
- Meyer, K.E., and Peng, M.W., 2016. Theoretical foundations of emerging economy business research. *Journal of International Business Studies*, 47(1): 3-22.
- Miska, C., Witt, M.A., and Stahl, G.K., 2016. Drivers of global CSR integration and local CSR responsiveness: Evidence from Chinese MNEs. *Business Ethics Quarterly*, 26(3): 317-345.
- Montiel, I., and Delgado-Ceballos, J. 2014. Defining and measuring corporate sustainability: Are we there yet? *Organization & Environment*, 27(2): 113-139.
- Oddou, G., Osland, J.S., and Blakeney, R.N., 2009. Repatriating knowledge: Variables influencing the "transfer" process. *Journal of International Business Studies*, 40(2): 181-199.
- Philips, D.J., 2005. Organizational genealogies and the persistence of gender inequality: The case of Silicon Valley law firms. *Administrative Science Quarterly*, 50(3): 440-472.
- Qin, F., and Estrin, S., 2015. Does social influence span time and space? Evidence from Indian returnee entrepreneurs. *Strategic Entrepreneurship Journal*, 9(3): 226-242.
- Qin, F., Wright, M., and Gao, J., 2017. Are 'sea turtles' slower? Returnee entrepreneurs, venture resources and speed of entrepreneurial entry. *Journal of Business Venturing*, 32(6): 694-706.
- Raynard, M., 2017. *Institutional imprints: The enduring effects of past political regimes on CSR in China*. Unpublished PhD Dissertation, Alberta School of Business, University of Alberta, Edmonton, AB.

- Riddle, L., and Brinkerhoff, J., 2011. Diaspora entrepreneurs as institutional change agents: The case of Thamel.com. *International Business Review*, 20(6): 270-280.
- UNESCO, 2006. *Global Education Digest 2006: Comparing Education Statistics Across the World*. UNESCO Institute for Statistics, Montreal, Canada, 193p.
- van Oudenhoven, J.P., 2006. Immigrants, in Berry, J.W. and Sam, D.L. (Eds.) *The Cambridge Handbook of Acculturation Psychology*, Cambridge University Press, 1<sup>st</sup> edition: 163-180.
- Waddock, S.A., and Graves, S.B., 1997. The corporate social performance-financial performance link. *Strategic Management Journal*, 18(4): 303-319.
- Wang, D., 2015. Activating cross-border brokerage: Interorganizational knowledge transfer through skilled return migration. *Administrative Science Quarterly*, 60(1): 133-176.
- Wang, C.Q., Hong, J.J., Kafouros, M., and Wright, M., 2012. Exploring the role of government involvement in outward FDI from emerging economies. *Journal of International Business Studies*, 43(7): 655-676.
- Wang, H., and Qian, C., 2011. Corporate philanthropy and corporate financial performance: The roles of stakeholder response and political access. *Academy of Management Journal*, 54(6): 1159-1181.
- Wennberg, K., and Lindqvist, G. 2010. The effect of clusters on the survival and performance of new firms. *Small Business Economics*, 34: 221-241.
- Wooldridge, J.M., 2012. *Introductory Econometrics: A Modern Approach*. Mason, Ohio: South-Western Cengage Learning.
- Wright, M., 2011. Entrepreneurial Mobility. *Building Methodological Bridges*, 6: 137-159.
- Wright, M., Liu, X.H., Buck, T., and Filatotchev, I., 2008. Returnee entrepreneurs, science park location choice and performance: An analysis of high-technology SMEs in China. *Entrepreneurship: Theory & Practice*, 32(1): 131-155.
- Yin, J.L., and Zhang, Y.L., 2012. Institutional dynamics and corporate social responsibility (CSR) in an emerging country context: Evidence from China. *Journal of Business Ethics*, 111(2): 301-316.
- Zhang, J., Kong, D., and Wu, J., 2016. Doing good business by hiring directors with foreign experience. *Journal of Business Ethics*, advance online publication December 28. doi:10.1007/s10551-016-3516-z.
- Zhang, R., Rezaee, Z., and Zhu, J., 2009. Corporate philanthropic disaster response and ownership type: Evidence from Chinese firms' response to the Sichuan earthquake. *Journal of Business Ethics*, 91(1): 51-63.
- Zheng, L., Balsara, N., and Huang, H.Y., 2014. Regulatory pressure, blockholders and corporate social responsibility (CSR) disclosures in China. *Social Responsibility Journal*, 10(2): 226-245.
- Zheng, Q., Luo, Y., and Maksimov, V., 2015. Achieving legitimacy through corporate social responsibility: The case of emerging economy firms. *Journal of World Business*, 50(3): 389-403.
- Zu, L., and Song, L., 2009. Determinants of managerial values on corporate social responsibility: Evidence from China. *Journal of Business Ethics*, 88(1): 105-117.

**Table 1** Descriptive Statistics and Correlations by Survey Year

Variable <sup>a</sup>	2002 Survey		Correlations (below diagonal for 2002 and above diagonal for 2004)						
	Mean	SD	1	2	3	4	5	6	7
1 Sustainability initiative scope	0.18	0.42		0.01	<b>0.09</b>	<b>0.14</b>	<b>0.10</b>	<b>0.08</b>	<b>0.06</b>
2 Charitable donation intensity	0.02	0.13	<b>0.08</b>		<b>0.09</b>	<b>0.10</b>	<b>0.22</b>	<b>0.16</b>	0.01
3 Returnee owner-manager	0.08	0.27	<b>0.05</b>	0.04		<b>0.12</b>	<b>0.12</b>	<b>0.13</b>	0.03
4 Firm size <sup>b</sup>	152.73	288.98	<b>0.12</b>	-0.03	<b>0.07</b>		<b>0.56</b>	<b>0.35</b>	<b>0.11</b>
5 Profitability <sup>b</sup>	1.13	4.40	<b>0.08</b>	<b>0.07</b>	<b>0.10</b>	<b>0.49</b>		<b>0.31</b>	<b>0.06</b>
6 International	0.08	0.27	0.02	0.04	<b>0.08</b>	<b>0.14</b>	<b>0.13</b>		<b>0.07</b>
7 Owner-manager's age	43.95	8.07	0.02	0.01	-0.03	<b>0.04</b>	<b>-0.05</b>	-0.02	
8 Gender (male)	0.89	0.32	-0.01	-0.01	-0.02	<b>0.11</b>	<b>0.09</b>	0.00	<b>0.06</b>
9 CPC membership	0.30	0.46	0.02	0.03	-0.03	<b>0.13</b>	<b>0.06</b>	0.03	<b>0.18</b>
10 College/university degree	0.38	0.49	<b>0.04</b>	-0.02	<b>0.15</b>	<b>0.10</b>	<b>0.18</b>	<b>0.12</b>	<b>-0.15</b>
11 Firm age	7.04	4.36	0.02	0.04	0.02	<b>0.10</b>	<b>0.05</b>	<b>0.04</b>	<b>0.16</b>
12 Former SOE	0.07	0.25	0.03	-0.02	0.02	<b>0.07</b>	<b>0.05</b>	-0.00	0.02
13 Metro location	0.23	0.42	<b>-0.08</b>	<b>-0.06</b>	<b>0.08</b>	<b>-0.10</b>	<b>0.05</b>	<b>0.08</b>	-0.03
14 Regional development level	5.79	1.68	<b>-0.14</b>	<b>0.06</b>	-0.00	<b>-0.05</b>	<b>0.07</b>	<b>0.13</b>	-0.02

Variable <sup>a</sup>	2004 Survey		Correlations (below diagonal for 2002 and above diagonal for 2004)						
	Mean	SD	8	9	10	11	12	13	14
1 Sustainability initiative scope	0.25 <sup>c</sup>	0.49	<b>0.07</b>	0.04	<b>0.08</b>	0.01	<b>0.06</b>	0.02	<b>-0.10</b>
2 Charitable donation intensity	0.04	0.43	0.03	0.04	<b>0.11</b>	0.09	0.01	0.02	-0.03
3 Returnee owner-manager	0.07	0.26	<b>0.05</b>	<b>0.04</b>	<b>0.16</b>	<b>0.08</b>	0.01	<b>0.07</b>	<b>0.06</b>
4 Firm size <sup>b</sup>	166.71	583.86	<b>0.14</b>	<b>0.11</b>	<b>0.14</b>	<b>0.27</b>	<b>0.10</b>	-0.04	0.03
5 Profitability <sup>b</sup>	1.71 <sup>c</sup>	9.25	<b>0.13</b>	<b>0.10</b>	<b>0.13</b>	<b>0.19</b>	0.02	0.03	<b>0.09</b>
6 International	0.25 <sup>c</sup>	0.43	<b>0.07</b>	0.04	<b>0.10</b>	<b>0.12</b>	<b>0.04</b>	0.02	<b>0.11</b>
7 Owner-manager's age	43.43 <sup>c</sup>	8.11	<b>0.06</b>	<b>0.24</b>	<b>-0.12</b>	<b>0.22</b>	<b>0.05</b>	0.01	<b>0.04</b>
8 Gender (male)	0.86 <sup>c</sup>	0.35		<b>0.10</b>	-0.02	<b>0.06</b>	0.02	-0.02	0.02
9 CPC membership	0.35 <sup>c</sup>	0.48	<b>0.06</b>		<b>0.12</b>	<b>-0.06</b>	<b>0.15</b>	<b>-0.10</b>	-0.02
10 College/university degree	0.52 <sup>c</sup>	0.50	-0.03	<b>0.04</b>		0.00	<b>0.08</b>	0.00	<b>-0.04</b>
11 Firm age	6.11 <sup>c</sup>	4.02	<b>0.07</b>	<b>-0.12</b>	<b>-0.10</b>		<b>-0.11</b>	-0.01	<b>0.08</b>
12 Former SOE	0.08 <sup>c</sup>	0.27	-0.01	<b>0.11</b>	<b>0.11</b>	<b>-0.12</b>		-0.02	-0.03
13 Metro location	0.19 <sup>c</sup>	0.39	<b>-0.04</b>	<b>-0.10</b>	<b>0.15</b>	<b>-0.04</b>	-0.01		<b>0.57</b>
14 Regional development level	6.55 <sup>c</sup>	1.94	0.01	-0.03	0.01	<b>-0.05</b>	<b>-0.06</b>	<b>0.56</b>	

Notes: **bold** correlations significant at  $p < .05$  (Pearson for continuous; Spearman for categorical).

<sup>a</sup> Because the industry dummies are designed to be exclusive, the correlations between them (available upon request) are not reported in order to save space; the industry distribution by survey year is as follows: agriculture/mining (2002 = 6.90%; 2004 = 7.4%;  $\chi^2 = 0.69$ ), utilities/transportation (2002 = 3.3%; 2004 = 3.7%;  $\chi^2 = 1.04$ ), manufacturing/construction (2002 = 43.9%; 2004 = 41.9%;  $\chi^2 = 2.42$ ), retail (2002 = 21.5%; 2004 = 20.9%;  $\chi^2 = 0.31$ ), service (2002 = 11.2%; 2004 = 12.7%;  $\chi^2 = 3.56$ ), education/science (2002 = 3.3%; 2004 = 3.1%;  $\chi^2 = 0.19$ ), other industry (2002 = 9.9%; 2004 = 10.1%;  $\chi^2 = 0.04$ ).

<sup>b</sup> The means and standard deviations are based upon the original values for this variable (the correlations are based on the logged values).

<sup>c</sup> Differences between the 2002 and 2004 samples are significant at  $p < .05$  (two-tailed tests).

**Table 2** SEM Results for the 2002 Survey Year

	CSR = Scope of sustainability initiatives				CSR = Intensity of charitable donations			
	CSR (1)	Firm size (2)	Profitability (3)	International (4)	CSR (5)	Firm size (6)	Profitability (7)	International (8)
Returnee	0.072 (0.035) <i>p</i> = 0.040	0.266 (0.104) <i>p</i> = 0.010	0.123 (0.050) <i>p</i> = 0.015	0.051 (0.023) <i>p</i> = 0.027	0.020 (0.011) <i>p</i> = 0.078	0.287 (0.090) <i>p</i> = 0.001	0.122 (0.048) <i>p</i> = 0.012	0.068 (0.020) <i>p</i> = 0.001
Firm size	0.035 (0.009) <i>p</i> = 0.000				0.016 (0.003) <i>p</i> = 0.000			
Profitability	0.008 (0.018) <i>p</i> = 0.648				0.015 (0.006) <i>p</i> = 0.009			
International	0.011 (0.034) <i>p</i> = 0.743				-0.002 (0.011) <i>p</i> = 0.860			
Own-mng age	0.001 (0.001) <i>p</i> = 0.261	-0.001 (0.003) <i>p</i> = 0.678	-0.004 (0.002) <i>p</i> = 0.011	-0.001 (0.001) <i>p</i> = 0.439	-0.000 (0.000) <i>p</i> = 0.841	-0.003 (0.003) <i>p</i> = 0.370	-0.004 (0.002) <i>p</i> = 0.015	-0.001 (0.001) <i>p</i> = 0.445
Gender (male)	-0.022 (0.030) <i>p</i> = 0.455	0.241 (0.088) <i>p</i> = 0.006	0.127 (0.043) <i>p</i> = 0.003	-0.017 (0.020) <i>p</i> = 0.392	-0.016 (0.010) <i>p</i> = 0.091	0.244 (0.077) <i>p</i> = 0.002	0.130 (0.041) <i>p</i> = 0.002	-0.005 (0.017) <i>p</i> = 0.772
CPC member	0.007 (0.020) <i>p</i> = 0.716	0.151 (0.059) <i>p</i> = 0.011	0.041 (0.029) <i>p</i> = 0.151	0.015 (0.013) <i>p</i> = 0.243	-0.005 (0.007) <i>p</i> = 0.459	0.195 (0.055) <i>p</i> = 0.000	0.039 (0.028) <i>p</i> = 0.162	0.015 (0.012) <i>p</i> = 0.216
College/univ	0.016 (0.020) <i>p</i> = 0.430	0.451 (0.058) <i>p</i> = 0.000	0.241 (0.028) <i>p</i> = 0.000	0.066 (0.013) <i>p</i> = 0.000	-0.011 (0.007) <i>p</i> = 0.084	0.404 (0.053) <i>p</i> = 0.000	0.239 (0.027) <i>p</i> = 0.000	0.061 (0.012) <i>p</i> = 0.000
Firm age	0.001 (0.002) <i>p</i> = 0.488	0.027 (0.006) <i>p</i> = 0.000	0.010 (0.003) <i>p</i> = 0.001	0.004 (0.001) <i>p</i> = 0.006	0.001 (0.001) <i>p</i> = 0.424	0.032 (0.006) <i>p</i> = 0.000	0.011 (0.003) <i>p</i> = 0.000	0.004 (0.001) <i>p</i> = 0.002
Former SOE	0.039 (0.037) <i>p</i> = 0.284	0.336 (0.109) <i>p</i> = 0.002	0.059 (0.053) <i>p</i> = 0.267	-0.018 (0.024) <i>p</i> = 0.452	-0.000 (0.012) <i>p</i> = 0.986	0.292 (0.096) <i>p</i> = 0.002	0.067 (0.051) <i>p</i> = 0.193	-0.025 (0.021) <i>p</i> = 0.253
Metro location	-0.043 (0.026) <i>p</i> = 0.104	-0.104 (0.078) <i>p</i> = 0.180	0.114 (0.038) <i>p</i> = 0.003	-0.025 (0.017) <i>p</i> = 0.152	-0.013 (0.009) <i>p</i> = 0.141	-0.075 (0.069) <i>p</i> = 0.282	0.113 (0.036) <i>p</i> = 0.002	-0.011 (0.015) <i>p</i> = 0.459
Reg dev level	-0.025 (0.007) <i>p</i> = 0.000	-0.021 (0.019) <i>p</i> = 0.287	0.007 (0.009) <i>p</i> = 0.480	0.020 (0.004) <i>p</i> = 0.000	0.005 (0.002) <i>p</i> = 0.030	-0.030 (0.018) <i>p</i> = 0.092	0.004 (0.009) <i>p</i> = 0.652	0.020 (0.004) <i>p</i> = 0.000
Industry	Included	Included	Included	Included	Included	Included	Included	Included
Summary stats for each SEM	Total effect of returnee variable = 0.083 (0.035) <i>p</i> = 0.019				Total effect of returnee variable = 0.026 (0.012) <i>p</i> = 0.022			
	Total direct effect of returnee variable = 0.072 (0.035) <i>p</i> = 0.040				Total direct effect of returnee variable = 0.020 (0.011) <i>p</i> = 0.078			
	Total indirect effect of returnee variable = 0.011 (0.005) <i>p</i> = 0.017				Total indirect effect of returnee variable = 0.006 (0.002) <i>p</i> = 0.001			
	Total indirect effect through firm size = 0.009 (0.004) <i>p</i> = 0.031				Total indirect effect through firm size = 0.005 (0.002) <i>p</i> = 0.006			
	Total indirect effect through profitability = 0.001 (0.002) <i>p</i> = 0.654				Total indirect effect through profitability = 0.002 (0.001) <i>p</i> = 0.070			
	Total indirect effect through internationalization = 0.001 (0.002) <i>p</i> = 0.746				Total indirect effect through internationalization = -0.0001 (0.001) <i>p</i> = 0.860			
	N = 1998 II = -26897				N = 1475 II = -5353			

Notes: Path coefficients reported with standard errors in parentheses; results for industry dummies are available upon request.

**Table 3** SEM Results for the 2004 Survey Year

	CSR = Scope of sustainability initiatives				CSR = Intensity of charitable donations			
	CSR (1)	Firm size (2)	Profitability (3)	International (4)	CSR (5)	Firm size (6)	Profitability (7)	International (8)
Returnee	0.158 (0.054) <i>p</i> = 0.003	0.299 (0.148) <i>p</i> = 0.043	0.207 (0.090) <i>p</i> = 0.021	0.144 (0.049) <i>p</i> = 0.004	0.080 (0.039) <i>p</i> = 0.040	0.682 (0.179) <i>p</i> = 0.000	0.353 (0.101) <i>p</i> = 0.000	0.235 (0.057) <i>p</i> = 0.000
Firm size	0.020 (0.013) <i>p</i> = 0.133				0.027 (0.009) <i>p</i> = 0.003			
Profitability	0.058 (0.022) <i>p</i> = 0.009				0.062 (0.015) <i>p</i> = 0.000			
International	0.057 (0.035) <i>p</i> = 0.104				0.018 (0.023) <i>p</i> = 0.447			
Own-mng age	0.002 (0.002) <i>p</i> = 0.378	0.004 (0.006) <i>p</i> = 0.454	-0.000 (0.004) <i>p</i> = 0.943	0.004 (0.002) <i>p</i> = 0.063	-0.001 (0.001) <i>p</i> = 0.301	-0.002 (0.004) <i>p</i> = 0.530	-0.001 (0.002) <i>p</i> = 0.504	0.001 (0.001) <i>p</i> = 0.672
Gender (male)	0.036 (0.051) <i>p</i> = 0.480	0.420 (0.140) <i>p</i> = 0.003	0.194 (0.085) <i>p</i> = 0.022	-0.023 (0.047) <i>p</i> = 0.625	0.001 (0.031) <i>p</i> = 0.978	0.319 (0.085) <i>p</i> = 0.000	0.121 (0.049) <i>p</i> = 0.013	0.025 (0.027) <i>p</i> = 0.364
CPC member	-0.012 (0.032) <i>p</i> = 0.710	-0.038 (0.089) <i>p</i> = 0.671	0.059 (0.054) <i>p</i> = 0.278	-0.032 (0.030) <i>p</i> = 0.281	0.006 (0.021) <i>p</i> = 0.764	0.132 (0.064) <i>p</i> = 0.039	0.090 (0.036) <i>p</i> = 0.013	-0.017 (0.021) <i>p</i> = 0.412
College/univ	0.067 (0.031) <i>p</i> = 0.032	0.492 (0.085) <i>p</i> = 0.000	0.229 (0.052) <i>p</i> = 0.000	0.076 (0.028) <i>p</i> = 0.008	0.032 (0.021) <i>p</i> = 0.118	0.447 (0.060) <i>p</i> = 0.000	0.204 (0.033) <i>p</i> = 0.000	0.085 (0.019) <i>p</i> = 0.000
Firm age	0.003 (0.004) <i>p</i> = 0.420	0.062 (0.010) <i>p</i> = 0.000	0.029 (0.006) <i>p</i> = 0.000	0.005 (0.003) <i>p</i> = 0.182	0.008 (0.003) <i>p</i> = 0.002	0.097 (0.008) <i>p</i> = 0.000	0.032 (0.004) <i>p</i> = 0.000	0.008 (0.002) <i>p</i> = 0.001
Former SOE	0.040 (0.058) <i>p</i> = 0.486	0.559 (0.160) <i>p</i> = 0.000	0.134 (0.097) <i>p</i> = 0.170	0.019 (0.053) <i>p</i> = 0.718	0.014 (0.036) <i>p</i> = 0.697	0.559 (0.110) <i>p</i> = 0.000	0.097 (0.062) <i>p</i> = 0.117	0.081 (0.035) <i>p</i> = 0.020
Metro location	0.080 (0.048) <i>p</i> = 0.097	0.316 (0.133) <i>p</i> = 0.018	-0.018 (0.081) <i>p</i> = 0.824	-0.059 (0.044) <i>p</i> = 0.184	0.034 (0.031) <i>p</i> = 0.285	-0.119 (0.090) <i>p</i> = 0.187	-0.041 (0.052) <i>p</i> = 0.433	-0.064 (0.029) <i>p</i> = 0.027
Reg dev level	-0.036 (0.009) <i>p</i> = 0.000	0.009 (0.026) <i>p</i> = 0.711	0.036 (0.016) <i>p</i> = 0.020	0.036 (0.009) <i>p</i> = 0.000	-0.001 (0.006) <i>p</i> = 0.916	0.025 (0.019) <i>p</i> = 0.184	0.040 (0.011) <i>p</i> = 0.000	0.029 (0.006) <i>p</i> = 0.000
Industry	Included	Included	Included	Included	Included	Included	Included	Included
Summary stats for each SEM	Total effect of returnee variable = 0.184 (0.054) <i>p</i> = 0.001				Total effect of returnee variable = 0.108 (0.039) <i>p</i> = 0.006			
	Total direct effect of returnee variable = 0.158 (0.054) <i>p</i> = 0.003				Total direct effect of returnee variable = 0.080 (0.039) <i>p</i> = 0.040			
	Total indirect effect of returnee variable = 0.026 (0.008) <i>p</i> = 0.002				Total indirect effect of returnee variable = 0.027 (0.007) <i>p</i> = 0.000			
	Total indirect effect through size = 0.006 (0.004) <i>p</i> = 0.228				Total indirect effect through firm size = 0.012 (0.005) <i>p</i> = 0.015			
	Total indirect effect through profitability = 0.012 (0.007) <i>p</i> = 0.083				Total indirect effect through profitability = 0.012 (0.005) <i>p</i> = 0.013			
	Total indirect effect through internationalization = 0.008 (0.006) <i>p</i> = 0.156				Total indirect effect through internationalization = 0.003 (0.004) <i>p</i> = 0.453			
	N = 1043 II = -14680				N = 966 II = -6652			

Notes: Path coefficients reported with standard errors in parentheses; results for industry dummies are available upon request.

## ENDNOTES

<sup>1</sup> In 2004, the top five destination countries that hosted the majority (62.6%) of the global mobile student population consisted of the OECD countries of the United States (23.3%), United Kingdom (12.2%), Germany (10.6%), France (12.2%), and Australia (6.8%) (UNESCO Institute for Statistics, 2006: 46-47).

<sup>2</sup> [http://paper.people.com.cn/rmrb/html/2017-04/12/nw.D110000renmrb\\_20170412\\_1-01.htm](http://paper.people.com.cn/rmrb/html/2017-04/12/nw.D110000renmrb_20170412_1-01.htm) retrieved on July 18, 2017.

<sup>3</sup> [http://www.fortunechina.com/magazine/c/2010-03/12/content\\_31905.htm](http://www.fortunechina.com/magazine/c/2010-03/12/content_31905.htm) retrieved on July 18, 2017.

<sup>4</sup> <http://www.people.com.cn/GB/jingji/42775/3164559.html> retrieved on August 10, 2017.

<sup>5</sup> As a robustness check, we re-ran our SEM analyses excluding respondents who did not hold the title of General Manager or CEO. In each survey year, we were able to replicate all of the statistically-significant direct and indirect paths pertaining to our hypotheses (results available on request).

<sup>6</sup> The China Guangcai Program is organized and promoted by the United Front Work Department of the Communist Party of China (CPC) Central Committee and the All-China Federation of Industry and Commerce. It aims to eliminate poverty in poverty-stricken areas mainly through investments by private enterprises (<http://www.cspgp.org.cn/publicfiles/business/htmlfiles/cspgp/english/index.html> accessed on Aug. 23, 2017).

<sup>7</sup> Unfortunately the datasets did not contain information on the host country(ies) of those with education/training abroad. We elaborate upon this issue in the discussion section.

<sup>8</sup> Luo et al. (2016) provide evidence of the effects of an organizational leader's age on CSR in China.

<sup>9</sup> Positive relationships between female business leaders and CSR have been reported by Luo et al. (2016) and Marquis and Lee (2013).

<sup>10</sup> Studies showing relationships between political connections and CSR in China include Luo et al. (2016), Marquis and Qian (2014), and Wang and Qian (2011).

<sup>11</sup> We controlled for an owner-manager's education level by the dichotomous indicator denoting possession of a college/university degree for the following reason. Because many returnees to China initially left specifically for post-secondary education, and because it is at this level that individuals arguably experience greater exposure to the notion of CSR, the inclusion of the college/university degree indicator allowed us to better isolate the specific effect of international experience from the general effect of post-secondary education. A sensitivity check with the estimated number of years spent in school as a replacement for the dummy variable replicated all of the statistically-significant direct and indirect paths pertinent to our hypotheses, with just two exceptions. In 2002, the significance level for the positive direct path from the returnee indicator to sustainability initiative scope is  $p=0.061$ ; in 2004, the significance level for the positive path from the returnee indicator to firm size (with CSR measured by sustainability initiative scope) is  $p=0.077$ . Full results are available on request.

<sup>12</sup> China-based evidence for the effects of firm age include Luo et al. (2016) and Maynard (2017), while evidence of industry effects can be found in Miska et al. (2016) and Zhang et al. (2016). Mixed evidence exists with respect to SOE status, with studies finding positive (Zheng et al., 2014), negative (Luo et al., 2016; Zhang et al., 2009), and no significant effects (Marquis & Qian, 2014; Zhang et al., 2016).

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<sup>13</sup> As another robustness check, we re-ran our SEM analysis without the control for metro location (because of its moderate correlation with regional development level). We were able to replicate all of the statistically-significant direct and indirect paths pertaining to our hypotheses in both survey years (results available on request).

<sup>14</sup> We considered profits as another alternative denominator for charitable donation intensity, but we felt that sales would be more appropriate given that profitability is one of our theorized mediating variables. The use of donations/sales also facilitates comparisons with the findings reported by Luo et al. (2016).

<sup>15</sup> Exploratory analyses of our pooled datasets revealed suggestive evidence of a non-linear relationship between the length of education/training abroad and CSR.

# **Differences in Employee Perceptions on Downward and Upward Communications**

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## **ABSTRACT**

This study aims to analyze differences in employee perceptions on downward and upward communications. Downward communication is the interpersonal communication from the management (leaders) to the employees, while upward communication is the interpersonal communication from the employees to the management. The variables analyzed were openness, empathy, and supportiveness. The sample of study was 159 mechanic workers at one of the biggest coal mining companies in South Kalimantan, Indonesia. The sign test showed differences in employee perception for the variables of openness and supportiveness between downward and upward communications. Respondents more positively perceived upward communication compared to downward communication. This indicates unsatisfactory feeling towards how the company communicates with the employees. The implication of this research is the need to improve the quality of communication between management and employees, to prevent high turnover due to employee dissatisfaction in regards to the way of communication is managed by the company.

**Key words:** Downward Communication, Upward Communication, Employment, Human Resource Management, Sign Test, Survey Method.

## **INTRODUCTION**

Communication is an important issue in human resource management as it affects employee performance and attitude towards the organization. Both managers and employees need clear information regarding their work conditions, organization policy, services offered to consumers and so on in order for them to perform well. Through good communication management, employees can also communicate their needs and provide feedback to the organization. The purpose of this study is to analyze employee perception on communication both from the management (leaders) to employees and communication from employees to management. Specifically, the purpose of this study was to measure the 3 variables of the "Interpersonal Communication Effectiveness" theory (DeVito, 2015), which are openness, empathy, and supportiveness.

## **Coal Mining Industry in Indonesia**

The importance of human resource communication management is also felt by coal companies in Indonesia, especially since coal prices often fluctuate and affect the profitability of the company. 2015 was the company's worst year for stock performance, allegedly related to the enactment of Indonesia's Mineral and Coal Act as of January 2015. One of its contents is to ban the export of raw minerals. The impact of this prohibition affected the stockpiling and cash shortage so that the company's operations stopped.

The global market significantly affects the mining industry in Indonesia. The fall of world crude oil prices over the past three years due to excess supply in the market has also affected the decline in coal prices as a substitution of fuel and other alternative energies. While China reduced its imports of coal, the US exported its excess production of oil to Asia, thus the Asian market had been filled with supplies from Indonesia and America.

Based on 2014 energy outlook data released by the National Energy Board of Indonesia, Indonesia has coal resources of 119.82 billion tons and coal reserves of 28.97 billion tons, with detailed measurable resources of 39.45 billion tons. This reserve is spread over several areas on the islands of Sumatra, Kalimantan, Sulawesi and Java. This reserve will last for up to 50 years if coal production is around 430 million tons per year.

Total national coal production in 2015 reached 393 million tons and this puts Indonesia as one of the world's top 10 coal producers. The total production was generated from six of the largest coal mining companies, PT Bumi Resources (Kaltim Prima Coal & Arutmin), PT Adaro Indonesia, PT Kideco Jaya Agung, PT Berau Coal, Banpu group (Indominco, Truba, Jorong) and PT Bukit Asam, while the remainder was generated from the owner of the Coal Mining Concession Working Agreement and the company with another Mining Business License (IUP).

Basically, the characteristics of the Indonesian mining industry can be viewed from three aspects, namely: opportunity, challenge and volatility (fluctuations). All three greatly influence the mining conditions of Indonesia, but in general the characteristics of the mining sector are:

- An industry with intensive capital and long duration of project. With the location of mining in different regions in Indonesia, it has big operational risk.
- Sensitive to business cycles.
- Revenues are driven by fluctuations in commodity prices and exchange rates.
- Costs related to exploration, licensing, mine construction, and rehabilitation.
- Operational costs include: maintenance costs, fuel costs, energy costs, and labor costs.
- Environmental issues include: noise pollution, acid mine water, changes in local water balance, waste avalanches, and disruption of animal life, thus it needs strict environmental regulations.

In recent years, many coal companies have collapsed, especially medium and small scale local mining companies. Many employees have been laid off. As a result, many employees were anxious about their employment status with various rumors regarding who would get laid off. This type of situation can cause employees to choose rumor (grapevine) as an alternative communication path. Unfortunately, rumors tend to spread quickly and are perceived more reliable than information from management (Stoner, 1996). The spread of rumors is difficult to control. If left unchecked, management will not be able to anticipate dissatisfaction within the

organization, which may impact operations through strikes, absences and turnover (Gómez-Mejía, 2001).

## **THEORETICAL BACKGROUND**

Every managerial function and activity always involves both direct and indirect communication. Effective communication greatly impacts the success of managerial and organizational roles. Research by Sharma et al (2015) shows a positive and significant relationship between employee satisfaction and organizational communication. The quality of organizational communication also plays an important role for informing organization changes to employees. This has been well known to management experts since the findings of the Fenn and Head (1965) classic research indicating that low communication skills can increase company costs, as it can cause inefficiency within an organization.

Communication in the organization is often conducted in one way only, from top to bottom. Coal mining companies prefer distributing brochures and booklets to employees rather than interpersonal communication. In addition, some managements tend to ignore feedback from their employees. With such one-way communication, employees receive a lot of information, but they might not feel involved and respected. This means that the expected behavior changes are not achieved due to employee dissatisfaction with the existing communication system.

According to DeVito (2015), to achieve satisfactory interaction between two parties, communication is determined by five factors, namely openness, empathy, supportiveness, positiveness and equality. There are two channels of communication within the organization. Stoner (1996) divides it into vertical communication and lateral communication. Werther and Davis (1996) and Gómez-Mejía (2001) assign vertical communication into two categories:

1. Downward communication is information that starts from a certain point in the organization and is passed down or distributed to employees according to the hierarchy in the organization to inform and influence the employees. This is often used by managers to control the flow of information. Top-down methods are often used in this information system to convey organizational decisions or policies. In addition, it is also useful to provide information to employees about the expected organizational conditions and support. Examples of these downward communication media are in the form of information booklets, employee bulletin boards, jobholder reports and meeting forums.

2. Upward communication is a communication performed by employees to management (leaders) to explain information, thoughts and feelings. Media to convey this upward communication is through a meeting forum between employees and management (leaders). In addition, an informal meeting can also be a communication channel. Other management (leaders) - employee communication channels can be in the form of group-supervisor meetings, periodic top management meetings, "speak up" programs where employees are given a telephone number for calling or filing a complaint, anonymous grievance contacts, employee meetings with shareholders each year, or even through complaint procedures, questionnaires, interviews, open policies, labor unions, the grapevine, ombudsmen/ombudswomen and employee awareness programs.

There are two forms of information channels, formal and informal. Robbins et al (2013) state that informal communication has the potential to become a grapevine channel or rumor. Characteristics of grapevine are; (1) can not be controlled by management, (2) tend to be perceived by employees as real and reliable information as opposed to formal information submitted directly by management, and (3) often used as a "weapon" by certain parties (Robbins, 2013). Ironically, rumors at work are perceived to be 75% to 95% accurate and considered to be better information than formally obtained information (Wether & Davis, 1996). In addition, the rumors often spread much faster than formal communication channels (Stoner, 1996).

Effective communication within organizations is influenced by several factors (Robbins, 2013), among others; (a) management commitment to the importance of communication, (b) consistency between what managers' words and actions, (c) commitment to two-way, downward and upward communications, (d) more emphasis on face-to-face meetings as it proves to be more effective, (e) not worried to deliver bad news, (f) viewing communication as a running process, such as providing clear and rational information about the company's condition, providing the whole set of information or not piecemeal as soon as possible, communicating regularly, translating organizational policies into working practices, and not dictating to employees.

Open and effective communication can be considered as a strategy for an organization to grow. This study will limit the analysis on interpersonal communication by comparing whether there are differences in employee perception between downward communication and upward communication. The variables measured were openness, empathy and supportiveness from management to employees (downward communication) and from employees to management (upward communication). The reason for the selection of three out of five variables of DeVito's effective communication model (2015) is because in some literature, the positiveness of employees tend to be ignored by management (leaders). This is manifested in the form of reluctancy of management (leaders) to provide feedbacks to their employees. On the other hand, employees who are contractually bound to the company, inevitably have to give a positive attitude toward their superior. In many cases there is an imbalance of communication relationships for variable positiveness. The other variable, 'equality', is not examined in this study for the reason that this variable requires measurement of both parties, management (leaders) and employees, simultaneously. In this study, the selected respondents only came from a group of employees. This study does not include management (leaders) as respondents. Thus, this study only represents a single point of view from the perspectives of employees (mechanical workers of coal mining company).

## **RESEARCH METHOD**

To analyze the perception differences of employees on downward and upward communication in terms of openness, empathy and supportiveness, this research used sign test statistical analysis technique. The name 'sign test' shows the data to be analyzed are manifested in the form of positive and negative signs. Positive and negative signs will be known based on the difference in value between one sample and another. The sign test is used to test the comparative hypothesis of two correlated ordinal data samples.

The sample is considered to be correlated because the first sample members are also the second sample members. In this case, the two samples used the same respondents, i.e. the mechanics in a coal mining company in South Kalimantan. There were 159 respondents - all males aged between 22 and 40. Research sampling was done incidentally when the mechanics had performance evaluation session handled by some psychologists in Banjarmasin city. The company agreed to evaluate the communication perceptions of their mechanical employees on condition that the company name would not be exposed.

Because the sampling is incidental (nonrandom sample), then the statistic used is non parametric and as the sample amounted to more than 25 people, this study used chi square method. Its mathematical formula is as follows:

$$x^2 = \frac{[(n1 - n2) - 1]^2}{n1 + n2}$$

Where n1 = amount of positive sign data, and n2 = amount of negative sign data.

Furthermore, chi-square calculation result is compared to a critical value based on chi-square table with df = 1 and sampling error of 5% (0.05). If the calculated chi-square is smaller than the critical value as indicated in its table, then the hypothesis is rejected. In other words, there is no difference of perception of respondents regarding variables of openness, empathy and supportiveness in downward and upward communication.

### Research Instrument and Data Collection Technique

Communication variables of openness, empathy and supportiveness were represented by 30 statements in the questionnaire. Each statement was given a range of 1-5 based on the Likert scale showing the smallest score (1) as the most negative answer and the largest score (5) as the most positive answer. There were five alternative answers for each statement, Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). Table 1 shows some examples of the statements.

Table 1 Examples of Questionnaire's statements

Variable	Operational Definition	Statement	Measure
Openess	Management (leaders) to employees (or vice versa) can convey information openly, honestly and both are willing to have dialogues if necessary.	a. In the meeting, management (leaders) and employees can communicate openly about company's condition.	Reciprocal relationship
		b. Management (leaders) does not hide the truth in conveying information about the condition of the company.	D-ward comm
		c. Management (leaders) is willing to discuss the published information.	D-ward comm

		d. Between management (leaders) and employees, dialogue may occur about cases related to information provided. e. If requested, employees will not hide the truth about the condition in the field to their management (leaders).	Reciprocal relationship  Up-ward comm
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## RESULTS AND DISCUSSION

To test the validity of each statement in the questionnaire, this study used Pearson Product Moment calculations. The coefficient correlation of statements ranged from the lowest score of 0.500 to the highest score of 0.922. Thus all statements were valid. As for reliability test, the score was 0.977 (reliable).

Employees were first asked to evaluate the overall effectiveness of existing communication methods. Table 2 shows these results within the company by respondents. The majority of participants (74.8%) indicated that the current communication method is effective (39.6% respondents stating "agree" and 35.2% of respondents stated "strongly agree"). This means that most respondents positively perceived communication at the company where they work. Although the total scores which showed disagreement of communication way within company indicate smaller percentage (1.9%), it does not mean that the company is not at risk situation of lower productivity due to dissatisfaction of work circumstances. There were about 23.9% of respondents who were not able to decide the approval of the existing communication conditions. Based on these two indicator scores (strongly disagree and disagree), there are still indications of dissatisfaction with the existing communication conditions. Thus, it is necessary to improve communication practices in terms of openness, empathy, and supportiveness. Or, at least existing conditions should be maintained.

Table 2 Results of employees relationship management analysis (vertical communication):

*Survey Statement: "The current communication methods used by management is effective."*

Interpretation	Frequency	Percentage (%)
Strongly disagree	0/159	0.0
Disagree	2/159	1.3
Neutral	39/159	23.9
Agree	62/159	39.6
Strongly agree	56/159	35.2

In examining the perception differences about openness, empathy and supportiveness between downward and upward communications, the summary results are shown in Table 3, Table 4 and Table 5 accordingly.

Table 3 The perception difference on openness

Perception	N	+	-
Openness	159	72	45

$$\text{Chi-square} = \frac{[(72 - 45) - 1]^2}{72 + 45} = \frac{676}{117} = 5.778$$

$$5.778 > 3.481$$

The calculated *chi-square* value of 5,778 is *higher than* the critical *chi-square* value of 3.481, thus there is a significant difference in the perception of openness between downward and upward communications.

Table 4 The perception difference on empathy

Perception	N	+	-
Empathy	159	53	43

$$\text{Chi square} = \frac{[(53 - 43) - 1]^2}{53 + 43} = \frac{81}{96} = 0.844$$

$$0.844 < 3.481$$

The calculated *chi-square* value of 0.844 is *less than* the critical *chi-square* value of 3.481, thus there is no significant difference in the perception of empathy between downward and upward communications.

Table 5 The perception difference on supportiveness

Perception	N	+	-
Supportiveness	159	80	52

$$\text{Chi-square} = \frac{[(80 - 52) - 1]^2}{80 + 52} = \frac{729}{132} = 5.523$$

$$5.778 > 3.481$$

The calculated *chi-square* value of 5,778 is *higher than* the critical *chi-square* value of 3.481, thus there is a significant difference in the perception of supportiveness between downward and upward communications.

Based on the analysis, it was found that for the variables openness and supportiveness there are significant differences in employees' perception between downward and upward communications. In addition, when viewed from the comparison of the number of positive and negative signs, there are more positive signs of three variables (openness, empathy and supportiveness), meaning communication from employees to leaders (upward communication) was perceived better than from leaders to employees (downward communication). Although the analysis results of the variable empathy did not show differences in perception, yet overall it can be concluded that the management still lacks openness, empathy and supportiveness when communicating to its employees. It may be because: (1) employees are not viewed as an asset, so management gives less attention to information provided by its employees, hindering management from resolving issues; (2) Management does not fully trust its employees, therefore

not all detailed information is communicated to employees; in addition there is some management concern if information is too open to employees, the information may leak into the hands of competitors; and (3) Employees are deemed incompetent to understand the information being discussed by management, dissuading management to provide information to employees.

Pfeffer (1994) stated that sometimes there are departments (managers) who do not want to be open when they are reluctantly providing information requested by employees. This can cause employees to choose an alternative path such as rumors (grapevines). According to Stoner et al. (1994), rumors tend to spread quickly and are perceived more reliable than formal information from management. Worse yet, rumors are usually difficult to control. If left unchecked, Gómez-Mejía (2001) foresees that management will not be able to anticipate employees' dissatisfaction, which could impact operations through strikes, absences and turnover.

Another risk that may arise from these hard-to-control rumors is the distortion of information or distorted information from the reality. This arises because of office politics or the concerns of a particular person regarding information that could harm them. Distortion of information can have an impact on errors of work procedures, misinformation and the emergence of various other issues concerning the quantity and quality of information.

## **CONCLUSION**

Based on the initial assumption that if the relationship between management (leaders) and employees is good, then it will create a pleasant working atmosphere, and will influence job satisfaction. Results of the test analysis showed there are differences in employees' perception regarding openness and supportiveness in downward and upward communications. This means that there is an imbalance of information flow perceived by respondents.

The results of this study showed that employees had a more positive perception towards upward communication compared to downward communication, based on a higher score from DeVito's variables of Interpersonal Communication Effectiveness. Employees expect vertical communication to be harmonious. The imbalance of communication flow could have an impact on the emergence of actions that will affect job dissatisfaction with some behavior indications such as the incidence of grievances, rumors (grapevines), high absenteeism, strikes and so forth.

## **RECOMMENDATION**

To reduce communication gaps between the management (leaders) and employees, management should provide several medias for employees to express their concerns and input. There are two main media types: counseling bodies and anonymous surveys.

Through the human resource department (HR), management can accommodate the employee complaints, both related to their work and personal issue. This institution is expected to monitor grievances and rumors (grapevines) that may spread within the company. Similarly, the anonymous surveys such as grievance box or hotline provisions can improve the response rate and honesty of employee concerns.

Additionally, regular management training should be conducted to educate company leaders about the different methods of communication (such as downward and upward communication) along with evaluations on how each method is perceived by employees. Through knowledge of

these communication methods, management can dynamically shift between methods in order to suit the personal preference of each employees. Hence, the communication quality within companies can be improved as employees are given various medias to express concerns while management training ensures that every concern is acknowledged.

## REFERENCES

- DeVito, J. A. 2015. The interpersonal communication book 13<sup>th</sup> ed. New Jersey: Pearson Education, Inc.
- Fenn, M. & Head, G. 1965. Upward communication: The subordinate's viewpoint. *California Management Review*. 7(4): 75-80.
- Gómez-Mejía, L. R., et al. 2001. Managing human resources. New Jersey: Pentice-Hall.
- Pfeffer, J. 1994. Competitive advantage through people: Unleashing the power of the workforce. Boston, Massachusetts: Harvard Business School Press.
- Robbins, S. P. et al. 2013. Organisational behaviour 7<sup>th</sup> edition. NSW: Pearson Australia.
- Sharma, P. et al. 2015. Organizational communication: Perceptions of staff members' level of communication satisfaction and job satisfaction. *Journal of Academic Administration in Higher Education*, 11(1): 43-54.
- Stoner, J. A. F. et.al. 1996. Manajemen jilid II (translated by Alexander Sindoro). Jakarta: PT Prenhallindo.
- Werther Jr., W. B. & Davis, K. 1996. Human resources and personnel management 5<sup>th</sup> ed. Singapore: McGraw-Hill Inc.

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## Involvement and Movie-Induced Travel by Saudis

“Using the Involvement Construct to Understand the Impact of Movies and TV Shows on the Activities  
and Behaviors of Saudi Tourists”

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Using the Involvement Construct to Understand the Impact of Movies and TV Shows on the Activities  
and Behaviors of Saudi Tourists

**ABSTRACT**

Outbound travel from Saudi Arabia to many international destinations has experienced unprecedented growth in recent years. The tourism literature has documented the role of movies and TV shows in inducing travel. Increasing affluence in Saudi Arabia has also resulted in greater exposure of Saudis to international influences, including foreign movies and TV shows. In spite of this, however, no studies have explicitly considered the power of films and television dramas to influence international travel behavior among Saudi consumers. The purpose of this study was to examine the impact of movies and TV shows on Saudi consumers' choice of international travel destinations and tourism activities. By using the involvement construct as a framework, an online survey instrument was developed and a total of 149 usable responses were collected. The findings of this study suggested that most Saudi consumers were both highly engaged with movies and TV shows and highly involved with international travel. Highly involved consumers were more likely to engage in film/TV-induced tourism activities than their less-involved counterparts. Scenes shown in movies and TV had the greatest impact on Saudi consumers' involvement with international travel. For filming locations around the world, plentiful are the opportunities for product placement and destination marketing that target this rapidly growing, increasingly affluent market segment.

**Keywords:** Saudi Arabian Tourists, Movie/TV -induced tourism, involvement with international travel, tourist behavior, tourist consumption activity, engagement with movies/TV

## Involvement and Movie-Induced Travel by Saudis

### Using the Involvement Construct to Understand the Impact of Movies and TV Shows on the Activities and Behaviors of Saudi Tourists

#### INTRODUCTION

The amazing innovation of motion pictures has had a significant effect on many different aspects of life. In 1895, the perspective of entertainment changed forever when the Lumiere brothers presented the world's first public film screening in Paris (Bolan et al., 2011). The effect of movies and television in general has become noticeable across the globe. The movie and TV industry has become an essential contributor to countries' gross domestic product (GDP); Many governments worldwide believe that the tourism industry will continue to grow as long as locations within countries are featured in movies (Mitchell & Stewart, 2012). The cinema spectators go through a virtual travel experience as they explore locations from all over the globe (Corbin, 2014). The power of films is recognized internationally for how they affect viewers and influence them to seek more information about the locations featured on the screen (Mitchell & Stewart, 2012).

Even though past studies have documented increases in tourism to locations featured in films or on TV, this influence remains questionable when it comes to countries within specific regions in the world where cultures have the biggest influence (Mitchell & Stewart, 2012). In Saudi Arabia, tourism has a very important role in developing the economy and the quality of life across the kingdom (Khizindar, 2012). The social and cultural aspect of Saudi Arabia can be identified in terms of segregation of men and women along with limitations of leisure time with regards to religious duties like prayers, dress code in public, and consumption of alcohol (Khizindar, 2012). Despite these cultural and religious restrictions, Saudi Arabia remains in a strategic geographical position that makes its tourism market unique and special. With its vast natural resources, attractive archaeological sites, scenic deserts, valleys, parks, and

## Involvement and Movie-Induced Travel by Saudis

beaches, Saudi Arabia has managed to maintain a stable economic system that helped develop the tourism market and enhance the opportunities for investors from outside the country (Khizindar, 2012).

Saudi Arabia is set to see an increase in tourist arrivals between 2015 and 2019, as tourism becomes more important to the government (Business Monitor International Ltd, 2015). Reports indicate that the tourism industry in Saudi Arabia is expected to generate more than 400,000 additional jobs by further developing the tourism business, which will increase the level of employment in the country (Business Monitor International Ltd, 2015). Outbound departures are also set to rise as Saudi people look to travel abroad. Recent reports predicted a total increase of 28.1% between 2015 and 2019, with the main motivations being vacations and business trips (Business Monitor International Ltd, 2015).

Saudis are travelling abroad more for many different reasons, and despite the fact that Saudi Arabia has remarkable nature resources and holds a very important position in the region, the tourism industry is yet to be complete in terms of additional services to be provided to tourists. The lack of movie theaters in the kingdom is considered one of the major controversial issues as a main topic of social demands and discussions. Movie theaters are prohibited, and they are only located within private company compounds, such as theaters at Saudi Aramco residential camps (Nayef, 2012). Usually the reason given for banning movie theaters is that they allow men and women to mingle unsupervised, leading to possible immoral actions outside the realm of marriage. For this reason, many Saudis visit some of the Arab gulf countries, such as Bahrain and Emirates, on the weekends to see movies and drink, since alcohol is prohibited in Saudi Arabia (Nayef, 2012).

Past studies have shown that movies and TV have been a reason for the increases in international travelling activities. The locations that are featured in movies are often a strong motivator to travel abroad and visit the sites where those movies were shot (Mitchell & Stewart, 2012). With the major influence of the movie business in the world today, it is expected that the film industry will continue to influence the travelling choices for tourists around the globe; moreover, it is expected that the film business will continue to motivate tourists to seek more information about foreign locations featured in movies (Corbin, 2014).

## Involvement and Movie-Induced Travel by Saudis

As it is shown that movies have an impact on tourism and travel, this paper focuses on the relationship between movies, TV, and tourism. There are no studies in the literature that address the influence of movies and TV on outbound international travel by Saudis. This research is important for Saudi travel agents because it investigates the relationship between the movie industry and the tourism industry, with an emphasis on how the former affects Saudi travelers and tourists' choice of international destinations. Therefore, the purpose of this study is to fill the gap in the literature by using the involvement construct as a framework to examine the influence of movies and TV shows on Saudi people and assess whether those means of entertainment affect the travel activities of tourists. This study adopts Josiam, B., Kinley, T., & Youn-Kyung, K. (2005) study on the role of involvement in shopping and Josiam, B., Spears, D., Dutta, K., Pookulangara, S., & Kinley, T. (2013) study on the role of involvement in influencing movie-induced tourism by outbound Indian tourists, in order to determine which factors influence Saudi tourists' travel activities the most.

### **OBJECTIVES**

The objectives of this paper are:

1. To determine the demographic profile of Saudis who watch movies and TV shows.
2. To determine the level of involvement that Saudis have with foreign travel.
3. To determine the level of engagement and eagerness that Saudis have with movies and TV shows in terms of involvement.
4. To examine the relationship between involvement with foreign travel and film and television viewing.
5. To determine the propensity among Saudis to participate in activities at destinations shown in movies and TV programs.
6. To determine the motivations among Saudis to visit destinations shown in movies and TV programs.

## LITERATURE REVIEW

### Film-Induced Tourism

The film industry has been linked to tourism attraction in terms of featuring landscapes and specific historical locations within countries. Not only does the film industry encourage traveling activity, but it also is significantly associated with international traveling rates. As a matter of fact, successful films have a significant relationship with tourism according to recent studies (Mitchell & Stewart, 2012). Film-induced tourism has been the center of attention of many studies that investigate the relationship between films and tourism. The term “film-induced tourism” essentially means travelling to or visiting tourist destinations and attractions that have been featured in a film or TV program (Hudson et al., 2011). Even though film-induced tourism has been a real element of the tourism industry since 1970s, as some studies have claimed, it is actually a new concept that has not been studied enough by experts (Josiam et al., 2014).

In spite of the growing awareness that films have a relationship with tourism and destination marketing, this idea is under-studied (Hudson et al., 2011). The truth is that films have a long-term impact on both social and economic levels (Mitchell & Stewart, 2012). Research on film-induced tourism has been around since early 1990s (Hudson et al., 2011). Film-induced tourism has the capability of depicting locations as attractive destinations; moreover, it affects travelers’ plans (Rajaguru, 2014). Researchers found that the impact of films has reached many countries in recent years. In a study about the impact of films in the UK, researchers investigated the influence of films on Britons’ choices of travel destinations and found that 8 out of 10 Britons get their holiday travel destination ideas from films (Hudson, S., Youcheng, W., & Gil, S. M. (2011). Another study indicated that films are more practical and effective as a tool of destination marketing and that this tool delivers travel ideas faster than traditional tourist-destination marketing tools (Rajaguru, 2014). Therefore, a simple feature of a destination in a movie or TV show is enough to influence travel plans for tourists.

Film-induced tourism has not only been an influencing factor in determining tourism destinations, but it also has been an essential attributing element to the global economy. In fact, studies have explored

## Involvement and Movie-Induced Travel by Saudis

the impact of Hollywood and Bollywood movies and TV programs on the national economy for countries where tourism destinations are featured constantly. Spears et al. (2012) conducted a study about the impact of Hollywood productions on viewers in terms of traveling and choosing a destination. Hollywood movies and TV programs have become a source for travel information that helps spread destination awareness globally (Spears et al., 2012). The study focuses on the impact of Hollywood movies and TV on tourism activities and behaviors. The findings indicated that Hollywood movies and TV have been a source for information for most of the viewers, as they have a positive impact on tourism-related activities (Spears, D.L., Josiam, B., Kinley, T., & Pookulangara, S. (2012). Thus, Hollywood has become more of a global travel agency that provides images and information for movies and TV viewers around the world, motivating them and influencing their destination choices in traveling.

The large Bombay based Indian film industry - Bollywood, has also been a subject of research on movie-induced travel. Josiam et al. (2013) focused on the impact of Bollywood on activities and behaviors of outbound Indian tourists. Josiam et al. (2013) examined in their research the impact of Bollywood productions on Indians, as well as whether Bollywood films and TV programs affect destination choices for Indian tourists and their travel activities. The study indicated that there is a strong level of engagement between Indian viewers and Bollywood films and TV programs. Moreover, the study's findings have shown that Indians highly involved with foreign travel are more likely to seek inspiration from Bollywood movies and participate in activities at tourism destinations featured in Bollywood movies and TV programs (Josiam et al., 2013). Therefore, the power of film production and TV programs has exceeded the typical expectation of how much a simple destination feature in a movie or a TV show can influence where someone decides to travel and what they decide to do there. Bollywood is major source of motion pictures, and it is clear that using it as a travel motivation for international travelers in India is becoming a useful tool for travel agency and destination marketers.

### **Films as Travel Motivation**

Movies and TV shows inspire and motivate viewers to seek out destinations they have seen in movies or TV programs. Governments believe in the power of films and how locations within countries featured in movies will help increase tourism (Mitchell & Stewart, 2012). Hudson and Ritchie (2006) examined in their study the possible benefits of utilizing films in order to attract more tourists and increase the economic impact of tourism at the destination. They indicated three benefits: effective destination images, positive impact on the economy, and higher numbers of tourists. There are many motivations that influence travels around the globe; however, film industry stands as an effective motivator since depicting locations in films can change the travel plans for potential travelers (Rajaguru, 2014). Films can enhance destination awareness; in fact, they create place familiarity and improve destination image by turning some places into tourist spot because they were featured in a film (Rittichainuwat & Rattanaphinanchai, 2015). When tourists decide to travel, films serve as a source of information, suggesting what kinds of activities can be done at the destination (Hudson et al., 2011).

Studies have shown that films connect people emotionally. An emotional attachment can persuade travelers to visit locations where famous movies were shot and allow travelers to re-live scenes from their favorite movies (Rittichainuwat & Rattanaphinanchai, 2015). Considering the motivation of films, government incentives can persuade moviemakers to shoot their new films inside the country, and thus the directors help increase travel motivation among movie viewers around the world who want to come and visit this particular country (Mitchell & Stewart, 2012). When the movie *The Hobbit* was in preproduction, Warner Brothers pressured the New Zealand government to address some changes regarding its employment act and to provide a package of \$25 million worth of tax breaks to bring the production to the country (Mitchell & Stewart, 2012). *The Lord of the Rings* films were a huge shift in the tourism dynamic in New Zealand when they showcased the beauty of New Zealand's natural landscapes, which enticed the film's viewers and motivated them to visit the country (Rittichainuwat & Rattanaphinanchai, 2015). Therefore, the power of the film's motivation can change travel plans and motivate tourists to visit the country where films were shot.

### **Foreign Travel and Involvement**

Foreign travel involvement is associated with many aspects that motivate travelers to visit specific destinations internationally. Past studies have shown that travelers who were motivated to travel by films were especially influenced by scenery, landscapes, and cultural attractions of places featured in films (Hudson et al., 2011). The involvement construct was originally developed by Zaichowsky (1985), and it has been used in several studies related to tourism (Josiam et al., 2005). This scale is the same scale adapted and used by Clements and Josiam (1995). The involvement concept can be defined as an emotional state controlled and influenced by certain motivations that determine the relationship between a particular consumer and a purchasing decision (Brennan & Mavondo, 2000). Previous studies have shown that involvement plays a key factor in terms of influencing consumers at their tourist destination. Kim (2012) has examined how TV audience involvement impacts the viewers' on-site film tourism experience at locations used during the stage of production. Kim and Wang (2012) have also investigated the audience involvement with Korean TV drama and how it affects the tourism behaviors for viewers from China, Japan, Thailand, and Taiwan.

Involvement with travel has been a subject of interest in past studies for its influential role in consumers' traveling decisions and tourism activities. Past research has indicated several motivations for travel involvement, including leisure purposes and the activity of travel itself (Josiam et al., 2013). The film industry has made a huge difference in increasing involvement with travel because, as previously mentioned, movies often feature tourism destinations. The images of destinations that are shown in films motivate travelers as they increase their level of involvement with travelling and exploring certain sites (Kim & Richardson, 2003). As a consequence, the involvement with international travel was affected for the reasons mentioned earlier. Many studies, Josiam et al. (2013) ; Spears et al. (2012), have examined involvement with international travelling and the motivations that led to increasing levels of such travel to destinations shown in films as they related to the tourism destination choices and activities at the destinations whether it be for Indian travelers influenced by Bollywood movies or western travelers by Hollywood films.

## Involvement and Movie-Induced Travel by Saudis

### **Saudi Tourism and Involvement**

As the tourism industry keeps growing and becoming an essential contributor to the global economy, Saudi Arabia is slightly lifting the veil on foreign tourism. It is no surprise that the government is taking this step toward accepting international tourists, especially since Saudi Arabia is home to Islam's holiest city, Mecca. The tourism industry in the kingdom is becoming more of a contributor to the GDP, according to recent reports. Saudi Arabia is eager to expand the tourism industry by targeting nearly 45.3 million tourists by the year 2020 (Business Monitor International Ltd, 2016). Despite having religious pilgrimages as a cornerstone of the inbound tourism in the kingdom, it is still obvious that the Saudi economy relies on oil, which represents 52.6% of its GDP (Khizindar, 2012). However, recent reports show the new plan of the Saudi government to decrease dependence on oil and increase development in the tourism industry as a new key factor in the economy. Travel and tourism's direct contributions to the Saudi GDP amounted to SAR 59.6 billion in the year 2015, which is 2.5% of the total GDP (World Travel & Tourism Council, 2016). The job opportunities in tourism and tourism-related sectors are anticipated to reach 1.7 million by 2020, according to the latest report by the Saudi Commission for Tourism & National Heritage (Business Monitor International Ltd, 2016). Outbound travel has been increasing too as a consequence of the expansion of the travel and tourism industry. The Saudi travelers are ranked among the highest-spending travelers, spending more than \$14 billion overseas annually. Studies anticipate that Saudi outbound tourism will increase significantly over the next five years to reach 14.8 million travelers in 2020 (Business Monitor International Ltd, 2016). The Saudi government is keen to keep more Saudi spending inside the country by increasing development in the travel and tourism sector domestically.

### **Interest in Movies Made by Saudis**

The Saudi people are no ordinary supporters when it comes to cinematic entertainment. Despite the fact that Saudi Arabia has no public movie theaters, Saudis have managed throughout the years to keep up with the latest film productions because they enjoyed watching them in private theaters or at their private houses. The non-public film culture did not prevent Saudis from watching movies and getting

## Involvement and Movie-Induced Travel by Saudis

involved in the cinematic development (Ciecko, 2011). Since the only way to experience a movie is through TV cables, DVD, and the Internet, Saudis have overcome that obstacle by traveling to the nearest public theater in countries next to Saudi Arabia, such as Bahrain and Emirates. The public screening ban did not prevent some young and ambitious Saudis from starting their own directing careers. The year 2006 witnessed the first Saudi feature film *Keif Al Hal* "How's It Going?" (Ciecko, 2011). Abdullah Al-Eyaf, a Saudi filmmaker, has cited the theater ban in Saudi Arabia as a motivator for all filmmakers to become creative and make the best out of the given circumstances (Al-Eyaf, 2008). In his movie *Cinema 500 km*, Abdullah represents the current struggle of Saudi film lovers and how they travel to the nearest cinema theater in the Bahrain or Emirates on weekends just to experience the big screen. It is clear that the public ban of movies has not stopped the growing interest in cinema by Saudis. One would be surprised at the ability of the Saudis to discuss movies and TV shows as despite a ban on theaters, Saudi viewers as they have a long history following the latest productions of the cinematic world.

### **Globalization of Saudis**

In years past, the globalization of the Saudis was not as big as it is today for cultural and religious reasons; however, the constant increase in outbound traveling by Saudi people and the current economic situation are making a significant difference in terms of globalizing Saudi Arabia. The kingdom is considered to be one of the largest producers of oil, making the domestic economy stable and in very good condition. This allowed many Saudis to have better incomes and to travel and explore more. Reports indicated that nearly 10 million Saudi residents are traveling every year and that 49.7% of them travel for leisure purposes, 20.9% travel for business trips, 21.5% travel to visit family and friends, and 7.9% travel for other reasons including educational and medical ones (Mumuni & Mansour, 2014). Travel is not the only factor that pushes the Saudi globalization wheel; in fact, the government in 2009 adopted a Saudi employment strategy that would help reduce foreign workers in the country (Kono, 2013). Moreover, the Saudi government has increased development in the educational sector by encouraging studying abroad when it started the King Abdullah Scholarship Program (KASP) in 2005. This program was not only a

## Involvement and Movie-Induced Travel by Saudis

major step into globalization, but also it was one of the most effective cultural steps the government has taken.

### **PURPOSE OF THE STUDY**

Since previous literature has shown that travelers motivated by movies were actually influenced by scenery attractions featured in movies, it is important to understand how movies and TV programs influence people and make changes to their traveling plans. However, there are no studies that address this topic in Saudi Arabia. Therefore, the purpose here is to examine the engagement of Saudis with movies and TV shows, their involvement with international travel and how these issues impact outbound travel and tourist consumer behaviors by Saudis.

### **METHODOLOGY**

#### **Instrument**

In this study, the design of the survey instrument and the constructs and questions used were based on Josiam et al. (2005) and Josiam et al.'s (2013) studies, as these studies illustrated the reliability and validity of the scales utilized. The original studies measured items in English; however, in order to help Saudis to clearly understand the concepts, the entire survey was translated to Arabic. This study used an online questionnaire because it was helpful to reach participants in Saudi Arabia. After the questionnaire was translated to Arabic, and re-checked utilizing reverse translation, it was distributed via the Internet to participants on the social media website Twitter. Moreover, it was sent via email to Saudi participants inside and outside Saudi Arabia. The population of this study consisted of Saudis 18 years old and older. A total of 149 surveys were answered in this study. The study's questionnaire included sections about movie-viewing preferences, TV-viewing preferences, levels of engagement with watching movies and TV programs per week, sources for travel ideas, travel choices inspired by movie or TV program, travel activities influenced by movie or TV program, perceptions of attractions and activities at destinations, and levels of involvement with foreign travel/tourism. A section with questions regarding personal demographics was used at the end of the survey and will be used to determine the general characteristics of the sample. The following sections of the instrument were measured using the Likert

## Involvement and Movie-Induced Travel by Saudis

scale: movie and TV viewing preferences, sources for travel ideas, travel activities influenced by movie or TV, and levels of involvement with foreign travel/tourism. The five-point Likert scale was from 1 (“strongly disagree”) to 5 (“strongly agree”). Levels of engagement with watching movies and TV programs per week were measured by 12 items from (“0 hours”) to (“more than 10 hours”). The involvement scale consisted of 10 items. Descriptive statistics were used in the analysis of the survey results.

### FINDINGS

#### **Objective 1: To determine the demographic profile of Saudis who watch movies and TV shows.**

The study returned 149 usable surveys. Demographics of the sample are presented in Table 1. The age of participants ranged between 18 to above 40, with 30.9 %—the largest segment of the respondents—between the ages of 18 to 25. Females were the majority with a percentage of 57% to 43% males. More than two-thirds of the sample (66.7%) comprised full-time workers, and the rest of the participants were unemployed students and non-students. Most of the participants had earned at least a bachelor’s degree, earning between 5,000 and 15,000 Saudi Riyal monthly (1,300 to 4,000 US\$). More than half of the sample reported being married; furthermore, only 19% of them lived and studied outside of Saudi Arabia at the time of the study as the majority of participants were living inside Saudi Arabia. Finally, it is note-worthy that almost all of the participants have actually traveled outside of Saudi Arabia to a different continent. The sample, while not representative of the Saudi population, is clearly representative of middle and upper income educated Saudis who have the means and ability to travel abroad and have indeed done so.

<b>Table 1 goes about here</b>
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#### **Objective 2: To determine the level of involvement that Saudis have with foreign travel.**

Respondents were asked to answer and complete a 10-item involvement scale that was originally developed by Zaichowsky (1985). The same scale has been used in several studies in tourism;

## Involvement and Movie-Induced Travel by Saudis

specifically, it was adapted and used by Clements and Josiam (1995). Additionally, Josiam et al. (2005) utilized the original scale by Zaichowsky and adapted it to their study of tourist shoppers and involvement in the United States. In this study, the involvement scale adapted by Josiam et al. (2005) was used. The Involvement Scale was found to have a Cronbach's alpha of .975, indicating a strong reliability and signaling that can be used in future studies (Table 2). The mean involvement score was found to be 3.94 (SD = 1.017) on a 5.0 scale. Moreover, the median score was found to be 4.00, indicating a relatively normal distribution, as it is very close to the mean. At the outset, as in earlier studies, the range of the involvement scores were subdivided into three categories, which are Low, Medium, and High; however, it was found that the majority of the respondents were highly involved, and as a result, few participants were found to be in the Medium-Involvement category. In addition, almost no participants were reported as being in the Low-Involvement category. Therefore, the range of the involvement scores were re-categorized into two categories of Medium (1.0 – 3.0) and High (3.01 – 5.0). The sample distribution among the involvement categories is illustrated in Table 2. It shows that the overwhelming majority (82.4% ) of the sample is categorized as highly involved with foreign travel, and only 17.6% of the respondents were reported to be less involved with foreign travel (Table 2). Since Saudis are ranked among the highest-spending tourists in the world (Business Monitor International Ltd, 2016), the results in Table 2 support the expected growth in Saudi outbound travel.

<b>Table 2 goes about here</b>
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Using a crosstabs analysis with Chi-square, Involvement segments were compared in terms of demographics (Table 3). Significant differences were only found in the category of occupation as the full-time employed respondents were the majority of the category. The highly involved respondents are mostly full-time employed individuals and unemployed students as most of them have at least a

## Involvement and Movie-Induced Travel by Saudis

bachelor's degree. This indicates that full-time employed Saudis, are more likely to be paid higher salaries and thus are more likely to be able to afford international travel. Moreover, the unemployed students are more likely to fulfill their travel wishes by spending the disposable income they receive from their families and the Saudi government, since they live with their families and do not have to pay rent.

No significant differences were found in other categories, including gender, marital status, income, level of education, age, and Saudis who live in/out of Saudi Arabia. These findings indicate that nearly all of the respondents are capable of international travel because they have the financial resources and the interest to do so. Furthermore, in the category of age, most of the highly involved individuals are the ones between the ages 18–25, 26–30, and 31–36. It is common in Saudi Arabia to have more children at the age of 37 and above, which explains the reason people older than 37 are likely to be less involved with the travel activity. The income category also includes highly involved individuals, and those are reported as the ones who earn between 15,001 and 25,000 SAR monthly.

<b>Table 3 goes about here</b>
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### **Objective 3: To determine the level of engagement and eagerness that Saudis have with movies and TV shows in terms of travel involvement.**

Participants of the study were asked to answer seven questions that are related to their movie engagement. They were asked to rate their answers on each of the questions on a 5-point scale from strongly disagree (1) to strongly agree (5). The descriptive analysis (Table 4) shows that 37.8% of Saudis agree or strongly agree with the statement “I seek information/gossip about new movies before release,” while 37.1% of the respondents said that they disagree or strongly disagree. Regarding the second statement of “Being asked for recommendations about movies,” the results indicated that 41.2% agreed with this statement. Also, with the third statement of “I am considered a movie super/huge-fan,” the analysis found that 45.6% of the respondents agreed with this statement. The results in this section

## Involvement and Movie-Induced Travel by Saudis

indicate that a relatively large segment of Saudis are highly engaged with movies and TV shows, as 45.6% of them consider themselves significant movie fans. Another indication is that Saudis tend to seek recommendations of films from relatives and friends, with 41.2% of the population of the study seeking recommendations from or giving recommendations to their family and friends. However, seeking information before the release of news movies is not a popular interest among Saudis, and this could be the result of the absence of public screenings since the government banned them in the early 1980s.

Furthermore, the analysis in Table 4 shows the results of another four questions that participants were asked that were related to their eagerness to view movies. Regarding the first statement of “I watch movies as soon as they are available on the Internet,” the results indicated that 42.6% of the Saudis agree with it. However, considering the statement of “I watch movies on the day they premiere on TV networks,” only 15.6% of the Saudis said they actually try to watch new movies once they have premiered on TV. Additionally, more than half of Saudis do not wait for movies to come out on DVD or become cheaper, while only 23.9% of them are actually willing to wait until movies are available on DVD. Therefore, this section indicates that a large group of Saudi film viewers are watching movies as soon as they are available on the Internet. It is clear that the banning of public screening in Saudi Arabia has impacted viewers and led them to seek other opportunities to watch new movies, and the perfect chance for them in this case is the Internet, where they download and share movies with relatives and friends. With such a higher percentage of participants doing this—representing a considerable market segment—the future allowance of public screening would be a huge step toward film investment in Saudi Arabia.

<b>Table 4 goes about here</b>
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**Objective 4: To examine the relationship between involvement with foreign travel and film and television viewing.**

A correlation analysis was conducted to determine if there was a relationship between foreign travel involvement and movie engagement and eagerness to watch them. The result shows that there is a moderate but positive correlation in all of the engagement categories, indicating that the more individuals are involved with the foreign travel, the more the level of engagement with the movie experience. Moreover, a weak but positive correlation was apparent in the categories of eagerness. An ANOVA analysis was then conducted on the data in order to determine the differences between involvement levels and movie engagement. The results are displayed in Table 5. Significant differences are seen in mostly all of the movie engagement categories. The highly involved individuals are more likely to seek information about new movies than the ones with lower involvement. In addition, the highly involved individuals consider themselves to be movie super fans as they are always willing to give recommendations about movies to friends and family. Furthermore, in the eagerness categories, the high involvement segment is more likely to be the first to watch movies once they are available on the Internet, once they have premiered on TV, and as soon as they come out on DVD.

As a result, the descriptive analysis suggests that with the absence of public movie theaters in Saudi Arabia, Saudis are less likely to wait for long periods of time until movies are available on DVD. Instead, Saudis turn to the Internet as their first option to have their movie experience. Surprisingly, the medium-involvement segment of Saudis is actually willing to wait until the movies are available at cheaper prices on DVD. This might be an indication that the lower-involvement people do not have the same movie eagerness and passion that highly involved individuals have, and for that particular reason, they are more likely to wait for a better deal on DVD movies.

<b>Table 5 goes about here</b>
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**Objective 5: To determine the propensity among Saudis to participate in activities at destinations shown in movies and TV programs.**

Respondents of the study were asked to answer 12 questions in order to analyze and determine the propensity of engaging in activities depicted in movies. Once more, the questions were given to participants as a 5-point scale ranging from “strongly disagree” (1) to “strongly agree” (5) (Table 6). Findings from the descriptive analysis indicate that respondents of the study have a low level of propensity to participate in activities they have viewed in movies or TV programs. However, the findings show that 40.2% of respondents have a higher level of propensity to visit spots where a scene was shot; and almost half (48.9% ) reported that they have partaken in certain activities at destinations such as eating in restaurants they have seen in movies or TV program. Additionally, 60.9% visit tourist attractions seen in movies or TV programs, 40.2% shop in malls seen in movies, and 41.3% attend events and festivals featured in movies and TV shows.

<b>Table 6 goes about here</b>
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Results in this section indicate that Saudis in general have a low level of propensity to partake in activities they have seen in movies or TV programs. This might be a cultural factor that Saudis have, as they are very hesitant to participate in or adapting any activities that came from a different culture, such as western European countries and the U.S. Furthermore, the Islamic beliefs could have an impact on Saudis’ participation in activities such as drinking or going to bars. However, a large segment of Saudis (40% to 60%) has a high propensity level to partake in activities seen in movies as they eat at restaurants, visit tourist attractions, shop at malls, and attend festivals and events depicted in films. This indicates that movies and TV programs in general clearly have an impact on viewers from Saudi Arabia as they influence them to participate in activities and behaviors at destinations featured in movies/TV.

## Involvement and Movie-Induced Travel by Saudis

Involvement with activities shown in movies is a result of being highly engaged with films as was reported by Josiam et al. (2013) and Spears et al. (2012). The past studies suggested that individuals who are eager to watch movies and seek information about them are more likely to have higher levels of travel involvement. As a consequence, highly involved individuals tend to have a propensity to participate in activities seen in movies or TV programs. Josiam et al. (2013) reported that Indians with high levels of movie engagement and travel involvement are more likely to take part in activities they have viewed in Bollywood movies at certain destinations. The statistical analysis has reported similar results as Saudis who expressed eagerness and high level of travel involvement are more likely to participate in activities seen in movies than those who reported a medium level of involvement. Having a propensity to partake in activities might indicate that the better income that individuals have in Saudi Arabia allows them to fulfil their wishes of traveling and being part of activities from their favorite movies; moreover, Saudis are ranked among the highest-spending tourists in the world (Business Monitor International Ltd, 2016), which explains engagement with movies in the segment of Saudis highly involved with international travel.

A correlation analysis was conducted to determine if a relationship exists between travel activities and involvement levels. The analysis indicates that a moderate but positive relationship exists between the involvement with foreign travel and travel activities. Higher involvement levels predict a greater likelihood of the individual to participate in travel activities and behaviors at the destination. Involvement averages are represented in Table 7 to assess the correlation with the activities seen in movies or TV programs (Table 6). ANOVA analysis results support the suggested correlation between travel activities and involvement levels as the involvement averages indicate the variance between the groups in terms of participating in activities seen in movies or TV programs (Table 7). It is clear that the more Saudi viewers increase their level of involvement the more likely they are to increase their propensity to participate in activities viewed in movies.

<b>Table 7 goes about here</b>
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**Objective 6: To determine the motivations among Saudis to visit destinations shown in movies and TV programs.**

Respondents were also asked four questions to assess the motivation of visiting foreign locations shown in television and film. Again, like previous questions, all answers were on a 5-point scale from “strongly disagree” (1) to “strongly agree” (5). Findings indicate (Table 8) that among all of the travel motivations, the strongest motivation to visit destinations was “movies with scenes set in foreign locations,” as a significant percentage (42.2%) reported. This is similar to what Josiam et al (2013) indicated in the study of Bollywood movies and their impact on Indian tourist behaviors as most Indians found Bollywood movies with scenes set in foreign locations the most important motivation. After that, “travel channels on TV (Discovery/travel channels etc.)” were the second-strongest motivation to visit destinations for Saudis (37.2%). However, respondents did not find “TV shows set in foreign locations” as an influential factor to visit destinations, which 40.8% reported. The results in this section indicated that TV shows set in foreign locations do not motivate Saudis to visit destination as much as movies with sets in foreign locations and travel channels. The reason might be because of the modern visual effects used in film productions that allow producers to include better footage of the destinations; furthermore, the high budgets that moviemakers have is an element that TV networks rarely possess. Josiam et al. (2013) mentioned another reason for the variance between the impact of TV shows and movies: TV shows typically are limited to a half hour or an hour of broadcasting, while movies often run for more than two hours.

<b>Table 8 goes about here</b>
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## Involvement and Movie-Induced Travel by Saudis

Correlation analysis was conducted to determine if a relationship exists between involvement average and motivations shown in movies and TV shows to visit certain destinations. The results indicate that there are moderate and weak correlations among the different motivation categories; however, the correlations are positive. As the involvement increases, the motivation to visit destinations shown in movies and TV increases as well. An ANOVA analysis also supported similar findings as the correlation analysis indicated earlier (Table 9). Once again, as involvement with foreign travel increases, motivations to visit destinations shown in films and television increases as well. It is clear that individuals who are highly involved with foreign travel are likely to be influenced by the locations presented in movies and TV programs.

<b>Table 9 goes about here</b>
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## CONCLUSIONS

The findings of this study indicate that a large segment of Saudis are highly involved with foreign travel and possess the financial means to do so. Furthermore, the results suggest that a large segment of individuals—nearly half of the population—are passionately engaged with movies and TV shows; however, the engagement before the movies being released is weak. This could be because of the absence of cinema theaters in Saudi Arabia as Saudis do not feel the need to seek information or gossip before the release of the movies. A majority of Saudis do not watch movies on the first day they premiere on TV networks or wait for the DVD release. Having the Internet as the first, best choice to watch movies might be the reason for this. Regarding the relationship between the foreign travel involvement and movie/TV viewing, significant differences were found among engagement categories as Saudis highly involved with travel are more likely to seek information, recommend movies, and consider themselves super fans of films. Saudis segmented into the high-involvement group, indicating a higher level of propensity to participate in tourist activities influenced by movies or TV programs. However, Saudis prefer to visit

## Involvement and Movie-Induced Travel by Saudis

attractions seen in movies over engaging in other activities. The reason could be that Saudis are, again, protective about their identity or culture, and seek the activities compatible with their religious and cultural beliefs. Additionally, movies with scenes set in foreign locations have been reported to be the most important and influential motivation for Saudis to visit destinations. Therefore, travel agencies should design their travel schedule to consider a large potential market such as Saudi Arabia where consumers tend to be more interested in visiting attractions than engaging in any other activity.

### **LIMITATIONS OF THE STUDY**

This study employed a convenience sampling method to gather data; therefore, the findings of this research may not be generalizable for the entire population of Saudi Arabia. Future studies should seek to draw a larger sample using a random sampling method to increase confidence in the findings and increase the ability to generalize findings for broader populations.

## REFERENCES

- Al-Eyaf, A. (2008). Coming soon, Scorsese of Arabia. *The Washington Post*. Retrieved on May 11, 2016 from <http://www.washingtonpost.com/wp-dyn/content/article/2008/05/16/AR2008051603615.html>
- Bolan, P., Boy, S., & Bell, J. (2011) "We've seen it in the movies, let's see if it's true": Authenticity and displacement in film-induced tourism. *Worldwide Hospitality and Tourism Themes*, Vol. 3 Iss: 2, pp.102 – 116
- Brennan, L., & Mavondo, F. (2000). Involvement: An unfinished Story? *ANZMAC Visionary Marketing for the 21st Century: Facing the Challenge*, 132-137.
- Business Monitor International Ltd. (2015). Saudi Arabia tourism report Q3 2015: Includes 5-year forecasts to 2019. *BMI Research*.
- Business Monitor International Ltd. (2016). Saudi Arabia tourism report Q2 2016: Includes 5-year forecasts to 2020. *BMI Research*.
- Ciecko, A. (2011). Cinema "of" Yemen and Saudi Arabia: Narrative strategies, cultural challenges, contemporary features. *Wide Screen*, 3(1), 1-16.
- Clements, C., & Josiam, B. (1995). Role of involvement in the travel decision. *Journal of Vacation Marketing*, 1(4), 337-348.
- Corbin, A. (2014). Travelling through cinema space: The film spectator as tourist. *Continuum: Journal of Media & Cultural Studies*, 28(3), 314-329. doi:10.1080/10304312.2014.900880
- Hudson, S. & Ritchie, B. (2006). Promoting destinations via film tourism: An empirical identification of supporting marketing initiatives. *Journal of Travel Research*, 44(4), pp. 387-396.

## Involvement and Movie-Induced Travel by Saudis

- Hudson, S., Youcheng, W., & Gil, S. M. (2011). The influence of a film on destination image and the desire to travel: a cross-cultural comparison. *International Journal of Tourism Research*, 13(2), 177-190. doi:10.1002/jtr.808
- Josiam, B., Kinley, T., & Youn-Kyung, K. (2005). Involvement and the tourist shopper: Using the involvement construct to segment the American tourist shopper at the mall. *Journal of Vacation Marketing*, 11(2), 135-154. doi:10.1177/1356766705052571
- Josiam, B., Spears, D., Dutta, K., Pookulangara, S., & Kinley, T. (2013). Using the involvement construct to understand the impact of Bollywood on the activities and behaviors of Indian tourists: An empirical study, presented at The 10th Annual World Congress of the Academy for Global Business Advancement (AGBA), Bangkok, Thailand, June 2013.
- Khizindar, T. M. (2012). Effects of tourism on residents' quality of life in Saudi Arabia: An empirical study. *Journal of Hospitality Marketing & Management*, 21(6), 617-637. doi:10.1080/19368623.2012.627226
- Kim, H., & Richardson, S. L. (2003). Motion picture impacts on destination images. *Annals of Tourism Research*, 30(1), 216-237.
- Kim, S. (2012). Audience involvement and film tourism experiences: Emotional places, emotional experiences. *Tourism Management*, 33(2), 387-396.
- Kim, S., & Wang, H. (2012) From television to the film set: Korean drama Dae Jang Geum drives Chinese, Taiwanese, Japanese and Thai Audiences to screen-tourism. *International Communication Gazette*, 74(5), 423-442.
- Kono, Y. (2013). Globally mobile Saudi students: Agents of economic, social & cultural transformation? *World Education News & Reviews*, 26(6), 1-4.

## Involvement and Movie-Induced Travel by Saudis

- Mitchell, H., & Stewart, M. F. (2012). Movies and holidays: The empirical relationship between movies and tourism. *Applied Economics Letters*, 19(15), 1437-1440. doi:10.1080/13504851.2011.631888
- Mumuni, A. G., & Mansour, M. (2014). Activity-based segmentation of the outbound leisure tourism market of Saudi Arabia. *Journal of Vacation Marketing*, 20(3), 239-252. doi:10.1177/1356766714522258
- Nayef, A. (2012). Top ten everyday things banned in Saudi Arabia. [Blog] Retrieved on May 11, 2016 from <http://listverse.com/2012/11/12/top-10-everyday-things-banned-in-saudi-arabia/>
- Rajaguru, R. (2014). Motion picture-induced visual, vocal and celebrity effects on tourism motivation: Stimulus organism response model. *Asia Pacific Journal of Tourism Research*, 19(4), 375-388. doi:10.1080/10941665.2013.764337
- Rittichainuwat, B., & Rattanaphinanchai, S. (2015). Applying a mixed method of quantitative and qualitative design in explaining the travel motivation of film tourists in visiting a film-shooting destination. *Tourism Management*, 46136-147. doi:10.1016/j.tourman.2014.06.005
- Spears, D.L., Josiam, B., Kinley, T., & Pookulangara, S. (2012). Tourist see tourist do: The influence of Hollywood movies and television on tourism motivation and activity behavior. *FIU Review*, 30(1), 53-74.
- World Travel and Tourism Council. (2016). Travel and tourism economic impact 2016 Saudi Arabia. Retrieved on May 12, 2016 from <http://www.wttc.org/-/media/files/reports/economic%20impact%20research/countries%202016/saudiarabia2016.pdf>
- Zaichkowsky, J.L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 12, 341-52.

## Involvement and Movie-Induced Travel by Saudis

**Table 1**  
*Demographic Characteristics of the Sample*

	N	%
Gender		
Male	37	43.0
Female	49	57.0
Age		
18-25 years old	25	30.9
26-30 years old	22	27.2
31-36 years old	18	22.2
37-40 years old	6	7.4
41-above years old	10	12.3
Employment Categories		
Employed/Full-time	58	66.7
Unemployed/Student	20	23
Unemployed/non-Student	9	10.3
Level of Education		
High School	5	5.8
Vocational/Technical	2	2.3
Bachelor's Degree	55	64.0
Post-Graduate diploma/Certifications	7	8.1
Master's	14	16.3
PhD	3	3.5
Income		
Less than 5,000	7	8.2
5,000 to 15,000	29	34.1
15,001 to 25,000	25	29.4
25,001 to 55,000	17	20.0
Over 55,001	7	8.3
Marital Status		
Single	38	46.3
Married	44	53.7
Saudi Who Live in		
Saudi living in Saudi Arabia	68	81.0
Saudi living/studying outside Saudi Arabia	16	19.0
I have never travelled to another continent		
Yes	2	100.0
No		

*Note:* totals differ due to missing data

<b>Table 2:</b>		
<b>Foreign Travel Involvement Levels</b>		
	Medium Involvement 1.00-3.00 N (%)	High Involvement 3.001-5.00 N (%)
Numbers and Percentages	16 (17.6)	75 (82.4)
Mean involvement Score =3.94; Median Score =4.00; Modal involvement Score = 5.00		
Reliability (Alpha) = 0.975		

<b>Table 3:</b>				
<b>Demographic characteristics by Involvement Segment: Frequencies and (Means)</b>				
		Medium Involvement N (%)	High Involvement N (%)	Chi- square
Gender				0.938 (NS)
	Male	4 (10.8)	33 (89.2)	
	Female	9 (18.4)	40 (81.6)	
Age				5.969 (NS)
	18-25 years old	3 (12.0)	22 (88.0)	
	26-30 years old	1 (4.5)	21 (95.5)	
	31-36 years old	2 (11.1)	16 (88.9)	
	37-40 years old	2 (33.3)	4 (66.7)	
	41- above years old	3 (30.0)	7 (70.0)	
Employment Categories				7.003**
	Employed full-time	6 (10.3)	52 (89.7)	
	Unemployed student	4 (20.0)	16 (80.0)	
	Unemployed non-student	4 (44.4)	5 (55.6)	
Level of Education				4.466 (NS)
	High School	2 (40.0)	3 (60.0)	
	Vocational/Technical	0 (0.0)	2 (100.0)	
	Bachelor	7 (12.7)	48 (87.3)	
	Post-graduate diploma/post-graduate certifications	1 (14.3)	6 (85.7)	
	Master's	1 (7.1)	13 (92.9)	
	PhD	0 (0.0)	3 (100.0)	
Income				2.941 (NS)
	Less than 5,000	1 (14.3)	6 (85.7)	
	5,001 to 15,000	4 (13.8)	25 (86.2)	
	15,001 to 25,000	2 (8.0)	32 (92.0)	
	25,001 to 55,000	3 (17.6)	14 (82.4)	
	55,001 to 75,000	0 (0.0)	1 (100.0)	
	75,001 to above	2 (33.3)	4 (66.7)	
Saudi who live in				0.062 (NS)
	Saudi living in Saudi Arabia	11 (16.2)	57 (83.8)	
	Saudi living/studying outside Saudi Arabia	3 (18.8)	13 (81.3)	
Marital Status				0.813 (NS)
	Single	7 (18.4)	31 (81.6)	
	Married	5 (11.4)	39 (88.6)	

NS= no significant difference between categories;

\*Significant at  $p < .05$ ; \*\*Significant at  $p < .01$

Note: Totals vary due to missing data

**Table 4:**  
**Movie Engagement & Eagerness (N=149)**

	Strongly/ Disagree	Neutral	Strongly/ Agree
I seek information/gossip about new movies before release	37.1	25.0	37.8
Friends/family ask me for recommendations about movies	45.2	13.5	41.2
I am considered a movie “super/huge-fan” among my relatives/friends	37.6	16.8	45.6
I watch movies as soon as they are available on the Internet	39.8	17.6	42.6
I watch movies on the day they premiere on TV networks	68.1	16.3	15.6
I wait until the movie comes out on DVD	73.5	11.6	15.0
I wait until the movie is available at a cheaper price on DVD	83.0	8.2	8.9

*Note 1:* data is represented as percentage.

*Note 2:* Responses in five agreement categories have been condensed into three for succinct reporting.

**Table 5:**  
**ANOVA Involvement and Movie Engagement & Eagerness**

	Medium Involvement	High Involvement	F-value
I seek information/gossip about new movies before release	2.13	3.05	8.187**
Friends/family ask me for recommendations about movies	1.94	3.15	10.977*
I am considered a movie “super/huge-fan”	1.94	3.33	14.150*
I watch movies as soon as they are available on the Internet	2.31	3.04	3.690
I watch movies on the day they premiere on TV networks	1.56	2.24	5.518
I wait until the movie comes out on DVD	1.81	2.03	0.440
I wait until the movie is available at a cheaper price on DVD	2.06	1.63	2.915

\*Significant at  $p < .01$

\*\* Significant at  $p < .05$

**Table 6:**  
**Propensity to participate in activities as shown in Movies (N = 149)**

	Strongly/ Disagree	Neutral	Strongly/ Agree
I have taken a movie or TV related tour when travelling	47.3	26.4	26.4
I make it a point to visit spots where a scene was shot	42.4	17.4	40.2
I have traveled to destinations to see/interact with movie/TV stars	61.9	20.7	17.4
I have traveled to destinations to be like my favorite movie/TV stars	73.9	18.5	7.6
I have participated in activities because I have seen movie/TV stars doing it	64.2	22.8	13.0
I have re-enacted scenes in the location they were set	69.5	23.9	6.5
I purchase travel souvenirs used or purchased by movie/TV stars	52.2	28.3	19.5
I eat at restaurants that I have seen in a movie/TV program	34.8	16.3	48.9
I stay at hotels that I have seen in a movie or TV program	44.6	26.1	29.4
I go to tourist attractions that I have seen in a movie or TV program	22.8	16.3	60.9
I shop at stores/shops/malls that I have seen in a movie or TV program	34.8	25.0	40.2
I go to festivals/fairs/events that I have seen in a movie or TV program	29.3	29.3	41.3

Note 1: data is represented as percentage.

Note 2: Responses in five agreement categories have been condensed into three for succinct reporting.

**Table 7:**  
**ANOVA Travel Activities and Involvement Levels**

	Medium Involvement (N = 16)	High Involvement (N = 75)	F
I have taken a movie or TV related tour when travelling	1.80	2.80	10.536*
I visit spots where a scene was shot from a movie/TV show	2.00	3.04	8.196**
I have traveled to specific destinations to see/interact with movie/TV stars	1.69	2.41	5.539
I have traveled to specific destinations to be like my favorite movie/TV star	1.63	2.00	2.069
I have participated in activities when travelling because I have seen movie/ TV stars doing that activity	1.69	2.29	3.620
I have re-enacted scenes at movie/ TV show locations	1.56	2.07	3.526
When I travel, I purchase travel souvenirs that I have seen being used or purchased by movie/TV stars	1.94	2.49	2.840
I eat at restaurants that I have seen in a movie/TV program	2.13	3.24	11.102*
I stay at hotels that I have seen in a movie or TV program	2.13	2.80	4.620
I go to tourist attractions that I have seen in a movie or TV program	3.00	3.53	2.340
I shop at stores /malls that I have seen in a movie or TV program	2.56	3.04	2.077
I go to festivals/fairs that I have seen in a movie or TV program	2.50	3.21	4.504

\*Significant at  $p < .01$

\*\*Significant at  $p < .05$

**Table 8:**  
**Motivations to Visit Destinations Shown in Movies/ TV (N=149)**

	Strongly/ Disagree	Neutral	Strongly/ Agree
Movies with scenes set in foreign Locations	33.4	24.5	42.2
Travel channels on TV (Discovery/T Spears et al. (2012), ravel channel etc.)	37.2	25.7	37.2
TV shows set in foreign locations	40.8	25.2	34.0

*Note 1:* data is represented as percentage.

*Note 2:* Responses in five agreement categories have been condensed into three for succinct reporting.

**Table 9:**  
**ANOVA Involvement and Motivations to Travel to Destinations Seen in Films/TV**

	Medium Involvement (N = 16)	High Involvement (N = 75)	F- values
Movies with scenes set in foreign locations	2.06	3.08	9.459*
Travel channels on TV (Discovery/Travel channel etc.)	1.75	3.05	15.480*
TV shows set in foreign locations	2.13	2.83	3.789*

\*Significant at  $p < .01$

# SOCIAL ENTREPRENEURSHIP IN INDIA

## AN EMERGING BUSINESS MODEL TO SERVE SOCIETY

**\*Dr. D. SURYACHANDRA RAO**

**#Dr. M. SRAVANI**

### 1. INTRODUCTION

There are certain social and environmental issues which come in the way of the progress of emerging nations. Unfortunately, they are on raising trend and creating lot of unrest among the people in the society. It is widely believe that the sole responsibility of the Government is to tackle the societal problems and curtail them at its best. As a matter of fact, the Government along cannot attend the all the problems of the society and provide an acceptable solution to the satisfaction of all. Even the Governments of industrially advance and developed nations are also not able to tackle certain problems that their societies facing today. Some sincere attempts have been made by Government, Non-Governmental Organizations, and Private sector enterprises individually to overcome some of these problems, but could not create substantial impact.

In recent times, new trends have emerged to tackle the societal problems with more vigour and commitment. One such trend is that philanthropy. Philanthropy is not a new to the world but the way the philanthropists and Corporates addressing these issues make a lot of difference. For example, the global pharmaceutical giants giving billions of dollars in the form of medicine to the citizens of less developed nations and there by contribute to overcome the health related issues. Similarly, several countries across the globe are insisting their companies to set apart a portion of their profit to tackle the problems of the society in the name of 'Corporate Social Responsibility'.

Another innovative way of addressing the societal problem is Social entrepreneurship. Social entrepreneurship has become the buzz word in several nations and attracting attention of many. With the emergence of this concept and its wide spread ambiguity, this paper provides conceptual clarity on 'Social entrepreneurship' and makes the people to realise its potential in addressing the social issues and nation building. This paper also explores how social entrepreneurs contribute to the society and provides suggestions with a view to overcome the existing challenges for social entrepreneurship in the less developed nations, particularly in India and make this concept more vibrant for the wellbeing of the society across the nations.

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## **2. OBJECTIVES OF THE STUDY**

The objectives of the study are as follows:

- a) To enhance the conceptual understanding with respect to ‘Social entrepreneurship’ and makes the people to realise its potential in addressing the social issues.
- b) To explore the contribution of Social entrepreneurs in finding out solutions to the existing social problems in emerging nations in general and particularly in India.
- c) To provide suggestion with a view to overcome the existing challenges for social entrepreneurship in India and make this concept more vibrant for the well-being of the society.

## **3. HYPOTHESIS OF THE STUDY**

The study is taken up with the following hypothesis:

**H<sub>1</sub>** Social Entrepreneurship addresses the problems of the society in an innovative manner.

**H<sub>0</sub>** Social Entrepreneurship focuses more on the financial wellbeing of the enterprise only.

**H<sub>1</sub>** Social Entrepreneurship needs to overcome numerous challenges to create desired impact on the society in the emerging nations, particularly in India.

**H<sub>0</sub>** Social Entrepreneurship has a conducive environment for its functioning everywhere, as it tackle the societal problems.

## **4. METHODOLOGY**

The study undertaken for this purpose is descriptive in nature and a part of this article is exploratory in nature. Required data for this study is collected purely based on secondary sources. Published reports of Government, industry associations (like CII, ASSOCHAM, and FICCI) and Non-Governmental Organizations, books on entrepreneurship/social entrepreneurship, articles published on social entrepreneurship in journals, magazines, and research studies have been refereed in the present study. Web resources have also been taken into consideration for this study. Working papers published and displayed by various institutions / organizations have also been consulted during the course of this study.

## **5. LITERATURE REVIEW**

A literature review discusses published information in a particular subject area within a certain time period. It is simply summary of the sources. Literature reviews provide a solid background for a research paper’s investigation. It also helps the researcher to identify the gaps in the area of study in order to focus on it. Comprehensive knowledge of the literature of the field is essential to most research papers.

In order to better understand the development of social entrepreneurship, it would be useful to trace its origins. The term social entrepreneurship might be seen as being a relatively new but the concept can be found throughout history. Its first appearance was in the social change literature during the 1960's and 1970's. Around three decades ago, the Surdna Foundation's executive director Edward Skloot first used the term "Non-Profit Venture". Later Asoka's founder Drayton adopted the term "Social Entrepreneurship" (Light 2006). However, many researchers still call not-for-profit and for-profit social ventures as social ventures.

The concept of social entrepreneurship is poorly defined and its boundaries to other fields of study remain fuzzy (Mair et.al. 2006). Nobel Peace Prizes in 2004 and 2006 were awarded to two social entrepreneurs; Wangari Maathai, founder of the Green Belt Movement and Muhammad Yunus founder of the Grameen Bank respectively, indicating a focus shift and brought in a new enthusiasm among academic journals on this topic. Social entrepreneurship is slowly becoming a career choice among students and many main stream entrepreneurs started include a social mission of their enterprise. Organizations such as Ashoka and the Skoll Foundation recognize and support these "change makers" (Bornstein 2007).

Ranjini Swamy (1990)' this article explores some of the motives, attitudes, and abilities of a successful social entrepreneur-Baba Amte. The author also discusses in detail the challenges faced by Baba in the process of establishing Anandvan a home for leprosy patients and the courage with which he responded to the challenge.

Johanna Mair, Ignasi Marti'(2006) Social entrepreneurship, as a practice and a field for scholarly investigation, provides a unique opportunity to challenge, question, and rethink concepts and assumptions from different fields of management and business research. This article puts forward a view of social entrepreneurship as a process that catalyses social change and addresses important social needs in a way that is not dominated by direct financial benefits for the entrepreneurs. Social entrepreneurship is seen as differing from other forms of entrepreneurship in the relatively higher priority given to promoting social value and development versus capturing economic value.

Singh (2007) the paper begins with the examination of contextual factors influencing the emergence and development of social entrepreneurship. It further focuses on defining social entrepreneurship, and understanding the parameters of this rather broadly-used term. It then examines the characteristics and motivations of social entrepreneurs. The paper finally concludes by a discussion on some of the key issues emerging around social entrepreneurship, including support for social entrepreneurs, training and capacity building, implementation issues, and gaps in the existing research/opportunities for future research in this rapidly developing field Social Entrepreneurial Initiatives in India. His paper cover case studies of three organisations namely the e-government foundation, Project Shakti and L.V. Prasad eye hospital

Abbott (1997)' this paper discusses how poor women in India have challenged existing middle-class women's organisations, as well as existing, patriarchal trade union structures in

the last two decades. The paper presents case studies of two different organisations namely the Self-Employed Women's Association (SEWA) and the Annapurna Mahila Mandal (AMM) to show how this has been achieved. It argues that by directly identifying poor women's urgent need for recognition of their invisible informal sector income-generating activities, both SEWA and the AMM have been highly successful in improving the everyday lives of their members.

K.L Srivastava is of the opinion that Indian scene is full of possibilities for Social Entrepreneurship. Despite a steady growing economy after the liberalization in the early nineties, a wealth of human resources and management schools in the country, the social problems are on the rise. There has been rapid growth in the number of citizen sector organizations in India serving the rural poor and marginalized sector. Yet, the practice of social entrepreneurship and management of social businesses as effective tools for solving social problems have not receiving their due attention. Srivastava feels that much more needs to be done for facilitating the application of entrepreneurial energy for benefit of the majority of Indian society. In particular, the improvement of knowledge base and accountability aspects in citizen sector deserve urgent attention.

Jeff Scholl (2009) articulates two kinds of power to the Social Entrepreneurs. One is the power to bring specific change through the work that they do. The second is the power to inspire—to bring other people and organizations to work together, to scale solutions through their networking, and to find new ways to solve problems.

Seelos et al (2010) Social Entrepreneurship is an emerging umbrella term for the phenomenon of entrepreneurship that targets poverty or the social needs associated with poverty. It encompasses a variety of organizational innovations that target diverse social and environmental challenges. These organizations work as an alternative to or complement the government services for alleviating the challenges of poverty and other evils.

Hoogendroon, Brigitte & Pennings, Enrico (2010) suggests that it is worthwhile to explore the actual degree of social entrepreneurial activity in a country/region so as to facilitate promotion of such activities with strong policy framework and enabling environments. They further suggest research on the types of financing strategies employed by the social entrepreneurs and the effectiveness of such strategies in financing the enterprise and its activities.

Report by Swissnex India title “Social Entrepreneurship in India - Unveiling the unlimited opportunities” (2015) underlines that ” Models for social entrepreneurship in India are Social for-profit enterprise, non-profit and hybrid models. In addition to the above-mentioned models, other ways of creating impact in India are through philanthropy and through Corporate Social Responsibility. India has been regularly receiving global philanthropic money. Recently there has been a rise in local contributions from wealthy individuals with short and long-term vision. A new breed of high-net-worth individuals from the corporate sector is looking at investing philanthropic money in the form of grants and impact investments. Currently strategic philanthropy in India is still at a nascent stage.”

Singh, Partap, Dr. in his research paper title “Social Entrepreneurship- A growing trend in Indian economy”(2012) underlines that “Social entrepreneurship is the recognition of a social problem and the uses of entrepreneurial principles to organize create and manage a social venture to achieve a desired social change. Thus, the main aim of social entrepreneurship is to further broaden social, cultural, and environmental goals. Social entrepreneurs are commonly associated with the voluntary and not-for-profit sectors, but this need not preclude making a profit.

As is the case in many emerging fields of research, there are significant gaps in the literature currently available on social entrepreneurship. The review undertaken by the researcher found that none of the afore said authors have studied the social entrepreneurship in a comprehensive manner. Moreover, there is lot of misconception and misunderstanding is there with respect to this concept. Further, the authors feel that since it is an emerging concept, awareness about social entrepreneurship is also lacking among the general public and concepts like this need to be promoted in a big way for the benefit of the societies across the globe and for the inspiration of the youngsters.

## **6. TERMINOLOGY PERTAINING TO SOCIAL ENTREPRENEURSHIP**

### ***a) Social Enterprise***

A social enterprise may be defined as “an organization that applies commercial strategies to maximize improvements in human and environmental well-being, rather than maximising profits for external shareholders”. A social enterprise operates like a business, produces goods and services for the market, but manages its operations and redirects its surpluses in pursuit of social and environmental goals. Social enterprises have socially bound mission statements and operate with the goal of solving a social problem as a part of their mission. Social enterprises can be structured as a for-profit or non-profit, and may take the form of a co-operative, mutual organization, a social business, a community interest company, or a charity organization.

Social enterprise is not a new concept but it started becoming popular only in 1960s. One of the popular Social enterprises is Grameena Bank, established by Muhammad Yunus in Bangladesh. It is a microfinance organization that makes small loans to people living in rural areas without requiring collateral. By employing the principles of social entrepreneurship, the Social organizations are addressing the social problems and bringing a positive change in the society.

### ***b) Social Entrepreneurship***

Social entrepreneurship is a new term, but old concept. It is a new breed of entrepreneurship that aims at taking up a social problem for bringing about a transformation in the same. It is all about recognizing the social problems and achieving a social change by employing entrepreneurial principles, processes and operations. Social entrepreneurship is, at its most

basic level, doing business for a social cause. It combines commerce and social issues in a way that improves the lives of people connected to the cause.

According to Wikipedia “Social entrepreneurship is the work of a social entrepreneur. A social entrepreneur is someone who recognizes a social problem and uses entrepreneurial principles to organize, create, and manage a venture to make social change. Whereas a business entrepreneur typically measures performance in profit and return, a social entrepreneur assesses success in terms of the impact s/he has on society.” Social entrepreneurs need to possess some special features along with the feature of any other type of entrepreneur.

*Having unique features and carries dual objectives viz., one is economic and other one is social.*

*Identify problem pertaining to the society and solve it by using the entrepreneurial principles, processes.*

*Committed to achieve large social change.*

*Make innovations in social, economic, and environmental issues of the society.*

*Social entrepreneurship promotes social enterprise and prime focus is on social innovations for prevailing social problems.*

### **c) Social Entrepreneur**

A social entrepreneur is somebody who takes up a pressing social problem and meets it with an innovative or path breaking solution. A social entrepreneur is a person who pursues novel applications that have the potential to solve community-based problems. These individuals are willing to take on the risk and effort to create positive changes in society through their initiatives. Social entrepreneurs are individuals with innovative solutions to society’s most pressing social problems. They are both visionaries and ultimate realists, concerned with the practical implementation of their vision above all else. (Ashoka 2012)

*The social entrepreneur is a mission-driven individual who uses a set of entrepreneurial behaviours to deliver a social value to the less privileged, all through an entrepreneurially oriented entity that is financially independent, self-sufficient, or sustainable. The objective is to create a social benefit that is not limited by personal gain. Basic features of social entrepreneurs are:*

- *Social entrepreneurs are creative and innovative. They look at the situation differently than the average person.*
- *Desire to improve the lives of the community at large is a characteristic that encourages social entrepreneurs.*
- *Just as in the case of any other entrepreneur, social entrepreneurs need a higher degree of determination because tackling social issues not that simple.*
- *Social entrepreneurs are highly ambitious people and put their heart and soul in the process of tackling some of chronic problems that the society is facing. They work with passion and are considered as social reformers.*

- *Aim of the Social entrepreneur is not to create just wealth, but most importantly, generate social value. Yes, wealth creation may be the part of effort, but is not an end in itself. Promoting systematic social change and creating desired impact is the real and ultimate purpose of social entrepreneurs.*
- *Social entrepreneurs are highly resourceful. With their innovative approach to the social problems, they will be able to mobilize the required resources.*
- *Social entrepreneurs are driven to produce measurable results to make perceptible dent on the society.*

**d) *Social entrepreneurship Vs. Non-Governmental Organization (NGO)***

Social Entrepreneurship is the process of bringing about social change on a major and more effective scale than a traditional Non-Governmental Organisation (NGO). They differ from NGOs in that they aim to make broad-based, long-term changes, instead of small-scale and time-limited changes. Furthermore, a NGO raises funds through events, activities and sometimes products. However, raising money takes time and energy, which could be spent in direct working and marketing processes. Above all, Social Entrepreneurs consider the affected people as part of the solution and not as passive beneficiaries.

**e) *Social entrepreneurship Vs. Corporate Social Responsibility (CRS)***

Social entrepreneurship and Corporate Social Responsibility (CRS) differ on several aspects. Social enterprises are those which are completely concerned about societal problems and try to find solutions through their innovative approach, whereas corporate enterprises have their own business to do and show some reasonable concern to the societal problems. CSR projects mean cost for the companies and shareholders. Especially shareholders would not approve corporate spending on social problems when it is considered that a portion of profits are allocated to CSR. Social enterprises core purpose is to provide solution to a social problem. Therefore, shareholders or entrepreneurs would feel happy to spend money on social projects. Social enterprises create lasting impression by striking at the roots of the problem. CSR efforts usually focus very limited scope of social problems.

**f) *Operational areas of Social entrepreneurship***

Historically, the main operational areas in which social entrepreneurs create change have been (Bornstein 2004):

- Poverty alleviation through empowerment, for example the microfinance movement.
- Health care, ranging from small-scale support for the mentally ill 'in the community' to larger scale ventures tackling the HIV/AIDS pandemic.
- Education and training, such as widening participation and the democratization of knowledge transfer.
- Environmental preservation and sustainable development, such as 'green' energy projects.
- Community regeneration, such as housing associations.

- Welfare projects, such as employment for the unemployed or homeless and drug and alcohol abuse projects.
- Advocacy and campaigning, such as Fair Trade and human rights promotion.

## **7. SOCIAL ENTREPRENEURSHIP IN INDIA**

Social entrepreneurship is still at a nascent stage in India and it definitely holds great opportunity in the days to come. It is emerging primarily because of what the government has not been able to do. The government is very keen on promoting social entrepreneurship – not necessarily by funding it or by advising on it or enabling it. Whereas in some countries, when someone takes it into their own hands to start a facility for education or healthcare or empowerment, the government often puts in place barriers to prevent this from happening.

For the last three decades, the social entrepreneurs in India are doing extremely well and became inspiration to the rest of the world with their achievements in different fields. Social entrepreneurs in India is recognizing the social problems and achieving the social change by employing entrepreneurial principles, processes, operations and above all with their innovative approach. Along with social problems, social entrepreneurship also focuses on environmental problems.

### ***a) Thrust areas of Social Entrepreneurship in India***

Women empowerment, unemployment, child rights, women rights, poverty alleviation, malnutrition, hunger, illiteracy, rural development, environmental sustainability, water management, health, agriculture, affordable housing, sanitation and hygiene, microfinance, education, superstition, training, caste discrimination are some of the operational areas where the social enterprises carryout their operations and act as ‘change agents’.

### ***b) Innovations of Social Entrepreneurs in India***

In India, the Social entrepreneurs with their innovative skills and abilities made a mark in different fields. Some of the pioneering innovations of social entrepreneurs are as follows;

1. Social enterprises are introducing some new products or services which are unique. One such illustration is Barefoot College, Tinolia, and Rajasthan.

Barefoot College identifies poor, rural jobless and unemployable youth who have been unable to finish their formal education and have returned to their village as dropouts. These very individuals are trained to be "barefoot" doctors, teachers, engineers, architects, designers, metal workers, IT specialists and communicators. The innovation lies in the simple and informal method of confidence building. Barefoot College is a testimony to the infinite capacity of people to identify and solve their own problems with their own skills, encouraging self-reliance and private initiative.

2. Some entrepreneurs identify new markets and formulate innovative strategies in the process of making their products or services accessible to the customers, who did not

previously have access. Introduction of finance by SKS Microfinance is one such social initiative.

SKS Microfinance is a non-banking finance company (NBFC), regulated by the Reserve Bank of India, founded by Vikram Akula in 1997. It operates across 19 states in India. Its main objective is to eradicate poverty by providing financial services to the poor. It follows the Joint Liability Group model. It involves lending to individual women, using 5-member groups as the ultimate guarantor for each member. Group lending.

3. Social entrepreneurs are also identifying new sources of inputs as a part of social entrepreneurship. Social entrepreneurs often innovate by linking previously excluded groups to the formal economy. By establishing affirmative business and social enterprises, social entrepreneurs try to assist the socially excluded sections of the society. Shri Mahila Griha Udyog Lijjat Papad, Mumbai is one such organization come under this category.

Shri Mahila Griha Udyog Lijjat Papad, popularly known as Lijjat, is an Indian women's cooperative involved in manufacturing of various fast-moving consumer goods. The organisation's main objective is empowerment of women by providing them employment opportunities. Started in the year 1959 with a seed capital of Rs. 80, Lijjat has an annual turnover of around Rs. 6.50 billion (over 100 million USD) in 2010, with Rs. 290 million in exports. It provides employment to around 43,000 (in 2015) women. Lijjat is headquartered in Mumbai and has 81 branches and 27 divisions all over India. Lijjat is primarily a cottage industry, urban by its origin, which has spread to the rural areas. It is considered as one of the most remarkable entrepreneurial initiatives by women that is identified with female empowerment in India.

4. Some social entrepreneurs try to change the existing organization structure or identify new industries as a part of social entrepreneurship. In other words, social entrepreneurs by changing organization to in-corporate a for-profit culture within the existing non-profit set up.

Self Employed Women's Association (SEWA) started by Ela Bhatt, winner of prestigious Ramon Magsaysay Award. It is the organization of poor, self-employed women workers. SEWA's expansion has taken the form of building an organization to the level that has positively influenced the life of thousands of women (poor). SEWA also worked on programmes that focused on economic changes besides other initiatives. Few of SEWA's sister organizations are SEWA Bank, SEWA Research, SEWA Housing,

Child Rights and You commonly abbreviated as CRY, is an organization to restore children's rights. The organisation was founded in 1979 by Rippan Kapur. CRY partners with grassroots level non-governmental organisations to uplift thousands of underprivileged Indian children denied of basic rights by working across levels - from direct action, advocacy, mobilising public opinion to policy change. CRY identifies projects across the country and funds the sincere efforts of many individuals and groups who work at a local and regional level and directly interact with the children to ensure

happy, healthy and creative childhoods. In 2016-2017, CRY reached out to 486,218 children and their families from 2361 villages and slums across 222 districts of 22 states in India.

5. Social entrepreneurs also innovate by changing the relationships between an organization and its constituencies. A study of social entrepreneurial organization illustrates that they have collaborated with various organizations to fulfil their mission.

For example, Child line was first established as an experimental project in June 1996, by Jeroo Billimoria, a professor at the Tata Institute of Social Sciences (TISS), Mumbai at the Department of Family and Child Welfare. Child line works for the protection of rights of all children aged from 0 to 18. Their special focus is on all children in need of care and protection, especially the more vulnerable sections. "Child line" mobilized support from Tata Institute of Social Sciences (TISS), government agencies, foundations, local child service agencies and businesses to build the Child line network.

6. In order to attain financial sustainability, the organizations are adopting earned income strategies.

Aravind Eye Hospitals is a hospital chain in India. It was founded by Dr. Govindappa Venkataswamy (popularly known as Dr.V) at Madurai, Tamil Nadu in 1976. It has grown into a network of eye hospitals and has had a major impact in eradicating cataract related blindness in India. As of 2012, Aravind has treated nearly 32 million patients and performed 4 million surgeries, the majority of them being cheap or free making it the world's largest and most productive eye-care service group. The model of Aravind Eye Care hospitals has been applauded and has become a subject for numerous case studies across the world. Aravind began performing surgeries on a large scale with treatment being free or heavily subsidized for the poor cross subsidized by the paying patients. Aravind established an outreach program wherein doctors reach out to remote villages to conduct eye camps sponsored by various organizations like Sathya Sai Organization, Lions Clubs International and Rotary International. The organizations take care of the costs of the camp, transporting the patients to surgery and their rehabilitation while Aravind does the surgery free of cost. Aravind started performing 5 times the number of cataract surgeries that were performed in the entire country and 16 times more than that of the entire U.S. Aravind established its own lens manufacturing facility Auro lab and blood bank to reduce costs.

### c) *Types of Social Enterprises in India*

The popularity of Social Entrepreneurship is growing at a very high pace in India. Earlier, organizations solving social problems were often assumed to be idealistic, philanthropic and lacking business acumen or the ability to be entrepreneurial. However, as the social sector has been coming in touch with the private sector, both have begun to realize that just one approach either pure philanthropic or pure capitalist is inadequate to build sustainable institutions.

Social enterprise space In India has a countless mixture of models and the majority of these models are scalable and replicable. Some social entrepreneurs generated social value through innovative not-for-profit enterprises, some more through for-profit Microfinance Institutions and Community Development Banks and others by combining for-profit and not-for-profit institutions. The landscape of institutions functioning in India is presented in the following table:

<b>Types of social enterprises in India</b>	<b>Name of the Organisation</b>
Co-operatives	AMUL, Mann Deshi Bank, SEWA Bank
MFI's	Aavishkar, SKS micro finance
BDS	Dasra, Social Edge, BYST, IRFT
Software Companies	Mahiti, Mitra technologies
NPOs	<a href="http://IndianNGOs.com">IndianNGOs.com</a> , SMGUL, CRY cards, Anaapurna Mahila mandal WIT, NEED, Udyogini, Basix, Shrujan, SEWATFC
Fair Trade Organisations	Sasha, Craftsbridge, SHARE, Creative handicrafts
Health care	Jiva, Arvind eye hospital, Vaatsalya Healthcare

**d) Resent trends in Social Entrepreneurship**

- Social entrepreneurship (SE) as a concept is a relatively a new field of study, it has made its foray into the field of management and behavioural sciences in the past 20 years. There is an increasing body of knowledge on Entrepreneurship, however SE as a subject is relatively new. Hence, Tata Institute of Social Sciences (TISS); Centre for Social Initiative and Management (CSIM), Chennai; Entrepreneurship Development Institute, Ahmedabad; International Institute of social entrepreneurship, Mumbai etc. have introduced some special programmes on Social entrepreneurs in recent times.
- All big brands and companies are adopting the concept of social entrepreneurship and trying to address the issues in our society by opening schools in far flung areas, educating women for family planning, making it possible for farmers and poor individuals to access low interest credits, establishing plants for waste treatment, planting trees and going green.
- Young Indians started realizing that Social entrepreneurship is a wonderful career option to pursue. Some youngsters take up this activity with nationalistic tendencies and with a view to serve the national by addressing the most complex problems of the society with their innovative approach.

## 8. CHALLENGES FOR SOCIAL ENTREPRENEURSHIP

The challenges of Social entrepreneurs are bit different and unique in nature. In India, social entrepreneurs have to face many challenges in view of peculiar conditions prevailing in the society. These challenges are preventing the growth and spread of social entrepreneurship in India as against to other regions and nations, who have made the social entrepreneurship a mission. Some of the prominent challenges faced by social entrepreneurship in India are as follows:

- a) **Lack of Education in Entrepreneurship:** Entrepreneurship in India is still not a regular course/subject at any level of education system. As education is the main source for promoting entrepreneurship in the business sector of the economy, there is still a lack of specific curriculum on entrepreneurship development in the Indian education system. Due to this gap in the Indian education system the country's entrepreneurial sector is still underdeveloped and struggling. Even business schools that have developed curriculum on entrepreneurship are lacking in terms of social entrepreneurship. This lack of social entrepreneurship knowledge presents a major challenge for social enterprises in finding competent and skilled promoters.
- b) **Lack of innovation:** By definition, social entrepreneur is one who tries to find solutions to the problems of the society with his innovative approach. Mohamed Yunus, a Noble laureate, a well-known social entrepreneur belongs to Bangladesh find the solution for the credit problems of poor and marginalized sections of society with Microfinance, an innovative approach. Youngsters are attracted towards the social entrepreneurship and try to tackle the complex problems of the society not with innovative models. A social enterprise success depends primarily on the way you tackle the problem with innovation and creativity.
- c) **Insufficient capital:** Mobilizing funds especially for start-ups remain a severe problem for social entrepreneurs. Government, Non-Governmental and other agencies come forward to assist a social enterprise only when they prove themselves in the field in a particular activity. Social entrepreneurs, in a country like India, are facing problems while raising required finance to launch their innovative and socially useful projects. Successful social entrepreneurs in their interactions with media clearly mentioning how they have struggled in the process of launching their social projects especially in raising required finances for the venture.
- d) **Non-availability of dedicated workforce:** Those who float and work with social enterprise require unique traits such as dedication, hard work, commitment, sincerity, honesty and particularly with social concern. Since the prime objective of social entrepreneurship is to get social gains/benefits rather than personal gains/benefits. One can find job seeker in a country like India where unemployment problem is acute but spotting a candidate with right kind of qualities becomes a major problem for the social enterprises.

- e) **Lack of Government support:** Lack of government support is a major hindrance for social business development in India. Currently, the government is not providing any kind of assistance for promoting these social cause ventures. The government's policies and regulations for social entrepreneurs are very complex and strict, with no tax incentives or subsidies being provided for a social business, the combination of which acts as major impediment to the growth of social businesses in India.
- f) **Lack of managerial capabilities:** Social enterprises functioning in India are lacking required managerial capabilities. Some of these enterprises do not have any vision, mission, objectives, structure and plan of action as well. As a result, they are not able to function effectively, make their presence felt, not able to create desired impact in the domains of their presence and ultimately leads to failure of these enterprises. Moreover, the proper and adequacy of infrastructure including the training, finance, consultation, and research are not in place for social entrepreneurship in India.
- g) **Collaboration:** In the rapidly changing environment, collaboration is almost a buzz word. Social enterprises have to work with other similar enterprises to overcome resource constraint and to create desired impact. Several enterprises across the globe used to work with other enterprises for social change. This trend needs to be continued and sustained for social cause. But, there are certain apprehensions which come in the way of working with others and a biggest challenge for social enterprises now a day.

## 9. MEASURES TO OVERCOME CHALLENGES

Challenges before the Social Entrepreneurs are many and growing with the time and dynamics of the society. These challenges need to be handled properly for the benefit of the society. Some of these challenges are simple and can be tackled with presence of mind. Certain measures need to be taken to overcome some more challenges come in the way. The following measures can be taken to overcome the challenges come in the way of social entrepreneurship in India.

- a) **Create awareness in a big way:** Awareness with regard to the concept of Social Entrepreneurship need to be created on a large scale because on the one hand majority of the people are not aware of this concept and on the other people confuse with other similar concepts like Non-Government Organizations, Corporate Social Responsibility and Philanthropy. Government alone is not at all completely responsible for task. Since it is a social cause, everyone shall take it as their own responsibility. So, media, NGOs, social media should come forward to take up the task of promoting social entrepreneurship and share the success stories for the better society.
- b) **Promote Education and Training:** In other parts of the academic world, Social Entrepreneurship has established for itself a niche in highly specialised training, research and practice. Universities of India should adopt enabling policies for beginning courses geared to social entrepreneurship and offer streams with social entrepreneurship as an academic course of specialized study. Training and development for this sector needs to focus on confidence building and leadership skills, using the social entrepreneurs as

resource persons who can impart hands on learning to the new generation. Training is needed for networking and resource mobilization for effective fulfilment of the goals. Thus the universities and professional schools have a great role to play in promoting social entrepreneurship as a way of solving social problems.

- c) **Government support:** Governments should frame policies for promoting innovation and entrepreneurship in the social sector and facilitate an enabling atmosphere, rewarding their performance and helping them scale their success. The governments can also revise its taxation policies in such a way that funding of social entrepreneurship ventures by corporate bodies and individuals becomes a win-win scenario for everyone. Governments can play the role of bringing together the social entrepreneurial initiatives that have the potential to create a greater impact in society. Further, the governments can provide start-up and growth financing for the social entrepreneurs, whose organisations have been seen as hotbeds of ideas and experiments. Grant for social entrepreneurship can become a budget allocation in every yearly budget of the government at all levels.
  
- d) **Access to financial resources:** Rate of failure of start-up enterprises who fail to ‘make it’ to the sustainable stage is extremely high, mainly because of the lack of adequate support at the incubation and pilot stage. Enabling access to finance right at the early/ start-up stage, and covering the full spectrum of an enterprise’s working capital needs, scaling requirements etc. would be a critical policy contribution. This would require a combination of tools like grants for incubation and research and development (in the case of tech-heavy enterprises), preferential lending, exemptions and incentives for individual and institutional equity providers and leveraging government start up funds specifically for this class of businesses.
  
- e) **Promote collaborations:** Several Social enterprises across the globe used to work with other enterprises for social change in sectors such as primary healthcare, education and livelihoods etc. This trend needs to be continued and sustained for social cause. Government shall come forward in a big way to take the help of social enterprises in the process of tackling certain social issues through Public Private Partnership (PPP) model. This sort of measure not only boost up the image of the Government but at the same time strengthen the Social enterprise and ultimately people of the society benefitted a lot.
  
- f) **Due recognition need to be provided:** Some social enterprises in India are doing extremely well in the process of providing solutions to eradicate social evils that threaten the social fabric. These enterprises work day and night with dedication, devotion, commitment and sincerity for the sake of other, particularly for the betterment of society. People behind such Social enterprises need to be recognized and honoured appropriately. Such selfless souls are getting due recognition in the form of Noble prizes, Raman megesis awards, Nation’s highest civilian awards etc. Certain foundations, trusts, Corporate houses also giving due recognition to such noble people. This trend need to be continued in a big way for the inspiration of young minds.

**g) Formation of Apex agency and self-regulations:** Social enterprises in India stress the need for an Apex agency either by the Government or even private sector. The goal of such an agency is to create partnership (between entrepreneurs and government), help enterprises in financing, capabilities and management development, technology and innovation, and access to markets. Moreover, self-regulations are needed to be prepared and followed by all. This sort of measures undoubtedly promotes a healthy environment and at the same time for the streamlined growth of this sector. Role played by the Apex agency and self-regulation is clearly evident in the Microfinance crisis in 2010 and for the sustenance of this sector in India.

**h) Consolidation of regulations:** Social entrepreneurs in India have to deal with government departments at national, state and local level to obtain various clearances. For instance, a social enterprise operating in a cluster of villages has to be registered with Central government body to obtain foreign donations. Therefore, simplifying and consolidating the legislation and reducing red-tape are the crucial first steps. In order to simplify matters, existing legislation for the incorporation and governance of social enterprises should be reviewed, consolidated and amended on a national level so that the regulations governing social enterprises can be standardized and more easily understood by those who want to become involved in this sector (Schwab Foundation 2006).

## 10. MAJOR FINDINGS AND CONCLUSIONS

Indian economy has been witnessing rapid growth since the onset of liberalizations from 1991 onwards. Unfortunately social and environmental problems of the country are increasing year after year (Christie & Honig, 2006) which necessitates the extensive application of multidisciplinary approaches and entrepreneurial energy in the social and environmental sectors. As a result, social entrepreneurship has significantly progressed over the last decade and with each passing day a greater number of people are using entrepreneurial skills in building sustainable enterprises for profit and non-profit purposes. Major findings of the study are as follow:

- a) Social Entrepreneurship has attracted the attention of many in recent years and became a buzz word. It combines social service with entrepreneurship and make this concept so attractive and unique.
- b) Social entrepreneurship is still treated as a young field of study, surrounded by lot of misconceptions. It is poorly defined and its boundaries to other fields of study remain fuzzy. Unfortunately, a social enterprise is very often considered as a 'Non-Governmental Organization' and equates it with 'Corporate Social Responsibility' by many.
- c) In the recent years, social entrepreneurship has witnessed a boom all over the world and India is not an exception to it. There is now a healthy competition and world class graduates are giving up lucrative jobs to work and contribute in meaningful ways towards the society.

- d) Social entrepreneurship has the power of not only bring specific change through the work that they do but also to inspire other people and organizations to work together, to scale solutions through their networking, and to find new ways to solve problems.
  - e) Literature survey revealed that there are limited numbers of empirical studies with very few quantitative studies available on this concept. Further, it is found that most of these studies are exploratory type, rigorous hypothesis testing is lacking, and little variety in research design is applied.
  - f) Social entrepreneurship in India is still at a nascent stage and it definitely holds great opportunity in the days to come. For the last three decades, the social entrepreneurs in India are doing extremely well and became inspiration to the rest of the world with their achievements in different fields.
  - g) The popularity of Social Entrepreneurship is growing at a very high pace in India. Earlier, organizations solving social problems were often assumed to be idealistic, philanthropic and lacking business acumen or the ability to be entrepreneurial. However, as the social sector has been coming in touch with the private sector, both have begun to realize that just one approach either pure philanthropic or pure capitalist is inadequate to build sustainable institutions.
  - h) Social enterprises in India is structured as a for-profit or non-profit, and may take the form of a co-operative, mutual organization, a social business, a community interest company, or a charity organization.
  - i) The challenges of Social entrepreneurs are bit different and unique in nature. In India, social entrepreneurs have been facing many challenges in view of peculiar conditions prevailing in the society. These challenges are preventing the growth and spread of social entrepreneurship in India as against to other regions and nations, who have made the social entrepreneurship a mission.
  - j) Social entrepreneurship (SE) as a concept is a relatively a new field of study, it has made its foray into the field of management and behavioural sciences in the past 20 years. There is an increasing body of knowledge on Entrepreneurship, however SE as a subject is relatively new. Hence, premier business schools, Entrepreneurial Development Institutes offering specialized courses on Social entrepreneurship.
  - k) All big brands and companies are adopting the concept of social entrepreneurship and trying to address the issues in our society by opening schools in far flung areas, educating women for family planning, making it possible for farmers and poor individuals to access low interest credits, establishing plants for waste treatment, planting trees and going green.
  - l) The hypothesis of the study have been tested on secondary data basis and it is found that
    - ✓ Social Entrepreneurship addresses the problems of the society in an innovative manner.
    - ✓ Social Entrepreneurship needs to overcome numerous challenges to create desired impact on the society in the emerging nations, particularly in India.
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Hence, both the alternative hypotheses have been proved, and null hypothesis have been rejected.

## REFERENCES

1. Light, Paul C (2008) 'Search for Social Entrepreneurship' Brookings Institution's Press.
2. Johanna Mair&Ignasi Marti, (2006) "Social Entrepreneurship Research: A Source of explanation, prediction and delight". Journal of World Business 41 pg. 36-44.
3. K.L Srivastava "Benefiting from Social Entrepreneurship and Social Businesses in India"
4. Bornstein, David (2007). How to Change the World – Social Entrepreneurs and the Power of New Ideas, Oxford University Press.
5. Dees, J Gregory (2001) "The Meaning of Social Entrepreneurship".
6. Johanna Mair&Ignasi Marti, (2006) "Social Entrepreneurship Research: A Source of explanation, prediction and delight". Journal of World Business 41 pg. 36-44.
7. Singh, (2007) Social Entrepreneurship: Conceptual Insights and Research Priorities, paper presented at the Seventh Biennial Conference on the new frontiers of Entrepreneurship, held between March 21-23, 2007, organised by EDI, Ahmedabad.
8. Skoll, Jeff "Social Entrepreneurship: Power to Change, Power to Inspire" Innovations 2009, Pg. 3-4, MIT Press.
9. Seelos, Christina; Mair, Johanna; Julie Battilana& M. Dacin, Tina. (2010) the Embeddedness of Social Entrepreneurship [: Understanding Variations across Local Communities. IESe Business School Working Paper WP – 858, May 2010, University of Navarra, Barcelona.
10. Hoogendroon, Brigitte &Pennings, Enrico (2010). What Do We Know About Social Entrepreneurship? An Empirical Research. International Review of Entrepreneurship 8(2) 2010, Senate Hall Academic Publishing.
11. Report on "Social Entrepreneurship in India-Unlocking the unlimited opportunities", by swissnex India, 2015. Derived from <https://www.kti.admin.ch/.../FINAL%20Social%20Entrepreneurship%20Report.../FIN>.
12. Singh,Pratap. Dr, "Social Entrepreneurship: A Growing Trend in Indian Economy", International Journal of Innovations in Engineering and Technology (IJIET), Vol. 1 Issue 3.ISSN: 2319 – 1058, 2012.
13. Murphy, P. J. and Coombes, S.M., 2009. A Model of Social Entrepreneurial Discovery, Journal of Business Ethics, Vol. 87(3): 325-336.

14. Hemantkumar P. Bulsara, S. G. (2015). *Social Entrepreneurship in India: An Exploratory Study*. Retrieved May 14, 2018, from journaliji.org: <http://www.journaliji.org/index.php/iji/article/view/20>.
15. Black, L. (2012, September 12). *Muhammad Yunus: the model social enterprise leader*. Retrieved May 20, 2018, from .the guardian: <https://www.theguardian.com/social-enterprisenetwork/2012/sep/12/muhammad-yunus-social-enterprise-leader>.
16. Ziegler, R. et al., 2014. Following Gandhi: Social Entrepreneurship as A Non-Violent Way of Communicating Sustainability Challenges. *Sustainability*, 6(2), pp.1018–1036. Available at: <http://www.mdpi.com/2071-1050/6/2/1018/> [Accessed November 12, 2014].

### Web links

\*1<http://www.thebetterindia.com/topics/social-enterprise/>

\*2<http://www.asianentrepreneur.org/top-10-social-entrepreneurs-of-India/>

\*3[https://en.wikipedia.org/wiki/Bunker\\_Roy](https://en.wikipedia.org/wiki/Bunker_Roy)

"4 SKS Microfinance," <http://indiamicrofinance.com/wp-content/uploads/2010/07/sks-ipo-angel-broking.pdf>.

\*5 Aravind Eye Hospital Case Analysis. Anti Essays. Retrieved May 11, 2018, from the World Wide Web: <http://www.antiessays.com/free-essays/379192.html>  
<http://www.123HelpMe.com/view.asp?id=163687>>.

\*6 Amul. Retrieved April 18, 2018, from <http://www.amul.com/m/about-us>.

## **Service Innovation: Towards a Sustainable Competitive Advantage in the Higher Education Sector**

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### **Abstract**

Service innovation is vital for service organizations to sustain competitive advantage for long-term survival the competitive and complex business environments. As one of the most critical service organizations, higher educational institutions are obliged to adopt continuous service innovations in achieving its long-term objectives and surviving in the competitive environment. In view of bridging the gap in previous literatures, the objective of this study is to examine the influence of components of service innovation, namely *product innovation*, *process innovation*, *organizational innovation*, *marketing innovation* on student satisfaction, as well as the influence of student satisfaction towards institution image and student loyalty. The findings showed that all four service innovation elements have considerable impacts on student satisfaction. Student satisfaction also has significant positive impacts on both institution image and student loyalty. Institution image partially mediates the relationship between student satisfaction and their loyalty. Institutes should place more emphasis and resource investments on service innovation to boost student satisfaction; subsequently leading to favorable institution image and loyalty for long-term development. Implications, limitations and future suggestions are also discussed.

### **1. INTRODUCTION**

Service innovation refers to the development of new services and practical ideas to improve both efficiency and effectiveness in the service delivery process (Chen, Lin and Yang, 2011). Service innovation is essential for service organizations to sustain a competitive advantage for the long-term survival the competitive and complex business environments. As one of the most critical service organizations, higher educational institutions are forced to adopt approaches to continue to innovate their services to achieve their long-term objectives and survive in the competitive era. Due to diverse changes in the global business environment and customer demands, reactive organizations will easily lose their competitive edge and face a variety of security and survival threats.

Despite the importance of service innovation in the higher education industry, a review of relevant literature revealed that less attention has been given to the research in this area (Noruzy, Abili, Pourkarimi and Ansari, 2017). Therefore, this study identifies the dimensions and measurement items of service innovation for the higher education industry; and further investigates the inter-relationships of service innovation, student satisfaction, institution image, and loyalty. For researchers, the findings of this research would help redefine relevant frameworks and inter-relationships among these variables and other related variables. In terms of implication, higher education practitioners would know how to prioritize their focus on different dimensions of service innovation; and tailor their strategies respectively to gain an edge over their competitors.

### **2. LITERATURE REVIEW**

#### **2.1 Student Satisfaction**

Oliver (1999) defined satisfaction as the outcome experienced by the consumers against a standard for pleasure or displeasure after consumption. Elliot and Shin (2002) stated that the

student satisfaction is based on their subjective evaluation of different results and education-related experiences, which are shaped by their experiences on the campus life. Satisfied students express a positive opinion about their institute, which attracts other students to the institute (Horstchraer, 2012; Fernandes, Ross and Meraj, 2013).

Some researchers stated that service providers provided a satisfactory service only if they are aware of their customers' requirements (Zeithaml, Bitner and Gremler, 1990; Winsted 2000). In the higher education sector, institutes adapt their services based on the students' desires, which positively affects their satisfaction levels and perceptions about the service quality. Besides relying on views of the academic insiders, the institutes must approach students for feedback in addition to monitoring the education quality in such institutes (Douglas and Douglas 2006).

## **2.2 Service Innovation**

Due to the absence of universal definition for the term, 'service innovation' can be interchangeable with 'service development' (Flikkema, Jansen and Van der Sluis, 2007). According to Gallouj and Savona (2008), innovative manufacturing concepts can be applied in the technology-intensive service sector. However, few researchers argued that the distinct characteristics of service have over physical products, namely the coproduction with customers, heterogeneity, intangibility, simultaneity and perishability should not be disregarded (Fitzsimmons and Fitzsimmons, 2010). The combination of the economically-viable innovations and earlier practices led to the economic development as well (Flikkema et al., 2007). There is a positive relationship between service innovation and students' satisfaction levels (Hu, Horng and Sun, 2009; Danjuma and Rasli, 2012). While service innovation was based on multiplicity, this study focused on components like *product innovation*, *process innovation*, *organizational innovation* and *marketing innovation*, as proposed by Sundbo and Gallaouj (1999).

### **2.2.1 Product Innovation**

Product innovation is defined as the introduction of up-to-date services and goods, with respect to their performance and functions (Oslo, 2005). Internal and external innovations were required for developing a new product to achieve better market position and increase visibility (Weiermair, 2004). Product innovation prompted the firms to be more flexible to provide better quality, costs and accessibility (Slack, Brandon-Jones and Johnston, 2016). Product innovation, accompanied by customer and organizer interaction also helps in delivering a better service and generate long-term profit (Chen et al., 2011). In the case of the higher education sector, institutes are required to design goods and services which incorporate customer value, flexibility, competitive advantage, product-customer match and profitability. Hence, this study hypothesized that:

*H1: Product innovation has a significant positive effect on the student satisfaction in the Malaysian higher education sector.*

### **2.2.2 Process Innovation**

Process innovation is defined as an improvement of processes and procedures which are involved in the production and distribution of the various services and goods (Oslo, 2005). The improvement in services depends on the service delivery workforce and the sincerity in their desire for organizational growth (Heracleous, Wirtz and Johnston, 2004). Zhou and Wang (2010) identified the customer-company relationships and stated that customer behavior was influenced by the favorable climate established by the organizations. Studies suggested that

frontline employees' engagement in service improvement and idea generation help companies gain competitive advantage (Berry et al., 2006; Lages and Piercy 2012). Higher educational institutes have to employ process innovation to gain an edge over their competitors. Therefore, this study hypothesized that:

*H2: Process innovation shows a significant positive effect on the student satisfaction in the Malaysian higher education sector.*

### **2.2.3 Organizational Innovation**

Organizational innovation is defined as the organizational or management techniques used by several institutes (Sundbo and Gallouj, 1999). Though changes made in the organizational innovation are not immediately obvious, the improvements lead to exclusive quality, cost-effectiveness, momentum and vulnerability (Cheng, 2014). Tang, Pee and Iijima (2013) stated that a process orientation directly affected the organization's internal management and organizational innovation, which led to higher employee innovativeness and customer integration. Organizational innovation leads to customer satisfaction and improved financial performance (Moon and Choi, 2014; Valenzuela, Mulki and Jaramillo, 2010). For the higher education sector, this study hypothesized that:

*H3: Organizational innovation shows a significant positive effect on student satisfaction in the Malaysian higher education sector.*

### **2.2.4 Marketing Innovation**

Marketing innovation is described as incremental changes which lead to contemporary behavior, strategies development and new markets (Sundbo & Gallouj, 1999). Naidoo (2010) observed that the marketing orientation positively affected the marketing innovation, leading to a competitive advantage and sustainable organizational performance (Arjunan, 2012). Most marketing activities are geared towards improving the customer-company relationship (Mariadoss, Tansuhaj and Mouri, 2011; Kumar et al., 2010). Cambra-Fiero, Melero-Polo and Vázquez-Carrasco (2013) observed that innovative non-technical marketing activities improve customer satisfaction and firm competitiveness. For the higher education sector, this study hypothesized that:

*H4: Marketing innovation shows a significant positive effect on student satisfaction in the Malaysian higher education sector.*

## **2.3 Institution Image**

The higher education institutions belong to an industry which heavily relies on the corporate image to survive and thrive (Elliot and Shin, 2002). Studies believe that the corporate image affects the rational perceptions and the association of an individual with the institution based on his attitude, experiences, feelings and knowledge (Fernandes et al., 2013). Hence, the higher educational institutes must develop their brand images in becoming distinctive and unique for survival, profitability and growth in this competitive industry. Kennedy (1997) identified two components of the corporate image, i.e., rational and emotional interpretations by an individual based on the cognitive and affective process components. The cognitive components were the antecedents of the effective components (Elliot and Shin, 2002). In this regards, satisfied students are more likely to have a favorable perception on the institution image. Hence, this study hypothesized that:

*H5: Student satisfaction shows a significant positive effect on institution image in the Malaysian higher education sector.*

## **2.4 Student Loyalty**

Customer loyalty is reflected by both behavioural and attitudinal dimensions, in which the behavioural dimension includes the individual's recurring purchase of a specific brand, and the attitudinal dimension is based on the customer's goodwill towards the brand and the desire to spread positive word of mouth (Chao, 2008). In the context of higher education sector, the behavioural intent is based on the students' desire to recommend their institute to other students, family or friends (Fernandes et al., 2013). Furthermore, they display an attitudinal goodwill towards the institute and subsequently recommend the said institute to their family, friends and acquaintances, at any opportunity. Hence, this study hypothesized that:

*H6: Student satisfaction shows a significant positive effect on student loyalty in the Malaysian higher education sector.*

*H7: Institution image shows a significant positive effect on student loyalty in the Malaysian higher education sector.*

*H8: Institution image mediates the influence of student satisfaction on student loyalty in the Malaysian higher education sector.*

## **3. METHODOLOGY**

This study is causal in nature. A qualitative method was employed to identify the dimensions of service innovation and measure the items for each dimension. A focus group consisting of 12 participants was formed to obtain in-depth industrial understanding for questionnaire development. The employed instruments were validated through a quantitative pre-test to determine suitability of language and items. Reliability and validity of instruments were further verified through a pilot-test among 100 students and practitioners in the higher education industry. Upon completion, the quantitative aspect began by the distribution of 200 questionnaires to higher education students through the convenience sampling method. Statistical tools in the Statistical Package for Social Sciences (SPSS) were used to test the hypothesized relationships among the variables.

## **4. ANALYSIS AND FINDINGS**

### **Respondents' Demographic Characteristics**

The demographic profile displayed a balanced gender ratio of male (53.8%) to female (46.2%) respondents. Majority of the respondents are aged between 16-25 (66.0%) with a handful in 26-35 (30.6%) and 36-45 (3.4%) region. The race which comprises to be the majority of the respondents is the Chinese (52.8%) race. Other than that, majority of the respondents are Malaysian (68.2%) and Single (78.8%). The big portion of the data collected also comes from students who are pursuing their bachelor's degrees (69.1%).

### **Exploratory Factor Analysis of Service Innovation Factors**

Exploratory Factor Analysis (EFA) was used to uncover and group the items upon common characteristics. The 17 service innovation items identified were analyzed using varimax rotation procedure to delineate the underlying dimensions associated with service innovation. The identified factor groupings of push factors extracted were named "process innovation", "product innovation", "organizational innovation", and "marketing innovation". The reliability of service innovation dimensions was above the recommended threshold of 0.70 (Hair et. al., 2010), which indicates that all items for service innovation are valid and reliable.

Statistical results reveal that respective service innovation dimensions possess significant positive and direct effect on student satisfaction. All four dimensions, namely product innovation, process innovation, organizational innovation and marketing innovation have significant positive and direct effect on student satisfaction. This is aligned with the findings from Hu et. al. (2009) and Danjuma and Rasli (2012). The relationship also suggests that availability of unique and contemporary higher education products (and/or services) will improve the level of satisfaction among students. Past studies noted that the customer-oriented innovation in the service industry increases its market demand (Bettencourt 2010; Bettencourt, Brown and Sirianni, 2013). Competitive advantage was achieved by integrating both radical and incremental innovations (Droege, Hildebrand and Forcada, 2009). This study includes elements of incremental innovations namely product dimension, process, organisational and marketing innovations (Sundbo and Gallaouj 1999). Students are likely satisfied if they find marketing communication attractive, well-planned, creative, and helpful.

Student satisfaction has significant positive impacts on both institution image and their level of loyalty. This was in agreement with the opinion expressed by Fernandes et al. (2013) and Bettencourt et al. (2013). Satisfied students displayed their loyalty to their institutes in a behavioural or an attitudinal manner (Bettencourt et al., 2013). Horstchraer (2012) discussed that students were more prone to attitudinal manner whereby they spread positive word of mouth about their institute. Hence, institutes must consider the student satisfaction levels in evaluating their corporate image. Student satisfaction is also a determinant in developing student loyalty.

Besides, institution image is found to be significant predictor of student loyalty in the higher education sector. The better the students' perceptions towards the institute image, the more likely they were to stay and complete their course (Fernandes et al., 2013). Institution image is considered as partial mediator on the relationship between student satisfaction and their loyalty in the Malaysian higher education sector. To encourage retention of students and long-term profitability, the institutes must build a good brand image by providing a conducive learning environment along with the consistency in delivering quality education.

## **5. CONCLUSION**

Based on the results of this study, there are several critical managerial implications to take heed of. The findings suggest that service innovation has a strong impact on customer satisfaction. Moreover, student satisfaction has a positive impact on institution image and loyalty. Institution image plays a partial mediating role between student satisfaction and their level of loyalty in the higher education industry. This indicates that the effect of student's level of satisfaction on their loyalty goes through the institution image. Higher education practitioners must better understand customer needs by implementing long-term strategies to attract more loyal students. Practitioners should place more emphasis and resource investments on service innovation to boost student satisfaction; subsequently leading to favorable institution image and loyalty for long-term development.

One of the setback in this study was the focus on the entire higher education industry without considering the types of institutions (private and public). Close-ended questions used in the questionnaire may have restricted the accuracy of representing actual thoughts and perceptions among higher education students. Therefore, the findings may not fully represent the target population; being less applicable in actual settings. Regarding feedbacks, diverging points-of-view may have been potentially overlooked since different backgrounds usually entail

dissimilar views. Therefore, future research should focus on different types of institutions, and further explore respondents from various backgrounds, demographic factors, and geographical regions to ensure higher contextual suitability, as well as obtain a better representation of the higher education industry.

The findings propose appropriate dimensions of service innovation, which can be used for future research and relevant model developments. The findings are insightful to services marketing scholars and relevant to practitioners who are interested in benchmarking better practices for higher education service concept. The outcomes yield valuable information for higher education practitioners in developing effective services marketing strategies to cope with the stiff competition; ensuring their long-term profit margin.

## REFERENCES

- Arjunan, C. (2012). Innovation in marketing. *Journal of Management and Science*, 2(4), 105.
- Avenarius, H. (1993). Introduction: image and public relations practice. *Journal of Public Relations Research*, 5, 65-70.
- Berry, L. L., Shankar, V., Parish, J. T., Cadwallader, S., & Dotzel, T. (2006). Creating new markets through service innovation. *MIT Sloan Management Review*, 47 (2), 56-63.
- Bettencourt, L. A. (2010). *Service innovation: How to go from customer needs to breakthrough services*. New York: McGraw-Hill.
- Bettencourt, L. A., Brown, S. W., & Sirianni, N. J. (2013). The secret of true service innovation. *Business Horizons*, 56 (1), 13-22.
- Cambra-Fierro, J. J., Melero-Polo, I., & Vázquez-Carrasco, R. (2013). Customer engagement: Innovation in non-technical marketing processes. *Innovation: Management, Policy & Practice*, 15 (3), 326-336.
- Chao, P. (2008). Exploring the nature of the relationships between service quality and customer loyalty: an attribute-level analysis. *The Service Industries Journal*, 28 (1), pp. 95-116.
- Chen, R. H., Lin, R. J., & Yang, P. C. (2011). The relationships between eCRM, innovation, and customer value – An empirical study, *Proceedings of the IEEE International Summer Conference of Asia Pacific 2011* (p. 299-302), Dalian.
- Cheng, B. L. (2014). The impact of service innovation on tourist satisfaction: Evidence from the Malaysian tourism industry. *Global Journal of Business and Social Science Review*, 2 (3), 96 – 106.
- Danjuma, I., & Rasli, A. (2012). Imperatives of service innovation and service quality for customer satisfaction: Perspective on higher education. *Proceedings of the 2012 International Conference on Asia Pacific Business Innovation and Technology Management*. 40, 347-352.
- Douglas, J. & Douglas, A. (2006), “Evaluating teaching quality”, *Quality in Higher Education*, Vol. 12 No. 1, pp. 3-12.
- Droege, H., Hildebrand, D., & Forcada, M. A. H. (2009). Innovation in services: Present findings, and future pathways. *Journal of Service Management*, 20 (2), 31-55
- Elliott, K. M. and Shin, D. (2002). Student satisfaction: an alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24 (2), 197-209.
- Fernandes, C., Ross K. & Meraj M. (2013). Understanding student satisfaction and loyalty in the UAE HE sector. *International Journal of Educational Management*, 27 (1), 613–630.
- Fitzsimmons, J. A., and M. J. Fitzsimmons (2010). *Service Management*. New York: McGraw-Hill.
- Flikkema, M., Jansen, P., & Van Der Sluis, L. (2007). Identifying Neo-Schumpeterian innovation in service firms: A conceptual essay with a novel classification. *Economics*

- of Innovation & New Technology, 16 (7), 541–558. <http://dx.doi.org/10.1080/10438590600918602>.
- Gallouj, F., & Savona, M. (2008). Innovation in services: a review of the debate and a research agenda. *Journal of Evolutionary Economics*, 19(2), 149–172.
- Hair, J. F., Black, W.C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective*. New Jersey: Prentice Hall.
- Heracleous, L., Wirtz, J., & Johnston, R. (2004). Cost-effective service excellence: Lessons from Singapore Airlines. *Business Strategy Review*, 15 (1), 33-38.
- Horstchraer, J. (2012). University rankings in action? The importance of rankings and an excellence competition for university choice of high-ability students. *Economics of Education Review*, 31, 1162–1176.
- Hu, M. L., Horng, J. S., & Sun, Y. H. (2009). Hospitality teams: Knowledge sharing and service innovation performance. *Tourism Management*, 30, 41-50.
- Kennedy, S. H. (1997). Nurturing corporate image. *European Journal of Marketing*, 11(3), 120-64.
- Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Tillmanns, S. (2010). Undervalued or overvalued customers: Capturing total customer engagement value. *Journal of Service Research*, 13 (3), 297-310.
- Lages, C. R., & Piercy, N. F. (2012). Key drivers of frontline employee generation of ideas for customer service improvement. *Journal of Service Research*, 15 (2), 215-230.
- Mariadoss, B., Tansuhaj, P. & Mouri, N. (2011). Marketing capabilities and innovation-based strategies for environmental sustainability: An exploratory investigation of B2B Firms. *Industrial Marketing Management*, 40, 1305-1318
- Moon, H. K., & Choi, B. K. (2014). How an organisation's ethical climate contributes to customer satisfaction and financial performance: Perceived organisational innovation perspective. *European Journal of Innovation Management*, 17 (1), 85-106.
- Naidoo, V. (2010). Firm survival through a crisis: The influence of market orientation, marketing innovation and business strategy. *Industrial Marketing Management*, 39 (8), 1311-1320.
- Noruzay, A., Abili, K., Pourkarimi, J. & Ansari, M. (2017). A conceptual model for service innovation excellence for non-governmental higher education. *Marketing and Management of Innovations*, 2, 129–141.
- Oliver, R. L. (1999), “Whence consumer loyalty”, *Journal of Marketing*, Vol. 63 Special Issue, pp. 33-44.
- Oslo, M. (2005). *Guidelines for collecting and interpreting innovation data* (3rd ed.). Paris: OECD Publishing.
- Slack, N., Brandon-Jones, A. & Johnston, R. (2016). *Operations management*. United Kingdom: Pearson
- Sundbo, J., & Gallouj, F. (1999). *Innovation in Services in Seven European Countries: The Results of Workpackage 3- 4 of the SI4S Project*. (Synthesis Report for the European Commission, Roskilde University, Denmark; and University of Science and Technology of Lille, France). Retrieved from <http://css.ruc.dk/Publikationer/CSSRapport1.pdf>
- Tang, J., Pee, L. G., & Iijima, J. (2013). Investigating the effects of business process orientation on organizational innovation performance. *Information & Management*, 50 (8), 650-660.
- Valenzuela, L. M., Mulki, J. P., & Jaramillo, J. F. (2010). Impact of customer orientation, inducement and ethics on loyal to the firm: Customers' perspective. *Journal of Business Ethics*, 93 (2), 277-291.

- Weiermair, K. (2004). Product Improvement or Innovation: What is the Key to Success in Tourism. (Journal article, University of Innsbruck, Austria). Retrieved from <http://www.oecd.org/cfe/tourism/34267947.pdf>
- Winsted, K. F. (2000), "Service behaviors that lead to satisfied customers", *European Journal of Marketing*, Vol. 34 No. 3/4, pp. 399-417.
- Zeithaml, V. A., M. J. Bitner, and D. D. Gremler (2008), "Services Marketing – Integrating Customer Focus Across the Firm", 5th Edition. Boston: McGraw Hill.
- Zhou, M., & Wang, H. (2010). The impact process of service climate on customer citizenship behaviours: Understanding the role of customer-company identification. *Information Management, Innovation Management and Industrial Engineering*, 3, 443-446.

# Strategic thinking of CEOs on framing a strategy: A system dynamics approach in Indian automobile market

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## **Abstract:**

A company desiring its goal as a market leader needs to get its strategies right, most often the strategies are framed by a group of executives directed by a Chief Executive Officer (CEO). Framing a strategy for the company requires a vast knowledge on the existing market and the dynamics in the market that is to happen over a period of time. Strategic thinking of CEOs plays a vital role in successfully handling such unexpected dynamic changes.

**Purpose** – This purpose of this study is to quantify the strategic thinking process, considering the different psychological traits of a CEO, and how these traits affect the strategies framed.

**Design/methodology/approach** – A quantitative analysis is done in this study using the system dynamics tool. The data is extracted using the social media analytics and the same is given as an input for the system dynamics model which is used for modelling and simulation of the interdependencies between the psychological factors. The analysis decodes how a change in the psychological trait of a CEO has an impact on the strategy framed for the company in an automobile market.

**Findings** – The study has explained how different psychological traits affect the thinking process of a CEO and how the strategies are framed with this thinking behavior. Use of the literature, evaluation and the constructed models are limited.

**Research limitations/implications** – The study is limited only to automobile industry in India and only partial psychological constructs were considered to examine their impact on the thinking process. This study can be further extended by analyzing the same to various other industries along with many other psychological constructs.

**Practical Implications** – The findings identify the change in behavior of the thinking process due to the fluctuations in the psychological traits of a CEO. This helps the top management to take into considerations different factors that affect the strategies framed for the company and

what are the threshold points in the system that are to be focused during the framing of a strategy.

**Originality/value** – The study fills the unattended gaps in the literature regarding how the psychological traits are interdependent on each other and how their relationship is affecting the thinking process.

**Keywords:** *Strategic Thinking, Decision Speed, Psychological Traits.*

## **Introduction:**

Strategic Thinking is the attitude of an organizational thinking process which drives smart actions and the will to inspire the entire firm to work towards a goal, achieving the competitive advantage over the competitors. The framework of strategic thinking has been divided in two different cycles (Kazmi & Naaranoja, 2015) . The first cycle is the basic flow of thinking, which involves three components which are system thinking, creativity and vision. This cycle in an advanced stage is converted into the revised flow of thinking which consists of planning & implementation, problem solving and decision making. The two cycles are a closed loop which means they are a continuous process involved in strategic thinking. This particular model is used to frame the advanced model which includes other exogenous and endogenous variables related to the business model. Strategic thinking is a process consisting of four different approaches (Bouhali, et. al., 2015), which describes how these four approaches give us an understanding before framing a strategy or a strategic plan. The approaches are mentioned as The How approach, The What How approach, The What Why How approach, The Why What How approach. These set of approaches give us a detailed considerate of all the terms to be considered before framing the strategic plan. There is a need to develop new plans and strategies by the CEO's when it is found that there are issues with the existing strategies. To understand the process of framing a strategy (Torres, et. al., 2017) a model in the form of a flow chart is constructed to check the feedbacks on the existing strategies. The same is converted to a system dynamics model with different cause and loop diagrams to check the affect of each variable on the model a henceforth a stock and flow diagram is constructed with same data to understand the behavior of the model. The challenges faced by a pulp and paper industry in the market is explained and a system dynamics modelling approach is suggested for understanding the strategic application to the business model (Risch, et. al., 1995). This study explained how side effects of an unattended existing strategy may affect the intended effect of the new strategy. The above introduction to the study explains how psychological factors affect the thinking of a CEO.

## **Literature Review:**

Research on strategic thinking in the literature has suggested that thinking process of a person is based on his psychological behavior and there are many psychological constructs to effectively capture the thinking process (Suchetha & Hermann, 2010). Psychological attributes determine how vigorously CEOs' look for data, how much they scan, how they gain knowledge about external environmental and internal organizational events or trends, and which sources they rely on to obtain and circulate the data (Hambrick, 1982; Miller & Toulouse, 1986). The research has concentrated on finding what are the different psychological traits of a person that

affect his/her thinking process and there is a vast amount of research done in the literature regarding the same (Hambrick, 1982; Miller & Toulouse, 1986; McCrae & Costa, 1987; Suchetha & Hermann, 2010). Many psychological constructs are explained in the literature and a few among them are taken in this study to analyze the thinking process of the CEO.

**Agreeableness.** Agreeableness has been defined as the tendency to be a mixture of both a discussion and a dialogue, which can also be defined as both altruistic and complaint about a particular situation (Bono & Judge, 2004). The relationship between CEO agreeableness and the capacity to bring about change is unclear due to the various mechanisms opposing the system. Agreeableness promotes a society of creativeness and risk taking based on supportive, accessible, and trust-based relationships with the employees (Judge & Bono, 2000). Controlled levels of agreeableness allow CEOs to efficiently equalize the opposing factors, also to improve the working atmosphere, whereas very high levels of agreeableness provoke nonparticipation and obedience, also very low levels of agreeableness destabilizes the originality and risk taking capabilities of the employee which may have an effect on the strategic thinking.

**Emotional Stability.** Emotional Stability is the capability of a person to control his various emotions which include rage, anger, happiness, sadness, depression and so on. Emotional adjustment is the capacity of person to bend his/her emotive conditions to different situational stresses and to persist composed and balanced in nerve-wracking conditions (McCrae & Costa, 1997). Emotional stability is measured as a strong interpreter of a person's malleability to impulsive and fluctuating situations (Peterson et al., 1993) which affects the strategic thinking process. Researchers have stated that emotionally stable leaders are high in self-confidence and are not frightened to challenge the situations they come across. Thus, the certainty and determination of an emotionally stable CEO may endorse efficiency in work by removing obstacles such as organizational inactivity and filtering preferences.

**Conscientiousness.** Conscientiousness reveals the level to which a person shows his/her steadiness and a success positioning (Judge et al., 2002; McCrae & Costa, 1997). CEOs' with higher conscientiousness levels prevent compelling actions that differ considerably from their past experiences. Goal driven CEOs also texture the need to individually take control and adopt accountability for strategic activities. CEOs with high desires for success tend to handhold most of the control in their own hands and to closely supervise and regulate the employee activities in their firms. Conscientious CEOs have a urge to reduce ambiguity and to gather explicit response on their performance (Judge et al., 2002). Recent studies from the organizational behavior states that there is a negative relationship between conscientiousness and the capability to adapt to changing situations. Hence it is proved that that CEOs' with low level of conscientiousness get adapted better to changing situations rather than the ones with higher levels of conscientiousness.

**Extraversion.** Extraversion is related with sociability and self-expression (Judge et al., 2002). Extraverted leaders manage to take the initiative in social gatherings, to familiarize people to each other and to be collectively attractive by being entertaining, presenting topics of debate, and energizing social connections (House & Howell, 1992). Extraverted leaders often try to build a network of social contacts which are broad in nature. CEOs who improve widespread "advice networks" are open to substitute and innovative points of view on a situation, this acquaintance enhances CEOs' ability to rapidly categorize the strategic confronts facing their companies and cultivate high-grade solutions to them. Developing the capability to quickly

adjust to environmental fluctuations requires designing of new ideas that may diverge from past strategies and the inventiveness of such strategies may create a conflict among the employees, Extravert CEOs can efficiently remove such conflict and stimulate rapid application of new strategies through their exceptional skills and their capability to take the inventiveness and convince and guide people so as to stimulate the efficiency in their work.

**Openness to Experience.** CEOs who are exposed to new practices are mentally inquisitive, accessible to an extensive range of motivations, value abnormal thought processes, and often seen as thoughtful and innovative (McCrae & Costa, 1987). Individuals with openness to experience have a strong requirement for change and are highly capable of accepting and adjusting to others' views (Costa & McCrae, 1988). CEOs open to new experiences vigorously seek enthusiasm and risks (Judge et al., 2002). Hence open CEOs are likely to minimize discriminating views and interpretation partialities, which helps the firm to push towards efficient working.

**Temporal Focus.** Temporal Focus is defined as a construct that describes the individuals psychological past, present and the future. It can also be explained as the extent to which an individual considers his perceptions of the past, present and the future. A strong past focus, which is connected with repeated use of past experiences in decision making can improve learning when previous understandings and thoughts are analyzed for applicable lessons (Shipp et al., 2009). Individual with a strong present focus acquires a “here and now” emphasis and highlights the present situation in decision making. Future focus is connected with thinking principally about what the future clamps and with foreseeing of future occurrences (Bluedorn, 2002; Wallace, 1956). Concluding with same, the study is taken further by finding the suitable variables from the literature.

## **Methodology:**

Strategic thinking as explained, is measured based on different psychological traits of a person, as this study is about how to quantify the thinking process of a CEO, a quantitative methodology is adopted to quantify the entire system and to analyse the behaviour of the system over a period of time. The approach used in this study is system dynamics modelling and simulation which analyses the behaviour of the system. System dynamics have been used by researchers to conduct system analysis through simulation of various expected scenarios (Alvarez et al., 2009; Mikulskiene and Pitrenaitė-Zilėniene, 2013). The above modelling and simulation process will generate results for the main stock and flow variables and hence a forecast will be made to predict the dynamics of the system over a period of time. There are certain steps to be followed during the application of the system Dynamics tool they are as follows (Sterman, 2000):

1. Identification of the problem/situation.
2. Identifying the variables and their relationship.
3. Modelling using system dynamics Software (Vensim).
4. Constructing a stock and flow diagram.
5. Verify the model.
6. Validate the model.
7. Simulate the model.

## 8. Analyse the results.

Firstly, a causal loop diagram is constructed based on the variables that are extracted from the literature and the relationships between the variables are indicated with the help of the polarities and delays. A causal loop diagram explains the loops that are formed in the system and depending on the behaviour of the loop they are classified as reinforcing loop and balancing loop. After the causal loop diagram has been completed and the loops are generated the next step is to construct the stock and flow diagram. Stock and Flow diagram is the main part of the system dynamics modelling, where the variables are grouped under three categories of variables namely level, rate, auxiliary and constants. The level variable is the stock variable which shows the behaviour of the stock which is affected by the input and output of the rate variables. Rate variables show the rate at which the input or the output is controlled and this is dependent on the Auxiliary variables. Auxiliary variables are the psychological constructs where the entire dynamics of the system are formulated and a change in the behaviour of these variable reflect in the stock and flow of the entire system. Auxiliary variables get their input from the constants where the sample data is loaded and the same data is used as the input for formulating the auxiliary variables. After the entire model is formulated and validated, simulation is done for the different values which are obtained from the samples. Every run has its own set of values and every set of values show a different behaviour from the rest. Finally the generated results in the form of graphs or tables are interpreted for the behaviour of the system and policies/strategies/decisions are formed/framed accordingly. The same method is used in this study to explain how the psychological constructs effect the strategic thinking of the CEOs.

The thinking module consists of all the psychological constructs such as the temporal focus, conscientiousness, emotional stability, neuroticism, agreeableness, dependability and so on. Existing issue rate and strategy framing rate are considered as the rate or the flow variables which explains the rate at which the firm is facing the issues and the rate at which the strategies are to be formed. Strategic thinking is the stock variable where the thinking process is quantified and predicted in the form of a graph for a period of time which can be analyzed for the thinking levels of the CEO. All the psychological constructs have their own set of constants where the data is loaded, constants are extracted from the literature

Since the study has been done for an automobile industry in India, so a sample of 30 companies were considered and the CEO's of those companies were check for their presence in the social media applications like Twitter and LinkedIn. Since CEO's of those companies are active in these social media applications, their tweets and posts in twitter and LinkedIn were extracted and they were checked for the word count of particular words which are mentioned in the description of variables in Table 1. This process is done using a software R Studio which helps in qualitative analysis such as word count. An algorithm was written to extract the tweets and posts from the social media applications and data for the past three weeks. The analysed word counts were loaded as data for the constants which are connected to the auxiliary variables. This acts as the data for the psychological. Five different sets of data were loaded as input to the model and the analysis was done to predict five different behaviors.

## **Results & Discussions:**

After the model has been constructed and formulated, its loaded with five different sets of data and the simulation was done for five different runs to check the behaviors of the system for five conditions.

Condition 1 (Blue Line) : Extreme positive values of all psychological factors.

Condition 2 (Grey Line) : Extreme negative values of all psychological factors.

Condition 3 (Black line) : 80% values of positive traits of all psychological factors.

Condition 4 (Green Line): 60% values of positive traits of all psychological factors.

Condition 5 (Red Line) : 40% values of positive traits of all psychological factors.

The results are generated in the form of a graph. The simulation was done for a period of 100 months with the data that was collected for the past one month. The model is simulated at a time step of 0.125 which means the model is simulated for four times a month and approximately 400 times for the entire simulation. Lesser the time step more the visibility of the deviations in the behaviour of the system.

The strategic thinking model has been simulated for five different psychological conditions and the results are generated in the form of graphs, model has also been validated using six different validation tests. From the analysis it is clearly seen that the behavior changes as the thinking process of the CEO changes. This gives an idea of the various dynamics in the system due to the change in the psychological levels of the CEO. The model has been checked for extreme conditions of both positive and negative traits of a CEO and the behavior of the system changes accordingly. Considering condition 1 from munificence of market, the shows that there is a good growth in the market whereas there is a decline in the behavior after a certain period. This clearly shows that behavior of a system is dependent on each and every factor that exists in the system and a small change in one of the factors can cause a change in the behavior of the system. The analysis also explained that when the positive traits and negative traits of a CEO are balanced properly the system may show a good growth. However, the positive and the negative traits lead the CEOs' to abandon their mental set and should lead over time to more nonconformist strategies. This study is a extended research of how the psychological factors can be quantified using the social media analytics and how the quantified factors together contribute to the thinking process of the CEO. This study can be further used as a reference for the researchers to study the thinking process of the CEOs' and their behavior with respect to many other parameters in a company. The study also delivers few managerial implications to the managers and analysts in the industrial domain, as to how the thinking process of any executive can be determined and how to study the behavior of the executives with respect to different parameters. This study also helps the top management to take into considerations different factors that affect the strategies framed for the company and what are the threshold points in the system that are to be focused during the framing of a strategy. Finally, our choice to focus on the automobile industry makes it possible for the study to avoid the problem of allowing for different institutional limitations but confines the generalizability of our inferences.

## REFERENCES

- Arndt, H. (2007, July). Using system dynamics-based learning environments to enhance system thinking. In *Conference Proceedings, The 2007 International Conference of the System Dynamics Society and 50th Anniversary Celebration*.
- Behl, D. V., & Ferreira, S. (2014). Systems thinking: An analysis of key factors and relationships. *Procedia Computer Science*, 36, 104-109.
- Blettner, D. P., Chaddad, F. R., & Bettis, R. A. (2012). The CEO performance effect: Statistical issues and a complex fit perspective. *Strategic Management Journal*, 33(8), 986-999.
- Bono, J. E., & Judge, T. A. 2004. Personality and transformational and transactional leadership: A meta analysis. *Journal of Applied Psychology*, 89: 901–910.
- Carchiolo, V., Longheu, A., & Malgeri, M. (2015, September). Using Twitter Data and Sentiment Analysis to Study Diseases Dynamics. In *International Conference on Information Technology in Bio-and Medical Informatics* (pp. 16-24). Springer, Cham.
- Chishima, Y., McKay, M. T., & Murakami, T. (2017). The reliability and validity of the Temporal Focus Scale in young Japanese adults. *Personality and Individual Differences*, 119, 230-235.
- Costa Jr, P. T., McCrae, R. R., & Dye, D. A. (1991). Facet scales for agreeableness and conscientiousness: A revision of the NEO Personality Inventory. *Personality and Individual Differences*, 12(9), 887-898.
- Crossland, C., Zyung, J., Hiller, N. J., & Hambrick, D. C. (2014). CEO career variety: Effects on firm-level strategic and social novelty. *Academy of Management Journal*, 57(3), 652-674.
- Delgado-García, J. B., La Fuente-Sabaté, D., & Manuel, J. (2010). How do CEO emotions matter? Impact of CEO affective traits on strategic and performance conformity in the Spanish banking industry. *Strategic Management Journal*, 31(5), 562-574.
- Dudycha, G. J. (1941). A scale for measuring attitude toward dependability. *The Journal of Social Psychology*, 13(1), 59-69.
- Elliott, J. C. (2010). Humility: Development and analysis of a scale.
- Hambrick, D. C. 1982. Environmental scanning and organizational strategy. *Strategic Management Journal*, 3: 159–174.

- Herrmann, P., & Nadkarni, S. (2014). Managing strategic change: The duality of CEO personality. *Strategic Management Journal*, 35(9), 1318-1342.
- House, R. J., & Howell, J. M. 1992. Personality and charismatic leadership. *Leadership Quarterly*, 3: 81–108.
- Jiao, H., Alon, I., & Cui, Y. (2011). Environmental dynamism, innovation, and dynamic capabilities: the case of China. *Journal of Enterprising Communities: People and Places in the Global Economy*, 5(2), 131-144.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, 2(1999), 102-138.
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives . In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102–138). New York: Guilford Press.
- Judge, T. A., & Bono, J. E. 2000. Five-factor model o personality and transformational leadership. *Journal of Applied Psychology*, 85: 751–765.
- Judge, T. A., Bono, J. E., Ilies, R., & Gehardt, M. W. 2002. Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87: 765–780.
- Kear-Colwell, J. J. (1965). Studies of the IPAT neuroticism scale questionnaire (NSQ). *British Journal of Clinical Psychology*, 4(3), 214-223.
- Kunc, M. (2012). Teaching strategic thinking using system dynamics: lessons from a strategic development course. *System Dynamics Review*, 28(1), 28-45.
- Lyneis, J. M. (1999). System dynamics for business strategy: a phased approach. *System Dynamics Review*, 15(1), 37.
- McCrae, R. R., & Costa, P. T., Jr. 1987. Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52: 81–90.
- McCrae, R. R., & Costa, P. T., Jr. 1997. Personality trait structure as a human universal. *American Psychologist*, 52: 509–516.
- Miller, D., & Toulouse, J. M. 1986. Chief executive personality and corporate strategy and structure in small firms. *Management Science*, 32: 1389–1409.
- Nadkarni, S., & Chen, J. (2014). Bridging yesterday, today, and tomorrow: CEO temporal focus, environmental dynamism, and rate of new product introduction. *Academy of Management Journal*, 57(6), 1810-1833.

- Nadkarni, S., & Herrmann, P. O. L. (2010). CEO personality, strategic flexibility, and firm performance: The case of the Indian business process outsourcing industry. *Academy of Management Journal*, 53(5), 1050-1073.
- Ou, A. Y., Waldman, D. A., & Peterson, S. J. (2018). Do humble CEOs matter? An examination of CEO humility and firm outcomes. *Journal of Management*, 44(3), 1147-1173.
- Pai, R. R., & Alathur, S. (2018). Assessing mobile health applications with twitter analytics. *International journal of medical informatics*, 113, 72-84.
- Pala, Ö., & Vennix, J. A. (2005). Effect of system dynamics education on systems thinking inventory task performance. *System Dynamics Review: The Journal of the System Dynamics Society*, 21(2), 147-172.
- Pan, X., Valerdi, R., & Kang, R. (2013). Systems thinking: A comparison between Chinese and Western approaches. *Procedia Computer Science*, 16, 1027-1035.
- Papageorgiou, G., & Hadjis, A. (2011). Strategic management via system dynamics simulation models. *World academy of science, engineering and technology*, 59, 229.
- Senge, P. M. (1991). The fifth discipline, the art and practice of the learning organization. *Performance+ Instruction*, 30(5), 37-37.
- Peterson, R. S., Smith, D. B., Martorana, P. V., & Owens, P. D. 1993. The impact of chief executive officer personality on top management team dynamics: One mechanism by which leadership affects organizational performance. *Journal of Applied Psychology*, 88: 795–808.
- Rahmandad, H. (2015). Connecting strategy and system dynamics: an example and lessons learned. *System Dynamics Review*, 31(3), 149-172.
- Robert Baum, J., & Wally, S. (2003). Strategic decision speed and firm performance. *Strategic Management Journal*, 24(11), 1107-1129.
- Shepherd, N. G., & Rudd, J. M. (2014). The influence of context on the strategic decision-making process: A review of the literature. *International Journal of Management Reviews*, 16(3), 340-364.
- Shipp, A. J., Edwards, J. R., & Lambert, L. S. 2009. Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. *Organizational Behavior and Human Decision Processes*, 110: 1–22.
- Snabe, B., & Größler, A. (2006). System dynamics modelling for strategy implementation—case study and issues. *Systems Research and Behavioral Science*, 23(4), 467-481.

Sterman, J. D. (2000). *Business dynamics: systems thinking and modeling for a complex world* (No. HD30. 2 S7835 2000).

Sweeney, L. B., & Sterman, J. D. (2000). Bathtub dynamics: initial results of a systems thinking inventory. *System Dynamics Review*, 16(4), 249-286.

Tsaousis, I., & Kerpelis, P. (2004). The traits personality questionnaire 5 (TPQue5). *European Journal of Psychological Assessment*, 20(3), 180-191.

Weil, H. B. (2007). Application of system dynamics to corporate strategy: an evolution of issues and frameworks. *System Dynamics Review*, 23(2-3), 137-156.

Wu, S. J., Melnyk, S. A., & Flynn, B. B. (2010). Operational capabilities: The secret ingredient. *Decision Sciences*, 41(4), 721-754.

## **Title: Structural Equation Modeling: An Emerging Tool in Social Sciences**

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**Abstract:** Statistical analysis has been an essential tool for social science researchers. Applications of statistical methods have been improved with the advent of computers in this technology-driven world. To comprehend more complex relationships associated with present research directions it is increasingly necessary to apply more sophisticated multivariate data analysis methods in the social science disciplines. The main aim of this article is to present partial least squares (PLS) as an evolving approach to structural equation modeling (SEM), and highlight its advantages and limitations to provide an overview of recent research on this method across various fields like Management, Marketing etc. SEM has experienced increasing dissemination in a variety of fields in recent years with non normal data, small sample sizes and the use of formative indicators being the most prominent reasons for its application to handle data inadequacies such as heterogeneity. This article provides an introduction to SEM for researchers meta-analyze reasons for SEM usage across the marketing, management, and MIS fields. This article addresses, the key methodological issues like reasons for using PLS-SEM, data and model characteristics, outer and inner model evaluations, and reporting.

**Keywords:** Empirical research methods, Partial least squares, Path modeling, Structural equation modeling

### **Introduction**

SEM is primarily intended for research contexts that are simultaneously data-rich and theory-skeletal. The model building is then an evolutionary process, a dialog between the investigator and the computer. With the increased usage of SEM can be credited to the method's ability to handle problematic modeling issues that routinely occur in the social sciences such as unusual data characteristics (e.g. nonnormal data) and highly complex models. This paper aims to discuss the current state of SEM by providing an overview of SEM technique based on an iterative approach that maximizes the explained variance of endogenous constructs, This article mainly focuses on confirming theories by determining how well a model can estimate a covariance matrix for the sample data, SEM operates much like a multiple regression analysis (Hair et al., 2011). This characteristic makes SEM particularly valuable for exploratory research purposes.

## **Review of Literature**

SEM is an advanced set of statistical procedures that is not yet part of the core statistical curriculum of social work doctoral education. In addition, numerous advances have made the software more user-friendly, enabling users to have conducted an analysis without fully understanding the underlying assumptions or the implications from their analytic decisions.

In a review of factor analysis as reported in the *Personality and Social Psychology Bulletin*, Russell (2002) investigated the use of factor analysis over time and highlighted many appropriate uses.

According to Sellers et al., (2004), Jenson (2005) concern about journal quality in social work research has been growing. It has been suggested that social work journals often do not have knowledgeable reviewers with sufficient scholarly expertise to provide rigorous critiques.

SEM has received considerable attention in a variety of disciplines including marketing (Hair et al., 2012b), strategic management (Hair et al., 2012a), management information systems (Ringle et al., 2012), operations management (Peng and Lai, 2012), and accounting (Lee et al., 2011).

SEM provides numerous advantages to researchers working with structural equation models. SEM is an emerging tool to explain the rationale behind the decision (Chin, 2010). SEM generally achieves higher levels of statistical power and demonstrates much better convergence behavior (Henseler, 2010; Reinartz et al., 2009).

## **Rationale of the Study**

Employee empowerment has gained a significant role in service-oriented organizations like financial institutions especially in banks. It is very important that bank employees have to serve the customers personally and acts as a bridge between bank's financial products and services. Therefore, it is very apparent that bank employees should be able to monitor and control the bank services as per customer requirement. The employees have to take necessary actions and quick decisions to fulfill the customer demands. Accordingly, the quality of service will improve thereby banks to win their customer satisfaction. Hence, it is necessary to understand the inter-dependent relationship among employee empowerment, job satisfaction and job performance. Also, how these relationships vary in the presence of mediating and moderating variables. In spite of several studies conducted in this area, focus is not made on the comparative study of public & private sector banks on employee empowerment. Therefore the present study has focused in above said area.

## **Statement of the Problem**

Banking sector is one of the most important competitive industries among service sectors especially in the post reform period of early 1990's. As a result banks focused on customer centric services by using advanced technology, tools and techniques to identify customer needs and preferences. Intense competition is established among the banks operating in India. So, Banks started focusing on service quality in order to achieve its performance goals.

The service operations are characterized by extensive interactions between service providers and customers. So customer satisfaction is closely associated with various service encounters and

service performances. For this reason, it is important for employees to be initiative and involved to experience job satisfaction from their work to contribute to the success of the organization.

Banking sector employees are less satisfied and less motivated than employees in other lines of work. The banking industry also suffers from high employee turnover rate and job stress. There are no adequate studies linking psychological empowerment and job satisfaction among employees. Lack of psychological empowerment could be a reason for these problems facing by banking sector. Majority of the studies on psychological empowerment are carried out in manufacturing sector and studies in service sector are concentrated on hotel industry and hospitals only. The present research study is directed to explore the dimensions of empowerment of employees in banking sector with reference to SBI and ICICI banks. This study is done with an aim to fill this research gap of examining empowerment impact on job satisfaction and job performance in select public and private sector banks in the State of Telangana.

### **Research Gaps**

Based on the extensive literature review, the study identified the following gaps:

- Most of the studies were focused on examining the direct effect of employee empowerment on job satisfaction and performance. The study identified a gap in terms of how empowerment dimensions relatively effect both job satisfaction and job performance.
- The study also observed that a few studies discussed how empowerment leads to job satisfaction which in turn leads to job performance. But, the study found a gap that exists how job satisfaction plays a mediation role on the relationship between employee empowerment and job satisfaction i.e., examining the indirect effect of empowerment on performance through job satisfaction.
- As indicated in the literature survey, empowerment has strong direct effect on job satisfaction and job performance. The study observed a gap that needs to be addressed in terms of moderation effect i.e., the direct effect varies in the presence of moderating variables (gender, age, education, experience and sector).

### **Objectives of the Study**

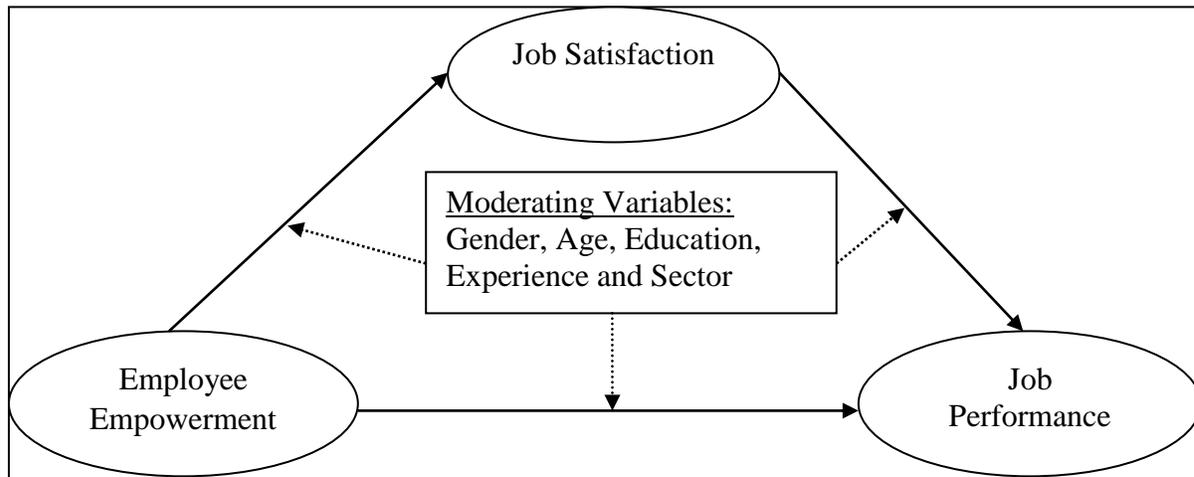
The specific objectives of the study have been outlined here:

- 1) To study the impact of empowerment on Job satisfaction and performance in managerial staff of select public and private sector banks in Telangana state.
- 2) To examine the role of Job satisfaction on the employee empowerment and performance.
- 3) To measure the effect of demographic variables on the relationship between Employee empowerment, Job satisfaction and performance.

### **Conceptual Model**

The study has proposed an integrated model which shows the inter-dependence of relationship among employee empowerment, job satisfaction and job performance. This model is developed based on the extensive review of the literature on various concepts, theories and models. The model highlighted that employee empowerment has strong direct relationship with both job satisfaction and job performance, where job satisfaction plays a mediation role. The model also

included the moderating variables (gender, age, education, experience and sector) on the relationship between empowerment and satisfaction; satisfaction and performance; and empowerment and performance. It implies that moderating variables affect the strength of the relationship among three constructs i.e., empowerment, job satisfaction and job performance. The proposed integrated model is shown in the Figure 1.1



**Figure 1.1 Integrated Model**

### **Hypotheses**

H<sub>1</sub>: There is a significant effect of employee empowerment on the job satisfaction

H<sub>2</sub>: There is a significant effect of employee empowerment on the job performance.

H<sub>3</sub>: There is a significant effect of job satisfaction on job performance.

H<sub>4</sub>: Job satisfaction has a significant role on the relationship between employee empowerment and Performance.

H<sub>5</sub>: Demographic variables significantly moderates the relationship between employee empowerment and job satisfaction.

H<sub>6</sub>: Empowerment, job satisfaction and job performance of managerial staff significantly differs in terms of age, gender, education, experience and sector.

### **Methodology**

The study adopted non-random sampling method for sample selection. The sampling techniques of the study are both convenience sampling and judgment sampling. Researcher collected the data by administering the questionnaire. The collected questionnaires were checked for its validity, some of the questionnaires were discarded due to improper responses. The details are presented in Table 1.1

**Table 1.1 District wise sample size**

S.No.	District	Headquarters	Original sample		Valid sample		Total
			Public Sector	Private Sector	Public Sector	Private Sector	
1	Adilabad	Adilabad	25	23	20	21	41
2	Hyderabad	Hyderabad	70	66	60	62	122
3	Karimnagar	Karimnagar	40	38	33	35	68
4	Khammam	Khammam	50	47	38	34	72
5	Mahbubnagar	Mahabubnagar	30	32	26	24	50
6	Medak	Sangareddi	43	42	36	38	74
7	Nalgonda	Nalgonda	35	36	32	33	65
8	Nizamabad	Nizamabad	42	40	35	37	72
9	Rangareddy	Hyderabad	57	54	49	45	94
10	Warangal	Warangal	60	58	55	53	108
Total			452	436	384	382	766

**Respondents' Profile**

**Table 1.2 Respondents' Profile**

S. No.	Variable		Public sector		Private sector		Total	
			Frequency	%	Frequency	%	Frequency	%
1	Gender	Female	78	20	122	32	200	26.08
		Male	306	80	260	68	566	73.92
2	Age (in years)	<31	18	5	166	43	184	24.00
		31-44	187	49	170	44	357	46.61
		>44	179	47	47	12	225	29.39
3	Education	Graduate	28	7	125	33	153	19.97
		PG	356	93	257	67	613	80.03
4	Experience (in years)	<5	154	40	157	41	310	40.50
		5 to <10	104	27	107	28	211	27.50
		10 to <20	69	18	61	16	130	17.00
		20 to <30	42	11	46	12	88	11.50
		>= 30	15	4	11	3	27	3.50
5	Sector	Public	384				50.13	
		Private	382				49.87	

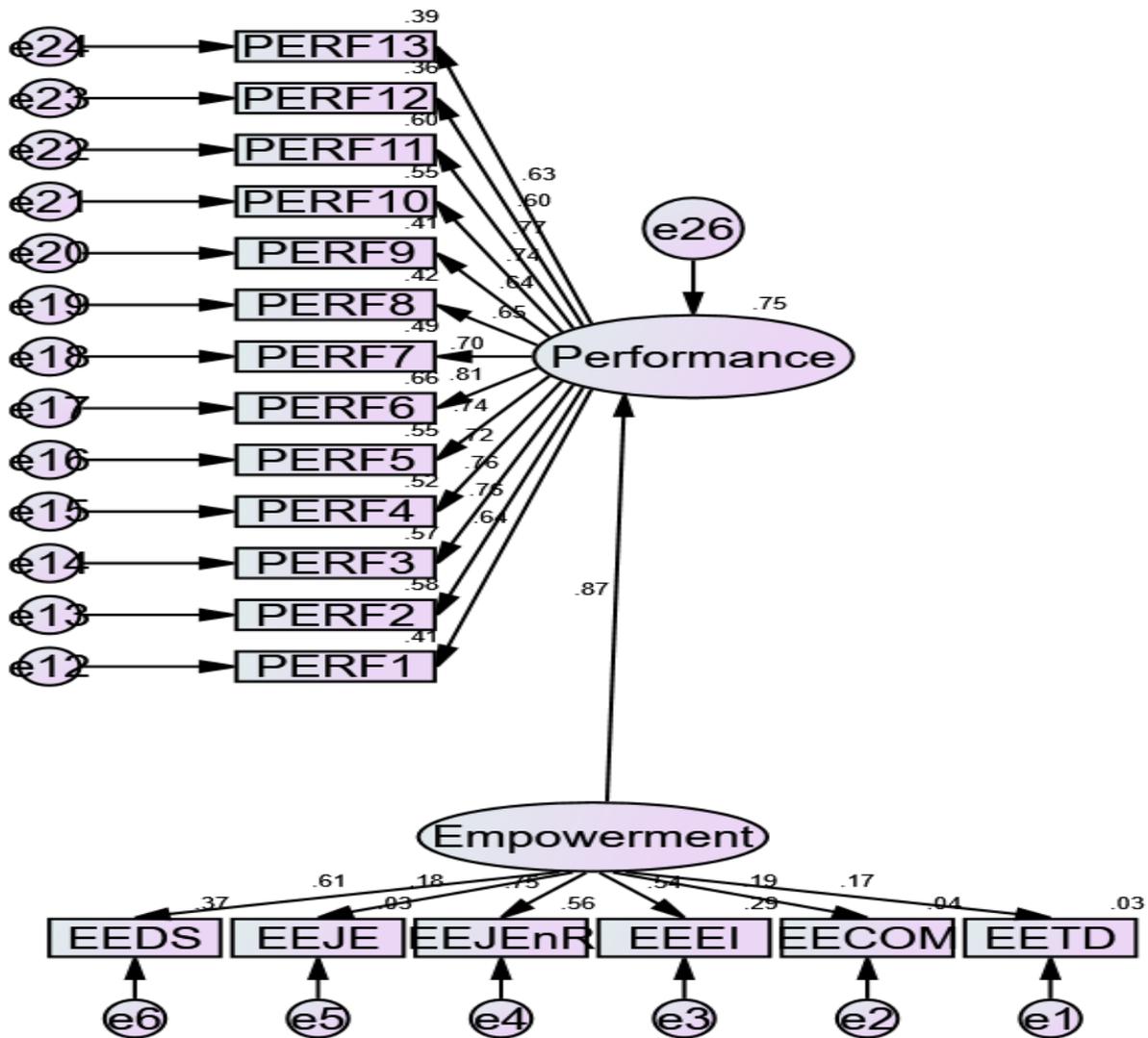
**Statistical Tools and Techniques**

The study used Structural Equation Model for the data analysis are performed using SPSS 20 and AMOS 21 versions.

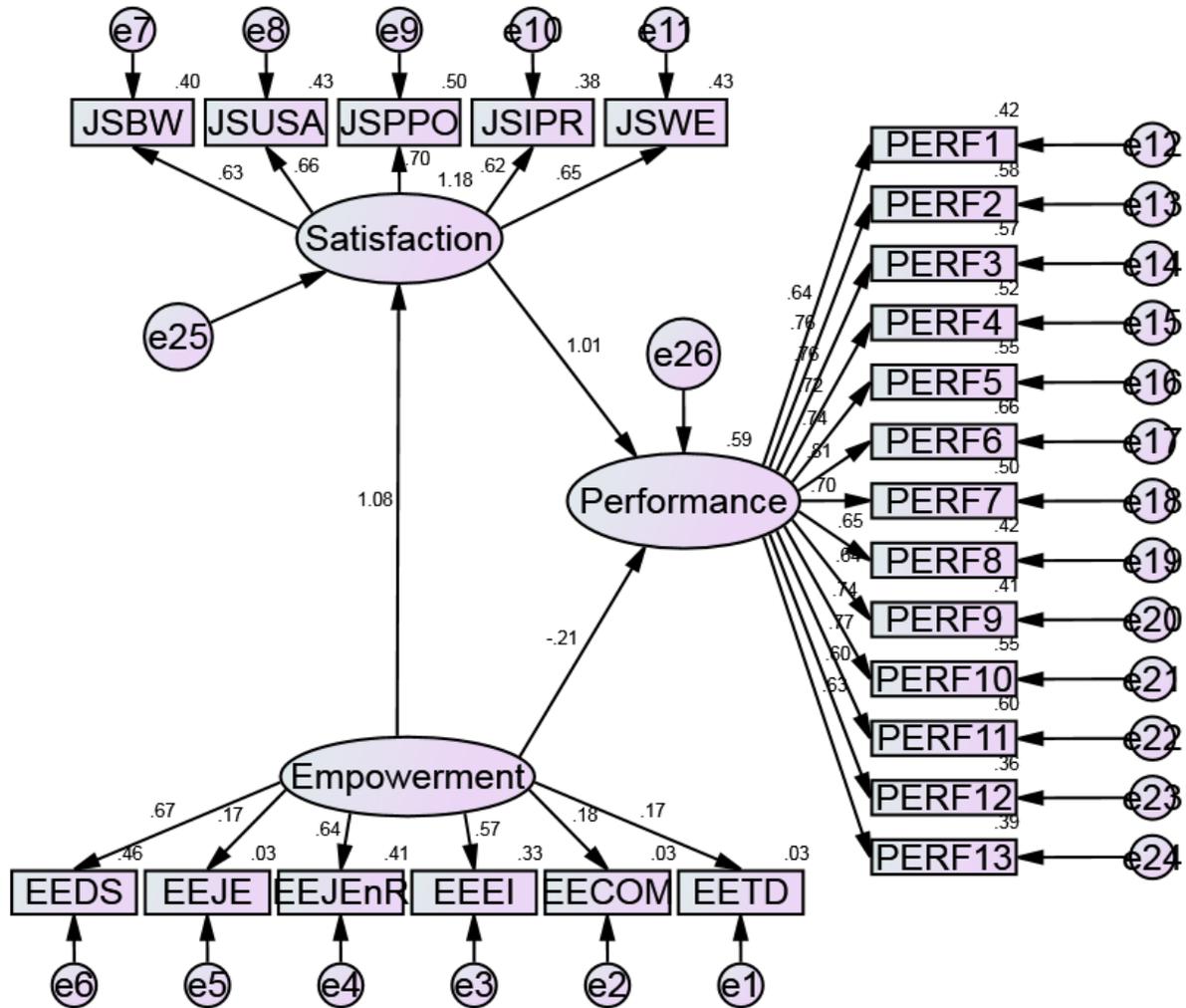
**Structural Equation Modeling (SEM):** SEM was used to examine the causal relationships among the study constructs such as employee empowerment, employee job satisfaction and employee job performance. The results were validated using the following measures:

- (a) Absolute fit measures (the ration chi-square/df should be between 2 to 5, Goodness-of-Fit Index (GFI) should be more than .90 and Root Mean Square Error of Approximation (RMSEA) should be less than .08).
- (b) Incremental fit measures (Adjusted Goodness-of-Fit Index (AGFI) should be more than .90, Tucker-Lewis Index (TLI) should be more than .90, Normed Fit Index (NFI) should be more than .90 and Comparative Fit Index (CFI) should be more than .90)
- (c) Parsimonious fit measures observed by Parsimonious Normed Fit Index (PNFI) and Parsimonious Goodness-of-Fit Index (PGFI) which values should be between 0 and 1. The higher the value the model is more parsimonious.

**Direct Model - Direct effect of Empowerment on Performance**



**Mediation Model- Mediation effect of job Satisfaction on the relationship between Empowerment and performance**



**Findings of Mediation Analysis**

Initially, the direct relationship is tested to understand how employee empowerment effects job performance. Later, the model is examined by introducing job satisfaction as a mediating variable in the direct model and interpreted the results. Based on the results of mediation analysis, the study reported the following findings:

- 1) In the presence of mediating variable i.e., job satisfaction, employee empowerment has no direct significant effect on job performance. It implies that employee empowerment has an indirect effect on job performance.
- 2) Job satisfaction has a significant full mediation effect on the relationship between empowerment and job performance.

## Findings of Moderation Analysis

To test the moderation effect. Since, the path employee empowerment → job satisfaction was not significant in structural mediation model, the moderation analysis is carried out on the two paths i.e., empowerment → job satisfaction and job satisfaction → job performance. Based on the results of moderation analysis, the study reported the following findings:

- 1) The strength of the relationship between empowerment and job satisfaction is stronger for the age group of 31 to 44 years followed by the age group less than 31 years and the age group more than 44 years
- 2) The strength of the relationship between empowerment and job satisfaction is stronger for the employees who have experience greater than or equal to 30 years followed by the employees who have experience 20 to less than 30 years.
- 3) The strength of the relationship between empowerment and job satisfaction is stronger for the public sector banks followed by the private sector banks
- 4) The strength of the relationship between job satisfaction and job performance is stronger for the age group of 31 to 44 years followed by the age group of more than 44 years and the age group of less than 31 years
- 5) the strength of the relationship between job satisfaction and job performance is stronger for the post graduate employees followed by the graduate employees
- 6) The strength of the relationship between job satisfaction and job performance is stronger for the employees who have experience 5 to less than 10 years.
- 7) The strength of the relationship between job satisfaction and job performance is stronger for the public sector banks followed by the private sector banks

## Conclusions

Banking sector in India is facing the problem of lack of empowerment in employees. The productivity is most crucial factor for the success of any organization, in turn it leads to the well being of employees. The innovative behavior of employee is also important especially in service organizations. Psychological empowerment is a predictor of innovative behavior of employees.

The present study found that there is a significant relationship among select research variables empowerment, Job satisfaction and job performance. In current scenario both SBI and ICICI banks are need to be improved in implementing empowerment practices to become effective and efficient. On the basis of results, it is concluded that psychological empowerment has positive and significant impact on job satisfaction resulting in increased job performance.

## References

Russell DW(2002) In search of underlying dimensions: The use (and abuse) of factor analysis in Personality and Social Psychology Bulletin, Vol 28(12):1629–46.

Sellers SL(2004), Mathesien S, Perry R, Smith T. Evaluation of social work journal quality: Citation vs reputation approaches. Journal of Social Work Education, Vol 40 (1):143–60.

Jenson JM(2005). Structural factors and the quality of publication in social work journals. *Social Work Research*, Vol 29(2):67–71.

Chin, W.W. (2010), “An introduction to a permutation based procedure for multigroup PLS analysis: results of tests of differences on simulated data and a cross cultural analysis of the sourcing of information system services between Germany and the USA”, in Esposito

Hensler, J. (2010), “Consistent & asymptotically normal PLS estimators for linear structural equations”, working paper, Economics and Business, University of Groningen, Groningen.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), “PLS-SEM: indeed a silver bullet”, *Journal of Marketing Theory and Practice*, Vol. 19, pp. 139-151.

Ringle, C.M. (2012a), “The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications”, *Long Range Planning*, Vol. 5 Nos 5/6, pp. 320-340.

Hair, J.F., (2013), “Partial least squares structural equation modeling: rigorous applications, better results and higher acceptance”, *Long Range Planning*, Vol. 46, pp. 1-12.

Hair, J.F., (2014), *A Primer on Partial Least Squares Structural Equation Modeling*, Sage, Thousand Oaks, CA.

# Strong, Yet We are Vulnerable: Psychological Panorama of Sustainable Women Entrepreneurs

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**Introduction-** Entrepreneurship as a conventional definition is the process of crafting, beginning and successively taking forward a new business, and it characteristically emerges as a small business, generally as a startup company that offers a product in demand, it can offer some sort of cutting edge service as well. An entrepreneur has been described as "someone who organizes and manages any organization, mainly a business, generally with sizable initiative and risk" An entrepreneur does not generally work like an employee, on the contrary he/she runs a small business and presupposes all the hazards and reward that the business venture offers. Entrepreneurs are regarded as a business head and innovator of new ideas and business processes. A woman entrepreneur is a confident, innovative and creative woman capable of achieving self-economic independence individually, or in collaboration, generates employment opportunities for many through initiating, establishing and running the enterprise by maintaining her personal, family and social life. Women joining business have been supplying a more prompt contribution to the economy. Yet women have faced varied hassles to sustain themselves in the business Thus with the scenario of multiple categories of difficulties or rather not so smooth path to entrepreneurial success and sustainability, the psychological variables that might impact the woman's firmness and boldness, have been attempted to be explored. Entrepreneurship has been explained through different theories. Among those theories, psychological theories of entrepreneurship concentrate on the individual and the psychological elements that compel entrepreneurial individuals. Looking at the strength of women and vulnerability to be unsuccessful, proactivity, personal efficacy and locus of control have been chosen from the psychological factors as playing the major role in women's tenacity and success.

Looking at the dearth of research with these variables, the goal of the present study is to explore the nature of proactivity, locus of control and personal efficacy of affluent and non-affluent women entrepreneurs and investigate their success as to how it is linked with these psychological dispositions. 200 women entrepreneurs were sampled from West Bengal from affluent and non-affluent population. Data was collected through questionnaires. The study aims to establish the relationship between women entrepreneurs' mindset towards engaging in activities with the first step forward (proactivity) or waiting for something to happen to them when they shall passively respond. The study compares the successful and unsuccessful women entrepreneurs in terms of the proactivity and personal efficacy scores; also investigates these dispositions with respect to their locus of control- internal and external. Finally an attempt has been made to study the contribution of the factors like proactivity (P), personal efficacy (PE), locus of control (LOC) and financial condition (FC), i.e. affluent or non-affluent on the woman entrepreneurs' being successful or unsuccessful.

### ***Operational Definitions:***

**1. Personal Efficacy and Entrepreneurship-** Personal-efficacy (PE) or self-efficacy is a person's belief that he or she can accomplish a particular activity. Bandura (1997) defines self-efficacy as “people’s judgment of their capabilities to organize and execute courses of action required to produce given attainments” and have the consequence that “people’s level of motivation, affective states, and actions are based more on what they believe than on what is objectively true.” Individuals having an accurate sense of self-image are better adapted to prevent negative outcomes.

**2. Proactivity and Entrepreneurship-** Proactivity or proactive behavior in organizational behavior refers to “anticipatory, change-oriented and self-initiated behavior in situations, particularly in the workplace”. Proactive behavior involves acting in advance of a future situation and not simply reacting to events in life. McClelland (1986) asserted that proactivity, or proactive personality, was one of nine entrepreneurial competences that are more characteristic of successful entrepreneurs regardless of country and type of business.

**3. Locus of Control and Entrepreneurship -** The concept of locus of control was coined in relation to proactivity. The concept of locus of control (LOC) was pioneered in 1954 by Julian B. Rotter. In previous researches on locus of control it has been found that at workplace, internal locus has been found to be positively related to favorable work outcomes, like positive task and social experiences, higher job motivation (Ng, Eby, & Sorensen, 2006), decision-making (Hendricks, Vlek, & Calje, 1992; Kaplan, Reneau & Whitecotton, 2001), satisfaction (Judge & Bono, 2001) and internally-oriented individuals are inclined to deal better with uncertainty (Abdel-Halim, 1980), and influenced by the future accomplishment of desired goals (Abel & Hayslip, 2001; Thornton, 1978), perhaps because of the belief in their own abilities (Griffeth & Hom, 1988). Brockhaus and Nord found that entrepreneurs were more internal in their locus of control beliefs when compared to managers (Kent and Sexton, 1982).

**4. Financial Affluence and entrepreneurship -** When it comes to entrepreneurship, one of the most important factors that fosters or hinders the launching and maintenance of a business is the financial condition of the entrepreneurs. It is not always observed that the entrepreneurs have huge financial capital to sail smoothly through the hurdles. They start from scratch sometimes, and go ahead with struggles towards sustainability of their business. This way, looking at the financial strength of the woman entrepreneurs, they can be clubbed into affluent and non-affluent entrepreneurs.

### **Summary of facts about Women entrepreneurship**

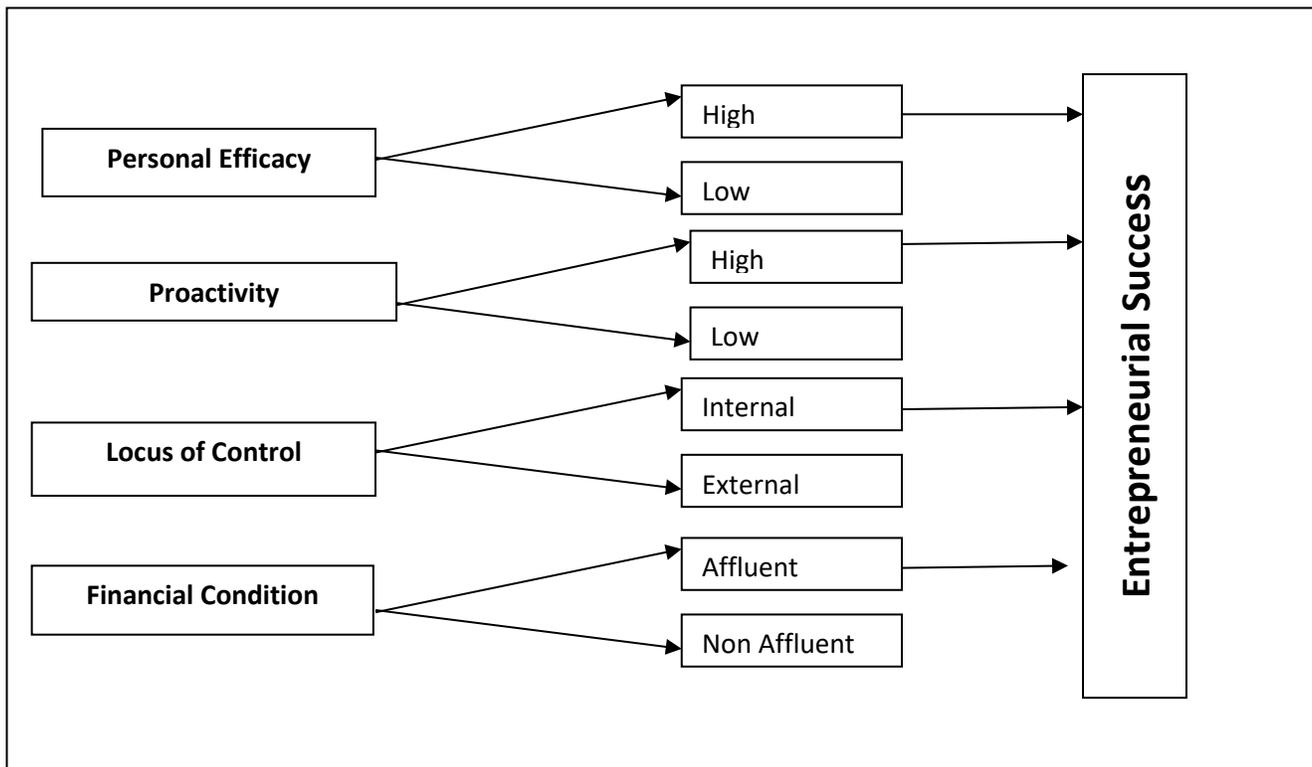
<b>Attitudes</b>	Global Entrepreneurship Monitor' London Business School, 2003	If there is no fear of failure working in mind, one-third of the population can start up a new venture.
	ONS Labour Market Statistics, September 2014	More than half of self-employed women (53%) work part-time compared to 17% of self-employed men.
	<u>Women in Enterprise: A Different Perspective</u> , RBS Group 2013	Women establish businesses under-capitalized; they do not have sufficient finances... It's just not lower financial capitalization; women also have lower levels of human and social capital.
<b>Access To Finance</b>	Kwang, Jones-Evans and Thompson. 2012	Women are around ten percent more likely than men to see finance as their only obstacle to entrepreneurship. Education and training can reduce the difference.
	ibid Carter & Shaw 2006	Women start businesses with around one third of the level of finance of their male counterparts, in every size and sector of business.
	Carter & Shaw 2001	Women use a narrower range of types of finance in their businesses. They are much less

		likely to use private equity or venture capital.
<b>Business Support, skills and training</b>	GEM UK 2005	Women who have undergone some form of enterprise training are twice as likely to be engaged in entrepreneurial activity.
	GEM Special Report: A Global Perspective on Entrepreneurship Education and Training, 2010	People who have taken up entrepreneurship training are found to be three times more confident about having the skills to run a business.
<b>Childcare</b>	Women's Business Council, Enterprise Evidence Paper, BIS 2011	Maternity can be a hurdle for women entrepreneurs and small business owners, as the legal framework and protections available for employees are not applicable for them.
	Rouse 2009	Pregnant female entrepreneurs generally do not take any time off as formal maternity leave.
	Women Returners and Enterprise, Timewise Foundation 2009	Women have cited that childcare is definitely a barrier to their venture, though the key issue is availability of formal childcare, yet women want to take care for their children themselves.

### Conceptual Framework and Research Questions

1. What is the relation of proactivity, personal efficacy and locus of control among affluent and non-affluent women entrepreneurs?
2. Do affluent and non-affluent women entrepreneurs differ in terms of their proactivity and personal efficacy?
3. Does proactivity, locus of control personal efficacy and financial condition impact on being successful or unsuccessful in entrepreneurship?

**Fig 1: Conceptual Model Relating Personal Efficacy, Proactivity, Locus of Control and Financial Condition of the Women Entrepreneurs**



## Measures of the Study

### *Participants and Procedure*

Data was collected by meeting each women entrepreneur individually and administering a set of questionnaires. Informed consent was taken from the respondents prior to data collection. The present study has employed 200 women entrepreneurs. The sampling method used for this study was convenience sampling. Discriminant Analysis t-test and ANOVA has been applied to analyze the data.

### **Data Analysis and Findings**

The study has made an attempt explore the nature of proactivity among women entrepreneurs with varying financial conditions- i.e. *affluent and non-affluent women entrepreneurs*, to understand the nature of proactivity among women entrepreneurs with different locus of control, to understand the nature of personal efficacy among affluent and non-affluent women entrepreneurs, to understand the nature of personal efficacy among women entrepreneurs with different locus of control, to understand whether affluent and non-affluent women entrepreneurs differ in terms of their proactivity, locus of control and personal efficacy and finally understand the relation between proactivity, locus of control and personal efficacy and financial condition with success and failure in entrepreneurship.

Majority of the respondents are within the age range of 40-44 years, all women, in business for minimum 4 years.

From the study conducted, and the results obtained thereof, it can be stated that the psychological disposition of affluent and non-affluent women entrepreneurs covered in the study has been found not very high for the overall sample studied; for proactivity the Mean being 52.63 (proactivity) on a scale of 20-100, and for personal efficacy it is M=61.96 for the overall sample.

The study has been able to probe into a couple of ‘entrepreneurship skills’ which are relevant to the success of entrepreneurship among women. Entrepreneurship skills are linked with proficiencies in doing a business successfully, besides it is also important that the entrepreneurs possess some inherent psychological profile that makes them better fit for the profession. If equipped with those identified traits, the ability to capitalize on recognized opportunities and a range of skills associated with increasing and implementing business plans to enable such opportunities become much higher (Table 1).

**Table 1: Table Showing Measures of Central Tendency for Proactivity and Personal efficacy among the Women Entrepreneurs (Overall Sample, N=200)**

		<b>Proactivity</b>	<b>Personal Efficacy</b>
N	Valid	200	200
	Missing	0	0
Mean		52.63	61.96
Std. Error of Mean		1.098	.932
Median		50.00	60.00
Mode		33	65
Std. Deviation		15.561	13.206

The study has focused on understanding two major psychological dispositions of women entrepreneurs, i.e. *proactivity and personal efficacy*. For the purpose, the entire sample has been, on the basis of data obtained classified into groups of affluent and non-affluent entrepreneurs; besides they have also been categorized on the basis of Locus of Control. Further analysis may explore the nature of the mentioned psychological variables on the basis of this categorization,

**Research Question 1: What is the nature of personal efficacy, proactivity and locus of control among affluent and non-affluent women entrepreneurs?**

**a) Personal Efficacy (PE):**

Personal efficacy among the women entrepreneurs were studied in the present study. For this purpose, the overall group of 200 women entrepreneurs studied was clubbed into two groups. One of the groupings was based on their locus of control (LOC), which was specifically three in number; they are *Internal LOC, External- Others LOC and thirdly External-Chance LOC*. The study has found that the group with internal LOC has highest PE (M=78.61), with a SD of 4.539, followed by the women entrepreneurs with external-others LOC (61.45) with an SD of 5.25, while that with the group having external-chance LOC has been found to be 48.60 with SD 4.17. Thus it has been found that entrepreneurs with internal LOC have the maximum personal efficacy, i.e. the power to achieve a desired goal. Those with internal LOC have the highest belief on what they are capable to accomplish in life; they are responsible for the incidences of events that happen in their life. They have their own strategies to motivate themselves; they bring themselves up during distress.

Results also reveal that there is a significant difference among the three groups of entrepreneurs, grouped on the basis of their LOC, with respect to their personal efficacy score. This implies that the way these three groups of entrepreneurs think, believe, self-regulate, and choose their way of work. The constructs of the personal efficacy scale have established the differences between the mentioned groups. (Table 2). Thus entrepreneurs with different categories of LOC differ in their PE.

**Table 2: Table Showing the Measures of Central Tendency and Dispersion, Mean Difference among the Women Entrepreneurs’ Personal Efficacy with Three Types of Locus of Control.**

Psychological Dispositions of Personal Efficacy	N	Mean	Std. Deviation	Anova Results
Personal Efficacy of Women Entrepreneurs with Internal LOC	56	78.61	4.539	591.31 <sub>df=197</sub> P<.000
Personal Efficacy of Women Entrepreneurs with External- Others LOC	82	61.45	5.254	
Personal Efficacy of Women Entrepreneurs with External-Chance LOC	62	48.60	4.170	

**b) Proactivity**

The study probed into the nature of Proactivity of the Women Entrepreneurs. First level of analysis is on the basis of three levels of LOC, i.e. Internal LOC, External- Others LOC and thirdly External-Chance LOC. The study has found that Proactivity has been the highest among the Women Entrepreneurs with Internal LOC, (M= 72.34, SD=4.2), followed by Women Entrepreneurs with External-Others LOC (M=52.52, SD= 7.47) and finally lowest among

Women Entrepreneurs with External-Chance LOC (M=35.82, SD=3.75). Further there has been found to be significant difference among the three mentioned groups of women entrepreneurs (Table 4). It has been established by the study that among all levels of LOC, entrepreneurial proactivity has been highest among the group with Internal LOC. In general, the proactive person considers that he has plenty of resources either external or internal. Here it has been established that women entrepreneurs with highest level of Proactivity believes in their internal resources. The proactive individual takes the charge for his or her personal advancement and accomplishments in life, they are self-sufficient. Their journey in life is not fully told by external forces but they are chosen by the proactive individual. Neither good nor bad events are attributed to causes outside the individual. Rather, the proactive individual faces reality and takes an unbiased analysis of self-blame and other-blame in the case of negative events.

**Table 4: Table Showing the Measures of Central Tendency and Dispersion, Mean Difference among the Women Entrepreneurs' Proactivity with Three Types of Locus of Control.**

Psychological Dispositions of Proactivity	N	Mean	Std. Deviation	Anova Results
Proactivity of Women Entrepreneurs with Internal LOC	56	72.34	4.261	605.2, df=197 P<.000
Proactivity of Women Entrepreneurs with External- Others LOC	82	52.52	7.477	
Proactivity of Women Entrepreneurs with External-Chance LOC	62	35.82	3.757	

***Research Question 2: Does affluent and non-affluent women entrepreneurs differ in terms of their proactivity and personal efficacy?***

When coming into the affluent and non-affluent women entrepreneurs their personal efficacy have been compared and data reveals that the affluent group of entrepreneurs (N=103) has a mean of 52.71 while that of non-affluent group has been found to be 72.42 with an SD =8.67. Thus it can be seen that non-affluent group of entrepreneurs have higher, and tested via t-test, a significantly higher perceived personal efficacy than their affluent counterparts. This is a very important finding; personal efficacy is definitely a task-specific construct that embraces a consideration of positive attitude an entrepreneur will have about her venture; non-affluent entrepreneurs come across several hurdles in their business, and an increased personal efficacy is definitely going to provide them with the extra mileage. Personal efficacy will provide the entrepreneur with beliefs and confidence about internal (personality) and external (environment) restraint and opportunities.

**Table 3: Table Showing Measures of Central Tendency for Proactivity and Personal efficacy among the Affluent (N=103) and Non-affluent (97) Women Entrepreneurs (Overall Sample, N=200)**

Psychological Dispositions	Categories of Women Entrepreneurs	N	Mean	Std. Deviation	Mean Difference
Personal Efficacy	Affluent	103	52.71	6.57	-17.02, df=198 P<.000
	Non- Affluent Women Entrepreneurs	97	72.42	8.67	

The second level of analysis of Proactivity of women entrepreneurs (Table 5) is with respect to the financial conditions of the women entrepreneurs, i.e. affluent or non-affluent. Results reveal that proactivity is higher among the non- affluent women entrepreneurs (M=65.41, SD=9.86), and comparatively lower among the affluent counterparts (M=41.11, SD= 8.17).

**Table 5: Table Showing Measures of Central Tendency for Proactivity and Personal efficacy among the Affluent (N=103) and Non-affluent (97) Women Entrepreneurs**

Psychological Dispositions	Categories of Women Entrepreneurs	N	Mean	Std. Deviation	Mean Difference
Proactivity	Affluent	103	41.11	8.17	15.60, $df=198$ P<.000,
	Non- Affluent Women Entrepreneurs	97	65.41	9.86	

**Research Question 3: Does proactivity, locus of control personal efficacy and financial condition impact on being successful or unsuccessful in entrepreneurship?**

With respect to the group of women entrepreneurs who have been successful in entrepreneurship and those who were not successful, an attempt was made to check their proactivity and personal efficacy. It has been found from the results that the mean of proactivity scores for the successful group is higher (M=64.10, SD=9.59) than those who have not been successful (M=38.22, SD= 8.60) the results show significant difference between the groups ( $t=19.18$ ,  $p<0.000$ ). Similarly, coming to personal efficacy, it has been found that the mean of personal efficacy scores for the successful group is higher (M=71.26, SD= 8.47) and that for the unsuccessful groups has been found to be low (M=50.59, SD= 5.02), gain the difference between the means of these two groups have been found to be statistically significant ( $t=18.87$ ,  $p<0.000$ ). Thus from the results, it has been established that proactivity as well as personal efficacy are two very important prerequisite to be present to entrepreneurs for entrepreneurial success. A higher level of those dispositions has been found to have contributed towards success in the venture (Table 6).

**Table 6: Table Showing Measures of Central Tendency for Proactivity and Personal efficacy among the Successful (N=88) and Not Successful (N= 112) Women Entrepreneurs**

	Proactivity (Successful Group)	Proactivity (Unsuccessful Group)	Personal Efficacy (Successful Group)	Personal Efficacy (Unsuccessful Group)
Mean	64.19	38.22	71.26	50.59
Std. Error of Mean	0.90	0.53	0.79	.511
Median	66.00	38.00	72.0	52.00
Mode	70.0	33.0	65.0	45 <sup>a</sup>
Std. Deviation	9.59	8.60	8.47	5.02
T-Test Results	19.18, $p<0.000$		18.87, $p<0.000$	

In this phase of analysis an attempt was made to see how success and failure in entrepreneurship is related to proactivity, locus of control, personal efficacy and financial condition of the entrepreneur. Here, a *Discriminant Function Analysis* has been conducted. From the Table of

ANOVA it can be concluded that proactivity and personal efficacy of the women entrepreneurs (Smallest value of Wilkes Lambda) are the two important variables to discriminate the groups. From the above table it can be seen that all the variables are significantly contributing to entrepreneurial success ( $p < 0.000$ ).

**Table 7: Discriminant Analysis of Women’s Entrepreneurial Success**

	Wilks' Lambda	F	df1	df2	Sig.	Canonical Discriminant Function Coefficients
Proactivity	0.350	367.881	1	198	.000	1.538
Personal Efficacy	0.357	356.131	1	198	.000	.043
Locus of Control	0.505	194.040	1	198	.000	.018
Financial Conditions	0.404	292.691	1	198	.000	.747
Constant						-6.621

*The results for the canonical discriminant function were: Eigen value= 2.368; Wilks'  $\lambda$  = 0.297 ( $R^2 = 0.70$ );  $X^2 = 237.99$ ;  $df = 4$ ;  $p < 0.0000$*

Discriminant analysis has the ability to maximize the between group differences on discriminant scores and minimizes the within-groups differences. The Eigen value is one statistic for evaluating the magnitude of a discriminant analysis. A large Eigen value is associated with a strong function. In the present analysis, the Eigen value has been found to be very high (2.368). This implies that the between-groups differences are revealed and the difference is very strongly explained. Wilks'  $\lambda$  indicates how good the discriminating power of the model is. Therefore, this highlights the importance of the variables: the lower the value of Wilks'  $\lambda$ , the higher the percent of explained variance of the dependent variable; since the percent of explained variance is calculated as  $[1 - (\text{Wilks' } \lambda)] \times 100$ .

Wilks'  $\lambda$ ; in the case where all the functions are in the analysis (0.297), indicates that differences between the two groups of entrepreneurs, successful and unsuccessful account for 70% of the variance in the predicting variables. The significance of the  $X^2$  implies that the discriminant functions discriminate well between the successful and unsuccessful groups. The canonical relation is a correlation between the discriminant scores and the levels of the dependent variable. A high correlation indicates a function that discriminates well. The present correlation of 0.70 is pretty high (1.00 is perfect). This is one of the statistics used to answer the question, "How well does the model work?" The model here accounts for 70% of between group differences. This shows the significance test used to answer the question "Does the model work?" This model does "work" and is a good fit for explaining the contribution of proactivity, personal efficacy, locus of control and entrepreneurial success. The data reveals that among the variables studied, maximum contribution is made by proactivity (Wilks'  $\lambda = 0.350$ ), followed by personal efficacy (Wilks'  $\lambda = 0.357$ ), financial conditions (Wilks'  $\lambda = 0.404$ ) and lastly by locus of control (Wilks'  $\lambda = 0.505$ ). The final thing to examine is the reclassification table. This shows how accurately the model can assign participants to their correct groups. The percentage correct is the average percentage correct for each group. This percentage correct is probably an overestimate of the classification accuracy of the model, because it is being "tested" using the same sample that was used to construct the model. In the present case, 88.5% cases are correctly classified.

**Table 8: Classification Table of Groups Classified from Discriminant Analysis**

Classification Table		Successful Unsuccessful	Predicted Group Membership		Total
			1	2	
Original	Count	Successful	81	7	88
		Unsuccessful	16	96	112
	%	Successful	92.0	8.0	100.0
		Unsuccessful	14.3	85.7	100.0

88.5% of original grouped cases correctly classified.

## Conclusion-

In India, many of the organizations are coming up with many programmes; the ultimate motto includes Entrepreneurship development Programmes (EDPs) to cater to the demands of potential women entrepreneurs, who may not have adequate academic records and talents, but however have the zeal for entrepreneurship. Further to the unique schemes for women entrepreneurs, including numerous financial and non-financial schemes for MSMEs additionally offer positive incentives and concessions for women entrepreneurs. For instance, under Prime Minister's Rozgar Yojana (PMRY), choice is given to women beneficiaries. The government has additionally organized for numerous relaxations for women to facilitate the participation of women beneficiaries in this scheme. In the global team of workers, India is not in a very good function— 113th out of 135 — in relation to the gender gap. Result obtained from the present study reveal that psychological factors have a strong signal of entrepreneurial success. And women entrepreneurs represent most effective 10 percent of the entire range of entrepreneurs in the country. With the perception that every woman entrepreneur has the potential to steer and create tremendous impact, women entrepreneurs ought to be advocated to swim out and carve a spot. So, psychological correlates of entrepreneurship should never be undermined, besides the social and environmental factors. Nature of the entrepreneurs does matter.

## References

1. Abdel-Halim, A.A (1980). Effects of Person-Job Compatibility on Managerial Reactions to Role Ambiguity. *Organizational Behavior and Human Performance*. 26(2), 193
2. Abel, B.J., & Hayslip, B. (2001). Locus of Control and Attitudes toward Work and Retirement. *Journal of Psychology*. 120, 479-488.
3. Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman
4. Carter, S., Shaw, E., Wilson, F. and Lam, W. (2007b) „Bank Loan Officers“ Perceptions of Business Owners: the Role of Gender“, *British Journal of Management* 18(2): 154-71.
5. Griffeth, R.W., & Hom, P.W. (1988). Locus of Control and Delay of Gratification as Moderators of Employee Turnover. *Journal of Applied Social Psychology*. 18, 1318-1333.
6. Hendricks, L., Vlek, C., & Calje, H. (1992). Effects of Frequency and Scenario Information on the Evaluation of Large-scale Risks. *Organizational Behavior and Human Decision Processes*. 52(2), 281-314.

7. Judge, T.A., & Bono, J.E. (2001). Relationship of Core Self-evaluation Traits – Self-esteem, Generalized Self-efficacy, Locus of Control, and Emotional Stability – with Job Satisfaction and Job Performance: A Meta-analysis. *Journal of Applied Psychology*. 86, 80-92.
8. Kaplan, S.E., Reneau, J.H., & Whitecotton, S. (2001). Effects of Predictive Ability Information, Locus of Control, and Decision maker Involvement on Decision Aid Reliance. *Journal of Behavioral Decision Making*. 14(1), 35.
9. Kent, C. Sexton, D & Vesper, K. & Englewood, H. (2015) "An Introduction to Self-Efficacy". *Neag Center for Creativity, Gifted Education, and Talent Development*, 18(3), 5-9.
10. Kwong C, Evans D J, Thompson P, (2012) "Differences in perceptions of access to finance between potential male and female entrepreneurs: Evidence from the UK", *International Journal of Entrepreneurial Behavior & Research*, Vol. 18 Issue: 1, pp.75-97, <https://doi.org/10.1108/13552551211201385>
11. McClelland, D. C. (1986). Characteristics of successful entrepreneurs. In *Keys to the Future of American Business*, Proceedings of the Third Creativity, Innovation, and Entrepreneurship Symposium, U.S. Small Business Administration and the National Center for Research in Vocational Education, Framingham, MA, (Addendum, pp. 1–14)
12. Ng, T.W.H., Eby, L.T., & Sorensen, K.L. (2006). Locus of Control at Work: A meta-analysis. *Journal of Organizational Behavior*. 27, 1057-1087
13. Rouse, J. (2009) 'Can You Hang On While I Give Birth and Breastfeed? Individualization, Agency and Oppression in Entrepreneurs' Maternity Plans', paper accepted for presentation at the Institute of Small Business and Entrepreneurship Conference, November 2009.
14. Thornton, G.C. (1978). Differential Effects of Career Planning on Internals and Externals. *Personnel Psychology*. 31, 471-476.

## **Challenges and Innovation - Unique Proposition : Hyatt Hotels Corporation**

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### **Abstract**

Hyatt Hotels Corporation an international hospitality company has been an industry leading brand over last sixty-years. Hyatt is an estimated \$5-7 billion company with strength of more than 90,000 employees. It owns, manages or franchises more than 725 properties comprising of Hotels, resorts and Vacation properties with Hyatt regency been flagship brand under its stable. Hyatt consists of mid-size, family-friendly brands to premium luxurious life style and all-inclusive resort brands. Hyatt has always been forefront in innovation with the unveiling of different brands across the segment and adopting new age technology. Their goal is been to be most preferred hospitality brand, loved and respected by all and achieve long-term growth for the company. Hospitality is been a highly competitive and economy dependent cyclical industry. Marriott and Hilton are the traditional competitors along with sharing economy companies like, Airbnb been new entrants in the ring.

### **History**

Hyatt – A metonym of Luxurious experience is headquartered in Chicago, USA and was started by an American entrepreneur Jay Pritzker. Mr. Pritzker's, instinct that America's restless business executives after their hectic day of work would prefer hotels near airports incited him to build a hotel chain 'Hyatt' in 1957.

At the age of 29, Mr. Pritzker started investing and owning small companies. He was best known for the business deal he signed in 1957, at a cafe shop call Fat Eddie's at Los Angeles International Airport. Mr. Pritzker was a man who had instincts for game changer deals and noticed Fat Eddie's coffee shop was remarkably busy and found the hotel had no vacancies in which it was located. He signed the deal to buy both Hyatt Motel (earlier possessed by, *Hyatt Von Dehn*) and coffee shop and offered \$2.2 million on a napkin from Fat Eddie's.

His successful investment in Hyatt Motel encouraged him to build a second Hyatt hotel in California, near San Francisco International Airport. Both the brothers (Jay and Donald Pritzker) focused on building hotel properties near airports in San Francisco, Los Angeles, and Seattle, then around the country and globally.

Pritzker brothers grew the company into a North American management and hotel Ownership Company. In 1962, company listed on New York stock exchange. In 1967 Mr. Pritzker bought an under-construction hotel in Atlanta and converted it as per Hyatt standards into the Hyatt Regency. The first of the huge atrium hotels Hyatt Regency Atlanta was often referred to as a white elephant by sceptics.

In 1968, Hyatt International was established and became a separate public company. Hyatt Corporation and Hyatt International Corp were delisted in 1979 and 1982 respectively. On December 31, 2004 all of hospitality assets of Hyatt were merged into a single entity Hyatt Hotels corporation, comprising of both Hyatt International Corp and Hyatt Corp.

Over the period of time Hyatt has grown into 13 premium brands, *Park Hyatt, Miraval, Grand Hyatt, Hyatt Regency, Hyatt, Andaz, Hyatt Centric, Hyatt Residence Club and the premium segment experience brands - The Unbound Collection by Hyatt, Hyatt Place, Hyatt House, Hyatt Ziva, Hyatt Zilara and Hyatt Residence Club* operational across 59 countries around the world.

The company's properties share core values and deliver excellent guest services along with unique and state-of-the-art interior designs that incorporate local art and styles.

## **Challenges**

Hospitality being highly competitive industry has a wide range of challenges. Hyatt participating in luxurious services arena faces a lot of occupational components such as Competitions, Regulations, Demands, Brand values and Market dynamics.

### *Competition*

Hyatt compete with its reputation and brand value, location, customer enhancement, room rates, quality of services & amenities which includes accommodation and security, customer loyalty programs, vacation ownership properties and branded residential properties.

Hyatt faces competition from small chains and independent-domestic group of hotels and operators to new channels of distribution in the hospitality industry. Other sources of competition are from other big companies including Alibaba, Google which offers online travel services that allow travelers to book stays on websites that facilitate the short-term rental of homes and apartments from owners, thereby providing an alternative to hotel rooms, such as Airbnb and HomeAway. Other factors impacting the competition are management and franchise agreements which include sustaining associations with property owners and investors. Also marketing support, reservation and e-commerce system capacity plays vital role.

### *Shared Economy*

Advancement in technology is not only the challenge, but what brought the tremendous competition is the innovation in hotel industry with the concept of collaborative economy. This provides mutual benefit to provider and consumer of service. The advent of shared economy is most felt in the ride hailing service with Uber. Hospitality industry or to say vacation rentals is also not left alone from this challenge by the organizations like – Airbnb, HomeStay and more. It has put renowned hospitality chains like Hyatt, Marriott back to the boardroom to analyze, innovate and find answers. Airbnb has more than 3 million listings, providing plethora of options from an economical place for quick getaway to an ultra-luxury mansion for the ultimate experience. The pace at which likes of Airbnb can expand is far greater than compare to a hotel chain to franchise or own a new property. Competitive pricing, authentic experience and choice of location of properties give hotel chains run for their money. Consistency in experience, quality of service and credibility are some of the factors which play in favor of renowned hotel chains. Question is will the hotel chain industry will find them crushed by new competition or they will co-exist with the Airbnb?

### *Government Regulations*

Hyatt manages, franchises, licenses and owns properties which take in innumerable foreign, federal, state and local government laws and regulations concerning food and beverages, infrastructure and zoning requirements, records privacy and overall business license and permit requirements, amongst many other jurisdictions. Their potential to develop, redevelop, remodel or refurbish any hotel property is dependent on approvals & Permissions from local legal authorities.

Hospitality businesses are also subjected to Bylaws stating about wages, overtime, working environments, recruitment, dismissal, non-discrimination (for disabilities, religion, region or race), work permits and benefit offerings which governs their dealings with workforce.

Non-compliance to any of above stated laws and regulations can adversely affect the operations, revenues and profits of business.

### *Changing consumer demands*

With information being just a click away and peer-to-peer endorsements being widespread on social media, travelers are more aware than they have ever been in history. Customers, especially youth, are looking for constant stimulation. They want to interact with the destination, benefit from cultural immersion and to engage with the community through genuine emotions and share experiences.

Having higher expectations, guests care about things differently and just having a well-designed hotel limit their experience anymore. Travelers these days are looking for value their quality time, outstanding experiences and memorable moments. The market dynamics after recession, became turning point and pivot to a luxury customer who sees things differently now. ‘Fine’ doesn’t exist in concept of luxury today, with zero tolerance for mediocrity, guests have an extremely low boredom threshold and that’s a key challenge

### *Building walls against Cyber Risks*

Large data is collected and handled by Hyatt. Its safety and confidentiality should be of utmost importance and critical to Hyatt’s business. To address the risks of loss or misuse of data, Hyatt should plan to evolve a risk management framework. Company is betting high on cyber security

and implementing and investing in new technologies including card tokenization and security encryption, end point security, network security and secure web and email gateways to minimize the impact of cyber-attacks.

### *Changing definition of luxury*

Viceroy Walshe has rightly said that luxury is driven very much by individuality. Today's idea of luxury is being defined by customer experiences. The aesthetic importance of experience is still incredibly important but it's not sufficient. Guests preferring such hotels have been using advance technology (for say high speed Wi-Fi, HD TVs) and elite services (of being served with amazing morning coffee) and thus they expect premium amenities as a part of their stay. The new generation is smart because they have exposure and want a great customer experience. To accomplish it well, it's hospitality industry and the desire for such prodigious needs must be really well taken care of. Though it is challenging to stay one step ahead but is a principal approach to stay in competition.

### *Shifting market dynamics*

The market dynamics for hospitality doesn't worry the hoteliers. There will always be a community of rich tourists who are not as severely impacted in an economic slump.

Competitive pricing however remains a challenge, whether the economy is up or down. The challenge is to provide world-class accommodation, cuisine amongst other luxurious services to seeking guests at an optimal price.

### *Making & maintaining the brand name*

New brand entrance in hospitality sector challenges mainstay brands like Hyatt to innovate and keep up with the time. Hyatt must build a brand that remains appropriate to the today's local and global consumer, to younger and older travelers and to traditional and modern travelers. As there are plethora of choices available to customers today, research shows that people have become less brand loyal and tend more towards luxurious and contemporary experiences. The new cohort of customers wants great experience which brings the challenge of making sure to preserve the brand which has been built over the time.

## **Marriott – Key Competitor**

Though Hyatt falls under the niche market of elite class travel accommodations, it struggles to lead. The pioneers of hotel industry are Marriot with respect to Property count, Geographical spread, best price, foreign brand value, Loyalty program, Customer satisfaction and employee affability (making it #12 in Fortune's list "The World's best workplaces – 2017).

Marriot (which has also acquired Starwood Hotels and Resorts) shows a big challenge to Hyatt in hospitality industry with property count of 5700 spread across 30 brands it's a huge plus from Hyatt 667 properties across 12 brands. The huge number of properties and variety of brands give opportunity to earn more loyalty points and consume them for the different amenities offered by Marriott. Marriott wins in the race of loyalty program with providing round the year access to club Vis a Vis Hyatt 4 passes for a year for same level of mid-tier customer. No. of Points earned for the penny is also higher for Marriott 10 Pts vs 5 Pts for \$1.

In a random survey, the results showed that for a very similar sized and serviced room, in very near vicinity Hyatt Rooms were pricing triple to that of Marriot, in addition to lower cost Marriot manages to give discounts. This results in attracting more customers and builds a customer chain.

Not only loyalty program, lower prices and customer satisfaction, but the pet friendly, non-smoking hotels and the online chat, multiple payment modes services make Marriot a customer oriented and Customer considerate industry players.

## **Innovations**

In the current dynamics of service Industry, a lot more than services and amenities needs to be taken care of. There are hidden factors which may impact company reputation, thus needs to be highlighted as matter of operations management. To stand out in field of these operations expertise a continuous research and innovation setup with respect to every aspect of business is required.

### *Personalized In-Room Experience*

Personalized experience is something customer look for in today's digital World. Hyatt collaborated with Sonifi solutions to provide customers the personalized In-room experience through Hyatt mobile app. Sonifi Solution staycast technology will provide customers option to stream their favorite shows through Netflix, Hulu with a touch of a button to the room TV. It doesn't need the customers to fill in their credentials in the TV app to run streaming services and thus take care of consumer concerns with sharing their account details on public streaming devices. The technology is already available in 14 Hyatt hotels with goal to first outfit Hyatt Centric and Park Hyatt with the technology and then to other brands of Hyatt family.

### *Environment as Concern*

Evaluating environment as a concern, Hyatt concentrated towards green buildings and sustainable solutions. The Building models & systems are designed to achieve efficient usage of water, air and light. They excel in following sustainable measures of energy, material, resources, indoor environments and operations. These practices have led Hyatt been awarded leadership in Energy and Environmental Design - LEED Platinum Certificate from Green Business Certification Inc. (GBCI)

Generation of electricity from Green Hydro Power is among the numerous innovations under the LEED projects. Hyatt Regency is the only Green Power recipient building in Delhi NCR.

### *Technology as Time-saver*

Hyatt understands time as essence of this era, gathering at hotel atriums and waiting in queues for registrations and record formalities became matter of discomfort to its premium range of customers. To avoid such discomforts and create fast pace procedures Hyatt began using portable technology (Tabs & Mobile phones) as mode of check-ins and Payments.

### *Concept of Live Labs*

Try and test theory which helps managers to learn the cause of failures at faster and cheaper rate is the Hyatt's live lab Concept. At these labs, after basic research when any new feature which is

introduced as the innovation, it is tested live in the hotel with the existent customer and in the real arrangements. These paradigms bring instant customer feedback and thus expedites the process of innovation.

### **Early bird to tackle Airbnb**

Hyatt understood the challenge through Airbnb and the impact of sharing economy in hospitality business. It made first move among all hotel chains to acknowledge and tackle it at its home turf with acquisition of OASIS. Oasis offers over 2,000 handpicked home rentals across the globe in 20 locations. It's a fraction of the size of Airbnb and offers exquisite properties. It opens up new market for Hyatt where it lacks presence like Barcelona, Ibiza and other some of the major tourist destinations. Oasis acquisition generates opportunity for Hyatt to offer experience which is a mix of hotel and homestay. Handpicked properties which can be booked for the experience, comfort and brand loyalty which Hyatt is well known for among its customers. It may not be seen as a big fight back to likes of Airbnb but it's a step in the right direction. Airbnb started off as an alternative way of accommodation against hotels and become a huge challenge, similarly we may expect this new concept of hotel + homestay to create a huge competition for the sharing economy companies in hospitality business in near future.

### **Strategies for Future**

Hyatt needs to plan a decisive strategy in this competitive hospitality segment to focus in the right areas and stay ahead of the competitors.

#### *Strategic acquisition*

Hyatt should grow its brand using acquisition of more properties by owning real estate and executing their own development projects to get their brands in key locations. As its competitors use the reverse of what Hyatt uses by being asset light, this strategy seems more plausible because they have access to strong liquidity.

Continuous review of business to identify properties or assets which may or may not benefit Hyatt will help them select the disposal of the non-beneficial properties easily. This would also divert the funds generated to foster their growth plans.

#### *State of the Art Technology*

To avoid operations from becoming less competitive, Hyatt must evolve with technological developments necessary for business. Hospitality industry has come across some new information systems and other state of the art technologies like revenue management systems, central reservations systems, property management and global/local loyalty programs. They are required for seamless business operations.

Also, the customers are rendered with the technology systems during their stay. This calls for regular update and replacements

### *Retaining the right workforce*

Loss of senior executives, such as General Managers (GM) may result in significant loss. The ability to maintain competitiveness largely depends on the workforce. The skills, local knowledge and efforts of employees contribute to a great extent. Hyatt should plan to enter into employment letter agreements with identified key executives and personnel.

Alternative to this, would be hiring the right workforce who would be a suitable replacement for the senior executives. Currently, the employees do not have a life insurance policy or key person insurance policy concerning the senior executives. This could be an area of betterment. Losing the services of one or more of these personnel could adversely affect Hyatt's strategic relationship, including relationship with the third parties.

### *Develop new initiatives*

Hyatt manages and franchises the properties owned by third parties under the standard agreements. Majority of these contracts require the 3rd property owners to maintain the brand values and integrity. Since, they are bound by these agreements in many ways there is little or no initiatives from these third parties. Hence, it is solely the responsibility of Hyatt to invest in these subsidiaries to evolve the existing brands from time to time. Hyatt needs to be proactive in such investments in a timely fashion.

### Exhibit 1.1 Best Workplaces for Diversity 2017

Best Workplaces for Diversity 2017		
Organization	Industry	Headquarters
Comcast	Telecommunication	Philadelphia
Hyatt Hotels	Hospitality	Chicago
Ultimate Software	Information Technology	Weston, Florida
Salesforce	Information Technology	San Francisco
Wegman Food Markets	Retail	Rochester, N. Y
Publix Super Markets	Retail	Lakeland, Florida
Marriott International	Hospitality	Bethesda, Md.
Kimpton Hotels & Restaurants	Hospitality	San Francisco

[Source: The best workplaces for diversity 2017, Fortune, Multinational Business Magazine]

### Exhibit 1.2 Best Workplaces in Chicago 2017

Best Workplaces in Chicago 2017			
Organization	Industry	Headquarters	Employee Says
Hyatt Hotels	Hospitality	Chicago	“Constant Opportunity for Growth”
Ultimate Software	Information Technology	Weston, Florida	“Genuine Respect and caring for individuals”
Kimpton Hotels & Restaurants	Hospitality	San Francisco	“Most Fun place to Work”
Edward Jones	Financial Services & Insurance	St. Louis	“People treat each other with dignity and respect”
Crowe Horwath	Professional Services	Chicago	“Strong support and care for one another”
AbbVie	Biotechnology & Pharmaceuticals	North Chicago	“Employees empowered to drive change for the better”

MOD Pizza	Retail	Bellevue, Washington	“Focuses on both people and business success”
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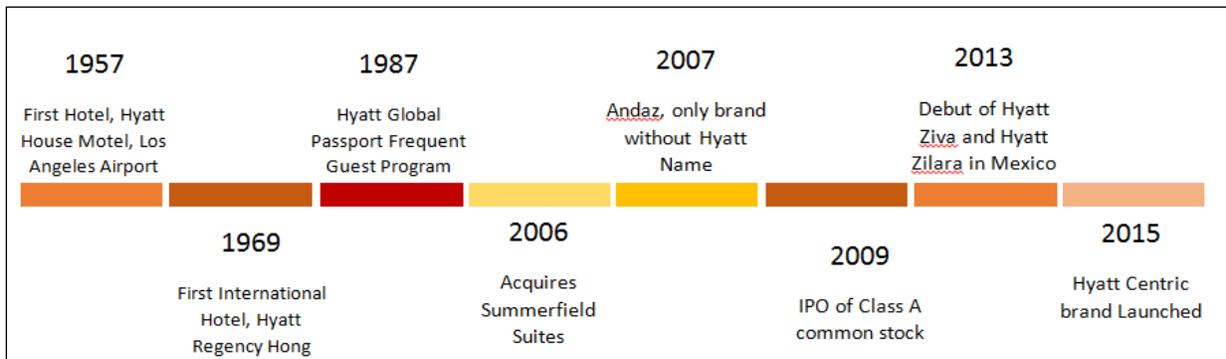
[Source: 50 Best companies to work for in Chicago, Fortune, Multinational Business Magazine]

### Exhibit 1.3: Loyalty Program



[Source: J.D. Power 2017 Hotel Loyalty Program Satisfaction Study]

### Exhibit 1.4 - History



[Source: Hyatt.com, Global Hospitality Brand]

**References:**

1. <http://www.referenceforbusiness.com/history2/38/Global-Hyatt-Corporation.html>
2. <https://about.hyatt.com>
3. <http://newsroom.hyatt.com/news-releases?item=123566>
4. <https://skift.com/2016/12/22/the-biggest-challenges-and-opportunities-for-luxury-hotels-in-2017-explained/>

**VALUE RELEVANCE OF INTEGRATED REPORTING: EVIDENCE FROM  
LISTED COMPANIES IN SRI LANKA**

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## Abstract

Reporting dimensions in Accounting and Finance arena have been gradually evolved and it is still transforming for new aspects which gives superior disclosures. Recently most of the companies around the world have adopted integrated reporting (IR) concept which some far beyond the sustainability reporting in their financial statements. Since this is newly emerged concept and unavailability of considerable amount of research studies, most companies in Sri Lanka are not still adopt IR in their reporting perspectives. Therefore the objective of this study is to identify the impact of integrated reporting on market capitalization of companies which are listed in Colombo Stock Exchange (CSE). For this study, all listed companies which are adopted IR have been selected and it was revealed that 48 companies have adopted IR by 2015 financial year. Data was collected for years 2015 and 2016 using annual reports of selected companies. IR was used as independent variable of this study while market capitalization was used as dependent variable. IR score is measured by using self-constructed index with the assistance of Integrated Reporting Framework guidelines. Total Assets, Net Profit, Dividend Per Share, Earnings Per Share and Return on Assets are included as control variables. Regression analysis was used in order to analyze the data. After doing Hausman test, it was revealed that fixed effect model is more appropriate for analyzing data. Estimated research model was developed with the assistance of Ohlson model. The findings of this study revealed that there is a significant relationship between IR and market capitalization. This research findings implies that IR positively affect towards maximization of shareholders wealth. So companies which are not yet adopt IR, should try to adopt IR for their reporting.

**Keywords:** Colombo Stock Exchange, Firm's Value, Integrated Reporting, Market Capitalization, Regression Analysis

## 1. Introduction

Today's rapidly expanding business environment companies play a vital role while attempting to serve the interests of their shareholders. It is becoming more difficult to retain shareholders because of continuing competition among business entities. Entities communicate with their stakeholders and convey its value creation mainly through their annual reports. But in recent years, most studies have found that annual reports are more complex and less relevant to shareholders since they consist of different presentations of information (Financial Reporting Council, 2011). Stakeholders are not willing to refer several reports to gain a view of the entity (Hoque, 2017). This issue gave rise to a new reporting concept called Integrated Reporting (IR) which depicts a holistic view of an entity in a single report. Stakeholders are able to form an idea of the entity by referring to both financial and non-financial information in an integrative manner. The combination of financial and non-financial information leads entities to communicate their performance and created value more effectively.

The concept of Integrated Reporting is still in its infancy in Sri Lanka. Adopting the concept is not yet compulsory for companies listed in Sri Lanka and is optional. Even though it is mandatory, some companies in Sri Lanka have adapted IR while others tend to adopt it because of its real benefits. Since IR has only recently appeared in the accounting arena only a few empirical investigations have been done into its dimensions and some researches deal with the initial introduction of IR and its benefits. This study tries to fill the empirical gap while investigating the value relevance of IR.

Lee et al. (2015) found that IR contributes to creating value for a firm. Even though this concept appears as a value creation momentum, it needs to be investigated to examine whether its benefits exceed its cost or not. This means, it should ensure that IR creates value for the firm.

The objective of this study is therefore to investigate the value relevance of IR and depict how IR adds value by increase shareholders' wealth.

This research will be useful both for IR adopted companies and non-adopted companies. Study findings conclude that, IR has a significant positive relationship with market capitalization. It reveals that IR adoption create more value to the company. So companies which are still not adopt IR should try to adopt IR for their reporting. This research would be an assistance to future researchers for the empirical studies for their researches.

## **2. Literature Review**

### **2.1 Integrated Reporting**

International Integrated Reporting Council (IIRC,2013) has defined Integrated Reporting as a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. IIRC is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs. Its mission to establish integrated reporting and thinking within mainstream business practice as the norm in the public and private sectors. This council has been officially established on 2 August 2010. Up to now IIRC has played a vital role regarding the development and promotion of IR within business firms. And also it has already introduced a well-organized Integrated Reporting Framework. The IIRC is not a regulator or a standard setter. Thus, companies are exploring integrated reporting with the IIRC voluntarily.

### **2.2 Empirical Findings on Integrated Reporting and Firm Value**

Several studies have investigated the effect of IR on the firm's value. A firm's value has been differently explored by various scholars using various determinants for measuring a firm's value. Almost all studies investigate how IR affects the firm's value and whether or not it creates additional value to the business entity.

Kosovix and Patel (2013) have examined the value-relevance of integrated reporting for the market values of companies listed on the Johannesburg Stock Exchange's Main Board, in South Africa. That was a purely quantitative study. The data for 2009 and 2011 was collected from the annual reports of selected companies. A self-constructed disclosure index was applied to define IR and determine the relationship between IR and a company's value creation. According to the findings, the disclosure of the level of compliance value of companies adopting IR had increased from 2009 to 2011. The degree of incorporation of IR affects the level of compliance between the sectors and characteristics.

Firms with higher IR score have higher market valuation ( Yeo et al., 2014). Further this study has revealed that equity investors do value IR. This study has used 100 South African companies listed on Johannesburg Stock Exchange for the period 2009 to 2012. The sample covers many industries such as agriculture, mining, chemical, electronics, manufacturing, transportation and services. Financial information and stock price data were collected from the annual reports, Standard and Poor's Global Vantage Database and Datastream Database. IR was valued by using a self-constructed index following the International Integrated Reporting (IIR) Framework and the IR Guiding Principles for each company year observation.

Lee at al.,(2015) have investigated the association between Integrated Reporting and firm Valuation. The sample was the listed firms in South Africa. This study has explored the association between cross-sectional variation in Integrated Reporting disclosures and firm valuation in the period after the implementation of Integrated Reporting. As the conclusion it suggests that the firm valuation is positively associated with Integrated Reporting disclosures.

Study revealed that the benefits of Integrated Reporting exceed its costs. Researchers predict that Integrated Reporting reduces the information processing costs in firms with complex operating and informational environment. Consistent with their prediction, they find that the positive association between firm valuation and Integrated Reporting is stronger in the firms with higher organizational complexity, suggesting that Integrated Reporting improves the information environment in complex firms such as firms with high intangible assets, firms with multiple business segments and large firms. Furthermore, it is found that in firms with higher external financing needs, the sub- sample of firms with higher Integrated Reporting have higher firm valuations, suggesting that Integrated Reporting mitigates the information asymmetry between corporate insiders and external suppliers of capital. Additional analysis indicates that firms with high Integrated Reporting outperform those with low Integrated Reporting both in terms in stock market and accounting performance.

Martinez (2016) has examined the effects of Integrated Reporting on the firm's Value by considering the voluntary adopters of the IIRC's framework. The purpose of this paper was to evaluate potential external benefits related to capital markets of the IR Framework on a sample of international voluntary adopters. The selected data sample is comprised exclusively of firms included in the IIRC's database as of September 2016. The results indicate IR is positively associated with market value and expected future cash flows, but not with bid-ask spread or implicit cost of capital.

Senaratne et al. (2015) investigated how IR as a part of managerial technology is diffused in an emerging economy taking Sri Lanka as a case study. This is a mixed study using both qualitative and quantitative data collected from annual reports and semi structured interviews. The study reveals a transitional approach to IR in these companies evolving through incremental changes to systems and processes that are already established in relation to sustainability reporting.

### **3. Methodology**

#### **3.1 Population**

All companies which are listed on the Colombo Stock Exchange formed the population for this research study.

#### **3.2 Sample**

All companies adopting IR were selected and it was revealed that 48 companies have adopted IR by 2015.

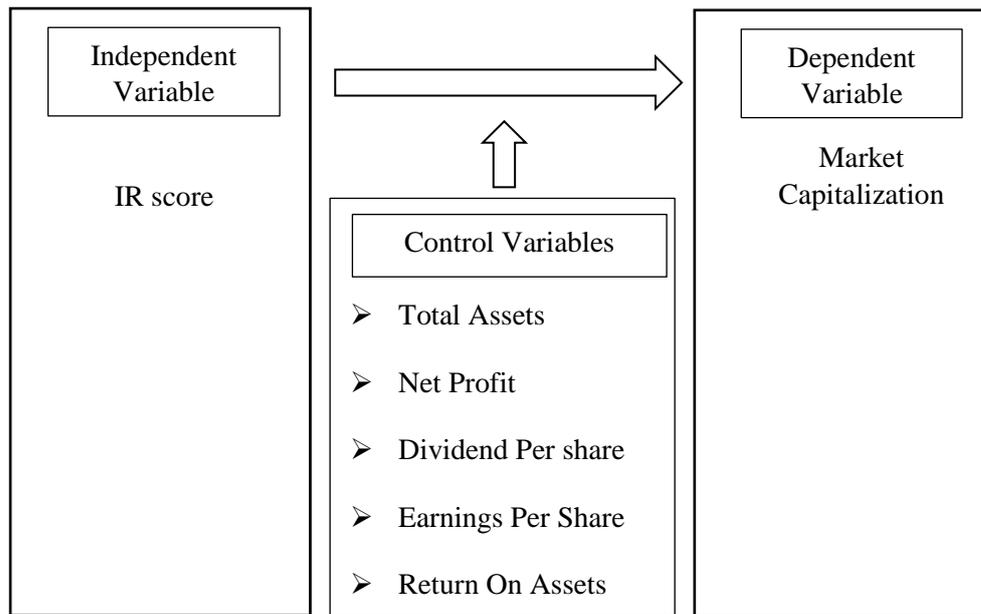
#### **3.3 Data Collection**

Data was collected for the years 2015 and 2016 using annual reports of selected companies. Companies adopting IR were identified by referring to annual reports with the words "Integrated reporting", "IR" or "<IR>" in the body of the report.

#### **3.4 Techniques of Analysis**

Regression analysis was done in order to analyze the data. The Hausman test revealed that a fixed effect model is more appropriate for this study.

### 3.5 Conceptual Framework



Source: Author Constructed

### 3.6 Hypotheses

$H_0$  : There is no significant relationship between IR and market capitalization.

$H_1$  : There is a significant relationship between IR and market capitalization.

### 3.7 Research Model

The study has been planned to perform with the help of Ohlson (1995) model. The Ohlson model is a well-established method for undertaking the accounting research and to investigate the value relevance of non-financial variables (Lo and Lys, 2000).

$$P_{jt} = a + \beta_1 B_{jt} + \beta_2 X_{jt} + \beta_3 V_{jt} + \epsilon_{jt} \text{----- Equation 01}$$

$P_{jt}$  : Value of the company

$B_{jt}$  : Book value of shareholders' equity

$X_{jt}$  : Net profit

$V_{jt}$  : Other information

$\epsilon_{jt}$  : Mean zero disturbance term

The Ohlson model has been constructed on the assumption of the value of the company is determined by the non-financial variables as well as financial variables. In equation 01,  $V_{jt}$  represent the other information that may be affecting towards the value of the company. So this allows researchers to use their own interpretations to determine  $V_{jt}$ . So in this study that variable is considered as the value of IR. Total Assets, Net Profit, Dividend Per Share, Earnings Per Share and Return on Assets are included to the equation as control variables.. Thus the modified equation can be demonstrates as equation 02.

$$MCAP = a + \beta_1 TA + \beta_2 NP + \beta_3 DPS + \beta_4 EPS + \beta_5 ROA + \beta_6 IR \text{----- Equation 02}$$

MCAP	=	Market Capitalization
a	=	Constant
$\beta_{1-6}$	=	Regression coefficients for respective variables
TA	=	Total Assets
NP	=	Net Profit
DPS	=	Dividend Per Share
EPS	=	Earnings Per Share
ROA	=	Return On Assets
IR	=	IR Score

### 3.8 IR Index

Building a self-constructed index and selecting the items gives a great possibility of disclosure (Kosovic and Patel, 2013). This approach is used frequently in academic research hence there is no certified theoretical guideline for selecting the items.

In order to measure IR score of the company, self-constructed index was used. This author's self-constructed index was developed as per the IIRC-2013 framework (section 4 page 24). There are main eight content elements that an integrated report should include as per the IIRC-2013 framework. Disclosures under each content element have been considered when developing IR index.

To measure the disclosure equation 03 was applied.

$$SC_j = \frac{\sum_{i=1} X_i}{TS_j} \quad \text{Equation 03}$$

$SC_j$  = Total scores complied for each company

$X_i$  = Summation of disclosure of complying item for each company

$TS_i$  = Total Summation of complied items of index

To assess the value of each item the binary model, 1 or 0 was applied, to determine if the information was disclosed or not. If the items were disclosed in the index, each item was given a value of one, and if not, a value of zero. The disclosure information was checked from annual reports and all index items were checked individually. A total of the index scores for each company and year were calculated in order to convert the scores receiving the scored ratio for each company. The sample of 48 companies' integrated annual reports in 2015 and 2016 are associated with the index, with 8 main categories divided into subcategories, providing a total of 31 items. The encoding, 1 or 0, has been done systematically and the same approach has been used in every company's information disclosure. This implies that the coding for each company has been equally treated; decreasing the subjectivity using the same technique.

### 4. Data Presentation And Analysis

The Pooled OLS regression model ignores the cross sections and time series nature of data. Therefore, this study rejects the pooled OLS regression model and accepts the other two models. The fixed effect model allows for heterogeneity or individuality among the forty eight companies by allowing for its own intercept value. The term "fixed effect" is used for the fact

that although the intercept may differ across companies, the intercept does not vary over time, that is, it is time invariant. The random effect model suggests that all forty eight companies have a common mean value for the intercept. So the hypotheses can be built as follows:

H<sub>0</sub>: Random effect model is more appropriate

H<sub>1</sub>: Fixed effect model is more appropriate

The Hausman test was done in order to test these hypotheses. The table 01 gives the results of the Hausman test.

**Table 01: Hausman Test of Cross Section Random effect**

Test Summary	Chi-Sq statistic	Chi-Sq d.f.	Prob.
Cross-section random	13.194774	6	0.0400

Since P value is 0.04 and is less than 0.05, the null hypotheses can be rejected and the alternative hypothesis is accepted. So the fixed effect model is more appropriate for testing data.

**Table 02: Regression Analysis; Fixed Effect Model**

Variable	Coefficient	Std. Error	Prob.
C	13.61634	1.797573	0.0000
TA	0.683682	0.124151	0.0000
NP	0.001078	0.048285	0.9822
DPS	0.001419	0.001652	0.3929
EPS	0.009955	0.004371	0.0252
ROA	0.000462	0.000448	0.3055
IR	3.394505	1.465040	0.0228
R- squared	0.306389	F-statistic	6.552334
Adj. R-squared	0.259629	Prob.(F-statistic)	0.000009

The table 02 shows the results of the regression model, which can be estimated as follows:

$$\text{MCAP} = 13.6163 + 0.6836\text{TA} + 0.001\text{NP} + 0.0014\text{DPS} + 0.0099\text{EPS} + 0.0004\text{ROA} + 3.3945\text{IR}$$

This model shows the interaction between market capitalization and its determinants. The R Squared in the regression model indicated that 30.63% of the variation in market capitalization is explained by the variables in the model. So the fitness of the model is only 30.6%. The F-statistics (prob > chi 2) prove the efficiency of the estimated models at 1% level of significance and the value was 0.000009. Total assets, Earnings Per Share and IR are the significant variables since these independent variables have p values less than 0.05. The main purpose of

building the above model is to examine the effect of IR on the market value of the company. IR has a p value of 0.0228, which is less than 0.05. So the results indicate that IR significantly affects the determination of market capitalization. IR and market capitalization show a positive association with a coefficient of 3.394505, which means that when IR increases by one unit, market capitalization increases by 3.394505 units. Thus it can be concluded that the null hypothesis should be rejected while accepting the alternative hypothesis as follows:

H<sub>1</sub>: There is a significant relationship between IR and market capitalization.

## 5. Conclusion

These study findings reveal a significant relationship between IR and market capitalization. The main objective of this study was to examine whether there is any value relevance of adoption of IR in Sri Lankan companies. Without identifying its value relevance, it is meaningless to adopt IR even though scholars and studies show IR adoption to be beneficial. So this study was done using companies listed on CSE. Thus the findings of this study can be highly relevant to the Sri Lankan context. The adoption of IR results in an increment of market capitalization. This result is in conformity with Martinez (2016), showing that IR is positively associated with market value and expected future cash flows, but not with bid-ask spread or implicit cost of capital. Lee et al., (2015) have also found that the firm's valuation is positively associated with Integrated Reporting disclosures. The study reveals that the benefits of Integrated Reporting exceed its costs. The sample consisted of the listed firms in South Africa. This study explored the association between cross-sectional variation in Integrated Reporting disclosures and firm valuation in the period following the implementation of Integrated Reporting. These research findings suggest that IR positively affects maximization of shareholder wealth. So companies which have not yet adopted IR should try to adopt IR in their reporting. The study is conducted in Sri Lankan context only. So it will be difficult to generalize findings for international context. Since the IR is not yet mandatory requirement in Sri Lanka, companies adopt IR as its own consent. So there is no proper single date for adoption of IR in order to conduct analysis. When selecting IR adopted companies, author assumed that just mentioning the word "Integrated Reporting" implies that such company is a IR adopted company. The study was based on the Colombo Stock Exchange (CSE). More researches should be done covering a larger region and more capital markets to establish whether similar results will be obtained. The present study was confined to the period of 2015 and 2016. More researches need to be done covering a longer period. And also research can be conducted by comparing Sustainability report era and Integrated Reporting era. Future research will be required to incorporate additional variables that affect the value relevance or can be used to another model to measure the result. It is rare to find a similar study to this topic in Sri Lankan context. So Researchers are encourage to conduct more researches in Sri Lankan context as well as international context.

## References

- Financial Reporting Council(FRC),. (2011). *Cutting clutter. Combating clutter in annual reports*. Retrieved from [www.frc.org.uk](http://www.frc.org.uk)
- Hoque, M. E. (2017). Why Company Should Adopt Integrated Reporting? *International Journal of Economics and Financial*, 7(1), 248.

- IIRC. (2013). *The International <IR> Framework*. London: International Integrated Reporting Council. Retrieved from [www.theiirc.org](http://www.theiirc.org)
- Kosovic, K., & Patel, P. (2013). *Integrated Reporting- is it value relevant?* Jonkoping International Business School. Jonkoping University. Retrieved April 04, 2014, from <http://www.divaportal.org/smash/get/diva2:624126/FULLTEXT02.pdf>
- Lee, K. W., Hian , G., & Yeo, H. (2015). The Association between Integrated Reporting and Firm Valuation. *Review of Quantitative Finance and Accounting, forthcoming*, 4(1), 47.
- Lo, K., & Lys, T. Z. (2000). The Ohlson Model: Contribution to Valuation theory, limitations, and empirical applications. *Journal of Accounting, Auditing and Finance*, 15(1), 337-367.
- Martinez, C. (2016). *Effects of IntegrEffects of Integrated Reporting on the Firm's Value: Evidence from Voluntary Adopters of the IIRC's Framework*.
- Ohlson, J. (1995). Earnings, book values, and dividends in equity valuation . *Contemporary Accounting Research*, 11(2), 661-687.
- Senaratne, S., Gunarathne, N., Herath, R., & Bandara, C. (2015). Diffusion of Integrated Reporting in an emerging Economy. *Global Conference of Environmental and Sustainability Management Accounting Network (EMAN)* (pp. 120-137). Colombo: University of Sri Jayewardenepura.
- Yeo, G., Wai, L. K., & Thiruneeran. (2014). Integrated Reporting and Corporate Valuation. *Integrated Reporting Forum* (p. 5). Singapore Accountancy Commission and The Institute of Singapore Chartered Accountants. Retrieved April 2014, 22, from [http://integratedreporting.org/wp-content/uploads/2014/04/Integrated-Reporting-and-corporate-valuation-Media-28-April-2014\\_NTU.pdf](http://integratedreporting.org/wp-content/uploads/2014/04/Integrated-Reporting-and-corporate-valuation-Media-28-April-2014_NTU.pdf)

## Changing the experience of flying : Vistara – the new kid on the block!

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### Abstract

Flying 32000 feet above the ground, sipping steaming hot Starbucks coffee, biting into succulent meal and always being greeted by a generous smile – Vistara has changed the way domestic flyers in India are experiencing in-flight services. Being one of India’s newest airline, it has reached to a great following and a very strong brand value. While it does come with its share of challenges and issues, it’s very interesting to study what drives this airline to deliver what is lacking most in the aviation industry – Superb Customer Experience!

### History

The joint venture between Tata Sons & Singapore Airlines gave birth to TATA SIA Airlines Ltd, or as we commonly know it – Vistara. Tata Sons and Singapore Airlines hold 51% and 49% stake respectively. The venture came into being to provide an extraordinary flying experience to the Indian customers and bring a mammoth change in the aviation industry.

The operations commenced on 9<sup>th</sup> January 2015, with the inaugural flight between New Delhi and Mumbai. In the last 3 years, Vistara has grown to become India’s 5<sup>th</sup> largest domestic airline serving on 22 major destinations across the country from Delhi, Srinagar, Lucknow, Varanasi in the north – to Chennai, Bangalore, Kochi, Port Blair in the south and Ahmadabad, Mumbai and Pune in the west – and covering the eastern India with Kolkata, Guwahati and Bagdogra. With over 700 weekly flights, Vistara has added more than 10 destinations in the last one year itself with the increasing demand of the passengers and the exquisite services that are offered. Its one of the few full service airlines that offers 3 different categories of seating : Business, Premium Economy & Economy.

The word Vistara is derived from a Sanskrit word *vistaar*, which means a “limitless expanse” – this is an inspiration for the limitless world that Vistara flies into – the sky. It also showcases the experience that it aims to provide to its fliers – one of a kind! The tag line that is associated with Vistara is – “fly the new feeling” – as it vows to revolutionize Indian travellers’ experience of flying. Whithin the word Vistara, there is another hindi word *tara* which means a star – this is also represented within the logo of the company . The logo is an eight pointed star intertwined together to form a shape of a continuous structure – this represents the aim of the company which is to provide a seamless and heart-warming experience to all its flyers.

The management of Vistara has the expertise from both Singapore Airlines as well as Tata Sons – the board includes five members : Chairman, Mr. Bhaskar Bhat, MD of Titan Company Ltd, Directors-on-Board, Mr. Swee Wah Mak, Executive VP (Commercial), Singapore Airlines, and two independent Directors Mr. Som Mittal, former President & Chairman Nasscom and Ms. Sangeeta Pendurkar. The board and the management having the best of the industry and domains, provide a wide range of benefits to the company and its policies – keeping the customer at the heart of all decisions and coming up with innovations in their operations.

## Customer Experience

Vistara has stood out as a leader in the aviation industry purely by changing the strategy and focussing on delivering exceptional customer experience. The experience is a holistic approach focussing on the mobile app, web services, check-in counters and finally leading up to in-flight experience. Vistara offers a wide array of fantastic services that leave an everlasting mark on all its flyers. The Vistara app provides the users a seamless experience of booking as well as checking in. It has been created with two main aims – simple and friendly to use. Their Vistara Club program even offers additional rewards to users checking-in online or using the app to book the tickets online. By registering to the Club Vistara services, customers can earn loyalty points for the completed flights – along with bonus on mobile check ins and additional points for booking via the mobile apps. These points once accumulated can be used to purchase flight tickets or upgrade from one class to another. There are four different categories of Club Vistara services – Base, Silver, Gold and Platinum – each includes a separate set of benefits – the higher the category, the better benefits it offers. Unlike the reward points on other airlines, Vistara is exquisite, as it provides points based on the fare value rather than the distance – this helps in rewarding the customers with higher points on higher spends. The experience of redeeming the points is seamless and easy – customers can either do it online or via the call centres. One area where the app could be developed further is showing the actual location of the incoming/outgoing flights for an enhanced customer experience on any flight delays and keeping the customers fully engaged on the arrival / departures.

Vistara is the only domestic airline offering both Premier Economy & Business class along with the regular Economy class and the services offered across the three areas vary as well. The Premium Economy & Business traveller is offered a welcome drink along with hot/cold towel as soon as they are seated. For a first time flyer in India, this makes a big difference and adds the extra “wow” factor to their experience. Wiping off their faces and hands with the hot/cold towel, the customers begin on a journey full of pleasant surprises.

One of the top areas that has impressed majority of the flyers is the on-board meals – the menu being designed by special chefs, the food has been quoted to be better than the meals served in top restaurants. Chicken tikka biryani and mirchi ka salan to veg pulao and kofta curry, chettinad chicken to vegetable pulao and paneer tikka, the meals offered are ever so delicious and are rarely complained about. Passengers who have flown via Vistara, look forward to traveling again and enjoying the mouth-watering meals offered on-board. Apart from the main food, Vistara also provides desserts and tea/coffee. The food offered on long duration flights are full meals as compared to short duration flights where light snacks are offered.

Vistara has recently started offering Starbucks coffee to the passengers on flight (on flight durations more than 2 hours). While this may be a small gesture, there are massive appreciations on the social media where the customers who love their brands – such as Starbucks, are highly pleased with this service. Vistara is the only airline in the world that is serving Starbucks coffee on flight – thanks to the parent company TATA! Such innovative ideas and thoughts are making a big difference to the customer experience and supporting in developing a brand attachment with the customers.

Vistara has a dedicated luxury lounge for its business class passengers at the Indira Gandhi International airport, New Delhi. Adding value to the flyer’s experience, Vistara also extends the special Lounge Access to its Economy and Premium Economy passengers at an attractively priced lounge fee. This gives the chance to not only the Business class passengers, but also the Economy and Premium Economy travellers to experience and relax in the comfort of the lounge.

Customers also have the advantage of pre-booking extra baggage at a highly discounted rate, prior to their travel and avoid the hassles and higher fees that could be charged at the airport. With this price advantage, also comes guarantee of refund/change of flights thereby providing a hassle-free experience to the customer.

Based on the 1264 reviews from TripAdvisor, 59% of the reviews were 5 stars or Excellent – which is the highest for any Indian Airline in the domestic sector! The top areas that the customers have been most pleased about are

the customer service, cleanliness, seat comfort and the smooth check-in and boarding experience. Food and leg room were rated very highly by majority of the reviewers were the flyers were very impressed with the quality and the quantity of food.

Rishad Patel has commented on SkyTrax , “Vistara service once again excellent. The crew on board and service is very good. Also, they have the best coffee I have had on any Indian carrier!” The average rating on SkyTrax is 9/10, one of the areas where users have requested intervention by the airline is the In-Flight entertainment services. Vistara currently does not offer any inflight entertainment on any of the flights – providing this would give an edge to Vistara as there are certain Jet and Air India flights where this service is offered.

Vistara also made headlines for refusing a top Indian celebrity, actor Salman Khan, to check in once he arrived late – this goes on to prove that all passengers are considered equal and no VIP treatment is given even to the celebrities. However, in order to help Salman Khan, Vistara also supported and helped in accommodating him on a different airline. This goes on to prove that the company operates on providing “Personal” experience to all customers.

On 30<sup>th</sup> May 2018, there was an accident on the National Highway leading towards to airport and this caused massive traffic jams across Delhi and Gurugram. Vistara took a bold step to ensure every customer who missed their flight was accommodated on the next flight with no additional fee or fare. Such strong decisions focussing on customers more than anything else is resulting in a massive thumbs up across all social media platforms. Some of the comments from customer who went head over heels on Twitter below :

“Only Vistara can be so considerate. Great work and heart touching” @abbasionly

“This is a first, I mean, I have never heard this except for storms and such. Awesome Air Vistara” @riddhineeta

“Excellent response, engaging and customer centric. @airvistara you will fly really high on engines powered by customer good will”. @way2anand

“That’s a good thought in an otherwise “corporate-y” world” @khushboo\_mehta1

“Thank you so much, I was having a panic attack in my car. This is why I always travel by Vistara” @yashendra2797

### **Dealing with the competitors**

While Vistara is the newest airline to be operating in India, it came with a challenge where the aviation industry was on a growth and the low cost carriers (LCC) such as Indigo, SpiceJet and GoAir had already cemented their brand of providing cost effective and no fuss services. This was working very well against the full service airlines such as Jet Airways and Air India. Vistara planned to target the full service sector providing world class experience at cost effective rates.

**Vistara vs Indigo :** Indigo Airlines is India’s largest domestic low cost carrier and Asia’s largest individual low cost carrier with respect to the size of the fleets and the number of passengers flown. With its primary base at New Delhi, Indira Gandhi International Airport , Indigo operates across 50 major destinations – both India and worldwide. Indigo started their domestic operations in 2006, nine years before Vistara came into existence. With the civil aviation rules, Indigo started their international operations five years after coming into play. Indigo was successfully becoming India’s most preferred airline with its low costs and excellent connectivity. While Indigo is a Low Cost Carrier and does not offer free meals like Vistara, they have an edge over Vistara due their high number of connectivity and operations across every major sector in India. Due to a no-frills airline, Indigo does not offer value added services such high loyalty rewards, extra baggage and Business/Premium Economy sections. Several customers are happy paying extra amount to get the privilege of extra leg room in the premium economy class in Vistara. One of the most common fact that is famous about Indians is that they way to their heart is through their stomach and Vistara just hits the bull’s-eye in this segment. Majority of the passengers

have been super pleased with the restaurant quality food. Vistara seating is preferred more than Indigo as it is spacious and has enough leg room even in the Economy section.

Vistara has come into the aviation industry when there has been a monotony and every single airline has been focussing on cost reduction and making more money. For example, Indigo charges extra to its customers for allowing them to receive their baggage first upon reaching to the destination – however, several customers have complained about not receiving their baggage timely, thereby causing strong dissatisfaction. Indigo also charges customers extra for window and aisle seats which has been refuted a lot on the social media. Overall, Indigo does have a few advantages over Vistara, however in current scenario, customers are willing to pay additional fare to gain the unforgettable experience provided by Vistara.

**Vistara vs Jet Airways :** Jet Airways has been India's leading airline across domestic and the international sector – offering Business and Economy class services on both sectors. Jet Airways is India's second largest airline with a market share of 17.8% and operates approximately 300 flights across all major destinations in India and worldwide. Jet Airways began its full-fledged operations in 1995 and moving into the international sector in 2004. The day Vistara was launched, Jet Airways announced that it would do away with the low cost carrier services and focus on fully serviced sector. Vistara and Jet Airways have a competition in the same segment where they both cater to similar customer – providing full services inclusive of free meals/snacks on board. Vistara and Jet Airways both provide a separate Business class on their aircrafts – however Vistara also provides the premium economy class on all its flights across the country. Based on the reviews on social media and Tripadvisor, Vistara shows a much better rating on all aspects from food to leg spacing and check-in experience. Vistara also has special counters for Business and Premier Economy customers to provide them with an easy and smooth check-experience , something that Jet Airways lacks.

**Vistara vs Air India :** While Air India remains one of the most talked about airline in India, for all the wrong reasons – from poor customer services to lack of personal element in their dealings with the customers, from the flights being delayed and cancelled to rude staff and low standard of food – Air India is in the news for reasons they would prefer to avoid. While in the last few years, they have managed to change this perception by recruiting new and young staff – Air India being famous for running with middle aged / elderly crew, some who are on the verge of retiring – this young breed of crew has brought about a change in their dealings with the customers. They have also acquired the Dreamliner fleets for the domestic flights (on certain sectors only) as Air India was infamous for having really old aircrafts with poor cleanliness. With Air India and Jet Airways falling behind delivering luxurious service, Air Vistara can enjoy the space which was once owned by Kingfisher airlines. With the backing of Singapore Airlines, Vistara has delivered what it aimed at the launch in 2015, providing exemplary customer experience which has been lacking in Air India.

### **Key Innovations**

**RADA** – using the latest Artificial Intelligence technology, Vistara has innovated with the most customer centric product – India's first robot that will be providing assistance to its customers at the airport. The robot has been named RADA and has been created to provide a seamless experience to the customers keeping in mind the ever changing customer behaviours – it will be initially placed at the Vistara Signature lounge at the Indira Gandhi International Airport at the T3 terminal in New Delhi. The robot is aimed to be launched on July 5 2018 where it will be interacting with the customers in the lounge and will be developed further based on the feedbacks received from the customers. Currently the robot will be able to scan the boarding passes, greet the customer and interact with them using hand gestures, engage with small children and play videos and songs, provide details on the destination city, weather and flight status. RADA has been designed and engineered in the TATA Innovation Lab, with the help of top technicians and engineers and supported by the reputed educational institute's students. Being built on the chasis of four wheels, RADA can operate in 360 degrees and is a brilliant story of the Make in India initiative launched by the Prime Minister Narendra Modi. The aim of using this robot is to take over the transactional activities from the efficient employees and enable them to deal with more complex and difficult tasks which require a humane touch and cannot be performed by machines.

*Crew* – to ensure the standards remain extremely high with the crew, all crew members were flown to Singapore and the training was conducted on the iconic Singapore Girl’s standard.

*Chef On Board* – a new service recently launched by Vistara, offers the Business and Premium Economy passengers services by a uniformed chef who takes their direct and instant feedback on the menu. With the unmatched reputation on the quality of food and the ever delicious menu, its imperative that Vistara continues to lead the way in maintaining the standards of the food. By offering the services of the chef and taking direct feedback from the customers, Chef on Board in a one of a kind service that can make the dining experience more memorable and fulfilling.

*Club Vistara* – an innovative reward program which is offered via the website and the company’s app. While there are points rewarded for each flight successfully completed by the passengers, there are special rewards given if the passenger completes the check-in via their app/website and other promotional offers. The rewards can then be used for booking other flights or even upgrading the flights from Economy to Premium Economy or Business and Premium Economy to Business.

*Women Flyer Service* – women safety and protection is the priority for all and Vistara has a smart innovation called the Women Flyer Service. With this service, Vistara would provide special assistance to women travellers flying alone by escorting them with their luggage, to and fro from their ground transportation. This service also provides preference of seat – either window or aisle, no middle seats. Vistara is the first airline to provide such a service at times when there is a high focus on safety of women in the country. A female passenger can also request support in booking a taxi from an authorised partner at the airport as in some of the cases, it was found that female solo travellers struggled upon landing and were seeking for help.

*Vistara Corporate Flyer* – this program has been designed to cater to the corporate customers to provide them a seamless travel experience by offering them an array of services from Zero cancellation/Change fee to enhanced cabin baggage allowance along with preferred seating options. Complimentary priority check in and boarding and baggage handling is also offered to customers who enrol themselves in this program.

*Vistara Young Star* – this special service is for unaccompanied minors who are aged between 5-12 yrs and are travelling without the company of a supervised adult. Vistara takes complete care of the child who travel under this program and are escorted by the airline staff and are seated in the aircraft while the cabin crew keeps a watchful eye on them. There is a fee of INR2500 for this service and the young traveller is handed over to an authorised person who has been already updated on the Unaccompanied Minor form. The children travelling under this service are required to carry correct photo identification. Parents can further call the customer service centres and advise them of any specific or special care that the young traveller need assistance with.

*Vistara Student Discount* – Vistara offers all the students in India (above the age of 12yrs), 10% discount on the economy base fare. The students can avail this offer while booking their tickets and are required to show the identity proof issued by the educational institute at the time of check in at the airport. The discount is only offered on the bookings made via the Vistara website.

*Vistara Senior Citizen discount* – Vistara also offers all senior citizens - who have attained the age of 60yrs at the time of the journey, a discount of 10% on the economy base fare. This offer is only applicable on the economy travel and the travellers are required to present the proof of age at the time of check in. Similar to the student discount offer, the senior citizen discounts are only applicable on booking made via the website.

## **Challenges**

Operating with Loss year on year – for the financial year 2017, Vistara’s net loss has increased to INR 518 crore which was up from the loss of INR400 crore in the financial year 2016. While the revenue for FY2017 has increased by two fold to INR 1390 crore as there has been an increase in the capacity and improved loads, however due to the increased pressure on cost, the losses increased by 29%. While Indigo, Jet and SpiceJet

made profits in 2017, Vistara's losses are an area of concern. As per the management and the board, it would take 3 to 5 years for the low cost airlines to break even and for the fully serviced airlines it could take more than 5 years as well. The airline has plans to order wide bodied planes and expand its operations on the untapped sectors in the domestic market. The company aims to be cash positive by the year 2018-2019 and become a profitable airline from 2020-2021. Similarly, since AirAsia India, the other airline started by the Tatas in association with Air Asia, is incurring losses, Tata Sons had in the same board meeting, approved infusion of \$25 million into this airline to support its operation.

Sustaining the quality of service – with the rise of social media and a tough competition across the aviation sector, Vistara needs to remain consistent and sustain the quality of the service. The recent incident on social media (02-May-2018) where a passenger claimed to have found a cockroach in his meals on board, received a lot of flak from the media. However, Vistara was proactive and gave a declaration on the details of the actual event. Vistara has a strong presence on social media (namely Twitter and Facebook) and they interact, provide support and accept feedbacks on all range of services.

The 3 section aircraft – Economy/ Premium Economy / Business – is a challenge specially on the shorter duration flights. While it makes the interiors of the aircraft look very claustrophobic, the presence of the Premium Economy section can also impact on the revenue model. This can continue to challenge them in coming future as well.

The model of other low cost carriers in India have been successful by providing services that a customer needs and not forced upon – such as the food. Allowing customers to buy food on board, gives them the freedom to choose from a menu rather than being forced to eat what is provided. While there has been many positive feedback on the food offered in Vistara, there are customers who would rather avoid eating or disliking the menu.

### **Next Steps & the Road Ahead**

Pre 2016, as per the Civil Aviation Policy in India, a domestic airline could move into the international sector on two conditions – minimum five years of domestic experience and at least 20 aircrafts deployed in the sector. However, the Modi government made amendments to this policy and agreed on excluding the requirement of five years of experience. This came as a big boon for Vistara, as a young three year old, newest airline in India, Vistara has the open gateways to venture into the international sector. In April 2018, Vistara received its 20<sup>th</sup> aircraft – making it fully eligible to start the overseas flights.

Venturing into the international sector, Vistara should be focussing on starting with short duration international flights from Indian destinations – to Thailand, UAE, Sri Lanka, Nepal, Indonesia, Singapore and Malaysia. These destination could work well within the range of the current fleet of A320 aircrafts. Vistara has proved its mettle with impressing customers and winning the latest award for “Most Passenger Friendly Airline”. Apart from being the highest rated airline on Trip-Advisor and SkyTrax, Vistara is most loved on the social media platforms such as Twitter and Facebook. With such positive reputation and customers who have already experienced great services, venturing into the International market will surely give Vistara an edge.

However, the top challenge will remain on cost effectiveness. As per the analysis from MakeMyTrip and Yatra – the most common travel portals used for booking flights and hotels in India, majority of the Indian customers are always searching for options which cost the least. Hence, Vistara with its three segments and fully serviced operations, would need to focus on ensuring the cost matches to the other top players in the segment such as Indigo, SpiceJet and GoAir.

These airlines do not provide free meals and high baggage allowance – while this could play a major game changer for Vistara being a step ahead in providing full service, it will be key for them to match the costs in comparison to the aforesaid airlines.

As Vistara has not been making any profits in the last 3 years and only leading to losses, it is crucial that they should not begin cost cutting to manage the drop in revenue and lead into the Indigo way – they should continue to focus on delighting customers by continuing to provide services that are exemplary and unmatched – something that leads to all flyers return to Vistara!

As quoted by a frequent British traveller Glenda Jowsey, “I was very impressed with the services offered by Vistara – from the smooth check-in experience to the on-board services, pleasing cabin crew and fantastic meal, Vistara can surely give any top European airline a run for their money!”

#### **References :**

<https://www.airvistara.com/>

<https://economictimes.indiatimes.com/industry/transportation/airlines/-aviation/vistara-offers-chef-on-board-for-business-premium-economy-fliers/articleshow/63984509.cms>

<https://www.ndtv.com/business/vistara-launches-chef-on-board-service-for-instant-feedback-1846140>

<https://www.indiatimes.com/news/india/gourmet-cockroaches-served-passenger-on-board-vistara-flight-finds-a-live-one-in-his-food-344609.html>

<http://www.traveller.com.au/vistara-airline-in-india-offers-woman-flyer-service-with-special-treatment-gxjle7>

<https://www.businesstoday.in/sectors/aviation/vistara-plans-start-international-operations-soon-bagged-20th-aircraft/story/274112.html>

[https://www.tripadvisor.co.uk/Airline\\_Review-d8729207-Reviews-Vistara](https://www.tripadvisor.co.uk/Airline_Review-d8729207-Reviews-Vistara)

<http://www.airlinequality.com/airline-reviews/vistara/>

[https://en.wikipedia.org/wiki/Jet\\_Airways](https://en.wikipedia.org/wiki/Jet_Airways)

<http://www.tata.com/article/inside/vistara-india-service-experience>

<https://economictimes.indiatimes.com/industry/transportation/airlines/-aviation/jet-airways-vistara-spicejet-question-snag-data/articleshow/63552704.cms>

[http://www.business-standard.com/article/companies/vistara-s-net-loss-widens-to-rs-518-cr-in-fy17-117091300929\\_1.html](http://www.business-standard.com/article/companies/vistara-s-net-loss-widens-to-rs-518-cr-in-fy17-117091300929_1.html)

<https://en.wikipedia.org/wiki/IndiGo>

<https://www.fortuneindia.com/ideas/the-new-king-of-good-times/101222#>

<https://www.airvistara.com/trip/seatmap>

<https://www.airvistara.com/trip/YoungStar>

<https://www.airvistara.com/trip/VistaraStudentDiscount>

[http://www.business-standard.com/article/companies/vistara-s-net-loss-widens-to-rs-518-cr-in-fy17-117091300929\\_1.html](http://www.business-standard.com/article/companies/vistara-s-net-loss-widens-to-rs-518-cr-in-fy17-117091300929_1.html)

<http://www.thehindu.com/business/Industry/Vistara-to-turn-profitable-in-2020-21/article16926692.ece>

<https://www.airvistara.com/trip/vistara-press-release>

Exhibits:

# HOW THEY STACK UP

FY17 figures in ₹ cr

Airline	Revenue	Net profit
IndiGo	19,369	1,659
Jet Airways	23,669	438
SpiceJet	6,191	430
Vistara	1,390	-518

Source: Companies

The Destinations that Vistara operates to and from in India (as of March 2018) :

State	City	Airport	Notes
<a href="#">Andaman and Nicobar Islands</a>	<a href="#">Port Blair</a>	<a href="#">Veer Savarkar International Airport</a>	
<a href="#">Assam</a>	<a href="#">Guwahati</a>	<a href="#">Lokpriya Gopinath Bordoloi International Airport</a>	
<a href="#">Chandigarh</a>	<a href="#">Chandigarh</a>	<a href="#">Chandigarh International Airport</a>	
<a href="#">National Capital Territory</a>	<a href="#">Delhi</a>	<a href="#">Indira Gandhi International Airport</a>	Hub
<a href="#">Goa</a>	<a href="#">Dabolim</a>	<a href="#">Goa International Airport</a>	
<a href="#">Gujarat</a>	<a href="#">Ahmedabad</a>	<a href="#">Sardar Vallabhbhai Patel International Airport</a>	
<a href="#">Jammu and Kashmir</a>	<a href="#">Jammu</a>	<a href="#">Jammu Airport</a>	
<a href="#">Jammu and Kashmir</a>	<a href="#">Srinagar</a>	<a href="#">Srinagar Airport</a>	
<a href="#">Jammu and Kashmir</a>	<a href="#">Leh</a>	<a href="#">Kushok Bakula Rimpochee Airport</a>	
<a href="#">Jharkhand</a>	<a href="#">Ranchi</a>	<a href="#">Birsamunda Airport</a>	
<a href="#">Karnataka</a>	<a href="#">Bangalore</a>	<a href="#">Kempegowda International Airport</a>	
<a href="#">Kerala</a>	<a href="#">Kochi</a>	<a href="#">Cochin International Airport</a>	

<a href="#">Maharashtra</a>	<a href="#">Mumbai</a>	<a href="#">Chhatrapati Shivaji International Airport</a>	
<a href="#">Maharashtra</a>	<a href="#">Pune</a>	<a href="#">Pune International Airport</a>	
<a href="#">Odisha</a>	<a href="#">Bhubaneswar</a>	<a href="#">Biju Patnaik International Airport</a>	
<a href="#">Punjab</a>	<a href="#">Amritsar</a>	<a href="#">Sri Guru Ram Dass Jee International Airport</a>	
<a href="#">Tamil Nadu</a>	<a href="#">Chennai</a>	<a href="#">Chennai International Airport</a>	
<a href="#">Telangana</a>	<a href="#">Hyderabad</a>	<a href="#">Rajiv Gandhi International Airport</a>	
<a href="#">Uttar Pradesh</a>	<a href="#">Lucknow</a>	<a href="#">Chaudhary Charan Singh International Airport</a>	
<a href="#">Uttar Pradesh</a>	<a href="#">Varanasi</a>	<a href="#">Lal Bahadur Shastri International Airport</a>	
<a href="#">West Bengal</a>	<a href="#">Kolkata</a>	<a href="#">Netaji Subhas Chandra Bose International Airport</a>	
<a href="#">West Bengal</a>	<a href="#">Siliguri</a>	<a href="#">Bagdogra Airport</a>	

**The number of fleets that Vistara is operating under (as of April 2018) :**

Aircraft	In service	Orders	Passengers <sup>[55]</sup>				Notes
			J	S	Y	Total	
Airbus A320-200	13	—	8	24	126	158	
Airbus A320neo	7	2 <sup>[56]</sup>	8	24	126	158	
<b>Total</b>	<b>20</b>	<b>2</b>					

## **Training of prison inmates before release; The low recidivism rate in Malaysia**

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### **ABSTRACT**

An exploratory study was done to validate the claim of a below average recidivism rate as reported by the Prison Department. The low rate attracted interest internationally and was investigated. A total of 15 personnel from each of the five open-prison centres already in operation were interviewed. They comprise 5-6 inmates, 2-3 trainers, 2 security personnel, 2 community/ public personnel and 2-3 recidivists. Open ended questions were employed during the interviews. This paper is focussed only on the issues related to the low recidivism rate thus reporting on the depths of the interviews in analysing inmates' perception, opinions, satisfaction, value judgements of the training received and making suggestions for the betterment of the rehab programmes. Additional entrepreneurial-related training would be much appreciated but will value most if training on acquiring entrepreneurial skills are obtained experientially. Authorities identified financing and security issues as a big stumbling block and if only these can be removed than the recidivism rate can be further reduced.

**Key Words:** Phases of rehabilitation, skills training, entrepreneurial training,  
Spiritual training, recidivism, self-sustainability, experiential training

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## **Introduction.**

Managing repeat offenders (recidivism) of convicts is not only psychologically exhausting but also costly and morally frustrating. The world average of recidivism is rarely below 20% and to record a rate much less than this is an achievement for any Prison Department (Curley C, 2017, reported as high as 80% depending on the data collected i.e. after 3 or 5 years; or what category whether robberies, burglaries drugs and so on). Majority of Prison institutions reported an ever increasing rate of new offenders (Denham 2005) and many are holding more than the official registered capacity. They are all costs to the national treasury. Umpteen forums and discussions have been done at all levels (national, regional and international) to share their experiences and try reduce the number. But looks like these will continue as the light at the end of the tunnel does not seemed to be able to get brighter.

Rehabilitation Centres are quite common all over the world and they vary in ownership, objectives, size, target group, funding and run at district or federal levels and whether operated by voluntary groups or supported by the authorities. Similarly, Malaysia have rehab centres for drug addicts, disabled senior citizens, former cancer patients, displaced residents after a catastrophic incidents like fire and flood and earthquake and many more. Many new initiatives were proposed especially in wanting to cut costs and in 2008, the government proposed an inter-departmental collaboration as an option to cut costs as many assets and expertise are available in one which can be utilised by the other and this will cut expenditure (<https://pmo.gov.my/home>). Surprisingly, after three years, more than 100 initiatives were created, recorded and saved the government millions of ringgit off its Treasury (Star on-line, 2016). This paper is a study on one of the initiative as it not only recorded a net saving of 3 million ringgit annually on both collaborating parties but also provided additional intangible benefits for one partner where the recidivism record showed less than 10%; an incredible

achievement for the Prison Department (This collaborative effort has caught international interest and triggered this study, Bernama 18/08/2015). This initiative of the collaboration has been labelled as the National Blue Ocean Strategy (NBOS) programme and by 2017, a total of 156 such projects have been recorded.

This paper reports a study on the outcome of the collaboration between the Prison Department (PD) and the Armed Forces (KOSMO 2013). The former is under the purview of the Ministry of Home Affairs while the latter is under the Ministry of Defence. For the first time in its history, the PD constructed open-prison (without concrete walls) at 5 locations in the country to house and prepare inmates who are in their last 2-3 years of serving the prison sentence. Five Prison Rehabilitation Centres (PRC) as they are called started operating in 2013. The PD do not have the land to build such PRCs but the Army does. The latter possess a fair size of land for their army operations and training and agreed to allocate 2.5 acres for the building and operation of the PRCs on the designated army land. Five army camp establishments were identified and the PRCs built do not have the 10-15 feet concrete wall for the inmates except for the barb wired periphery delineating the Camp. The Army Camp, spend millions of ringgit to maintain its land (grass cutting, landscaping, cleanliness of their compounds and many more) and contract out the required services. This is where the PD will try to provide as many as the required services required to be undertaken by the inmates. It is skill training as well as some income for the inmates and through this collaboration the Army was able to cut drastically the maintenance costs saving millions of ringgit. The outcome of this synergistic collaboration received appreciation from the Ministries.

### **Background of research**

It is the low recidivism rate reported by the PD that attracted attention. The Ministry of Education took up the request to validate this claim and allocate funds for it. Thus a team was

formed to study on all the five PRCs that were already in operation since 2011. (Subsequently two new PRCs started operations in 2016). Since this was the first of its kind in Malaysia, an exploratory study was undertaken to go into detail of the activities of the five PRCs. A case study approach was used as each of them were quite unique and diverse in many ways but are similar from the management point of view. The concepts of recidivism, re-offenders, spiritual and physical training, knowledge, skill and psychological preparations, had to be clearly understood in the minds of the researchers before venturing into the interviewing phase of the research process. So the overall study is quite wide and broad and this paper is only to report on the findings related to the activities and training that are believed to be the major contributors to the low recidivism issue.

The objectives of the paper are to:

- a. Gauge the kinds of training given in all the five PRCs and identify the the value-added activities taht are appreciated by the prisoners.
- b. Discover issues faced by the prisoners in order for them not wanting to come back into the prison wall,
- c. Feedback from the other parties involved in the rehab programmes and their opinion on why the low recidivism rate records as well as the conrtaints they faced?
- d. Identify prisoners' overall top two wish list.

## **Literature Review**

The number of prisoners being housed and taken care of, keeps increasing and this burden is felt by many, and many are already exceeding their capacity. Almost all prison have rehab programmes for their inmates and prepare them before they are released into the community. The kinds of rehab programmes are quite varied but the recidivism rate has not dropped below the 20% mark. The increasing number of re-offenders are costs to management indicating the

ineffectiveness of the rehab programmes; and so they say. Preventing new entries are being done through social related programmes, education, awareness, entrepreneurship training, technical and financial support but at the end, the prisons seemed to be overwhelmed with new members and disheartening are the re-offenders which make the recidivism rate regularly exceeding the 20% mark.

The Malaysian government had examined means of reducing crime rates to manageable levels. The PRCs rehabilitation programme are directed specifically to prisoners and frankly are quite common. Other than to reduce crime rates and recidivism, it will help reduce prison overcrowding, cutting down operating costs, and saving significant costs by not having to build new prisons. Additionally, rehabilitation programme gives the prisoners a second chance to go through the process of reintegration of their lives into the community, through the role of family, employers, or community members (Malaysian Prisons Department, 2008).

But the majority of the contents of the rehab programmes world-wide are quite similar as the authorities from one country would learn and share experiences with one another. With a significant number of prisoners are repeat offenders, the correctional institution has made rehabilitation a top priority. The concept of rehabilitation has taken on many different meanings over the years and waxed and waned in popularity as a principle of sentencing or justification for punishment. The means used to achieve reform in prisons have also varied over time, beginning with silence, isolation, labour, and punishment, then moving onto medically based interventions including drugs and psychosurgery (Bosworth, 2004). More recently, educational, vocational, and psychologically based programs, as well as specialized services for specific problems, have typically been put forward as means to reform prisoners during their sentence (Bosworth, 2004).

There are several definitions of rehabilitation but this paper is not going to dwell on it but takes the view that in the prison context it means making the prisoners ready to re-join society, as useful and law-abiding members of the wider community (Craig et al., 2013). As such, rehabilitation serves many purposes. It involves transforming prisoners' behaviour under specific intervention programmes aimed at successfully reintegrating them into the community (Abu Hassan, Hamin, & Othman, 2017). While Raynor (2004) argues that rehabilitation targets change to prisoners' attitude, personality, skills, employment and social relationship. Whereas Mackenzie (2000) further reflects that rehabilitation strategies should focus on changing the individual prisoners so that he or she will not continue with criminal activities. Crow (2001) states that rehabilitation as the practical step necessary to achieve social integration and, the provision of interventions or programmes focusing on helping the prisoners to gain access to accommodation, education, training and employment.

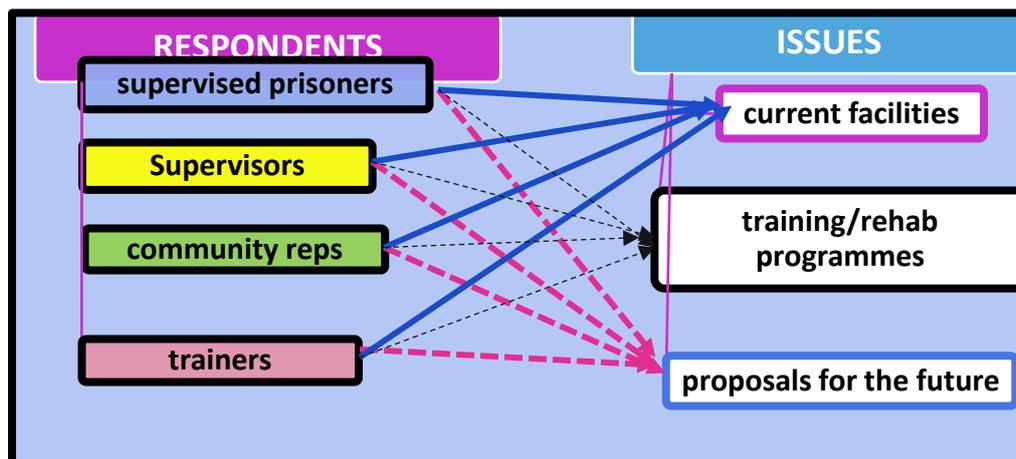
The most typical rehabilitation programmes in use worldwide are psychological (psychotherapy and behavioural therapy), educational (general diploma and adult education classes) vocational (getting job skills in areas such as food preparation, farm, labour work etc.) religious education and morale, and sports and recreational (Mohammed & Mohamed, 2015).

The first phase of this study was to identify where the prisoners are located in the “*Success in the Community Matrix* or Rehabilitation Program” as proposed by Matt Ferner in 2015 (who cited Ann Jacobs matrix proposed in 2003). This is a psychological matrix analysis in trying to understand the inter play between the phases of a person's development and his basic needs. This aspect is outside the purview of this paper but its findings will be referred to as the basis for this paper's intention in identifying the uniqueness of the PRCs that gave rise to the low recidivism rate.

## **Research methodology**

The exploratory and qualitative approach adopted looked at the status quo of the PRCs and their activities. The data gathering was done through an open ended questionnaire upon 10 possible targeted respondents for each centre, comprising four categories of personnel namely the supervised prisoners, (SP: 4-5), their supervisors in the camps (prison and army personnel: 2), community representatives where the SPs are assimilated into (2-3) and personnel that are involved in conducting the training both spiritual and skill training (2-3). The content of the open ended questionnaire (also semi structured) were synchronised before the researchers go to the field on an agreed upon day and dates. The list of possible respondents would have also been finalised by the respective PRC centres. The conceptual framework is as shown below.

**Chart 1: The Conceptual Framework of the Research**



The main model used for the initial research analysis was the one proposed by Ann Jacob's prisoner's rehabilitation matrix where she combined the rehabilitation phases with that of the basic life needs and is as shown in Table 1. She proposed this gathered from her long experience handling prison management in the criminal justice field and then took up the post as the Director of the Prisoner Reentry Institute (2011). The matrix was found to be most fitting for the research undertaken.

The follow up analysis however was back to the fundamental principles of entrepreneurial development and combining these with the elements of sustainability specifically focussed for the prisoners to be released.

**Data gathering and analysis**

One researcher was assigned to each PRC and the total time taken was about 5 man-days each. All data gathering were done manually (tape recording was not permitted). The information gathered were analysed individually and then consolidated amongst the 5 PRCs.

For every PRC, about 10-15 personnel were interviewed where at least 5 were the prisoners, 2 supervisors (Army and Prison personnel), 2-3 skill trainers that gave the training (voluntary group or otherwise), 2-3 prison family members if they are available, 2-3 community citizens (where the released prisoners were residing, like the village chief, teachers and relatives) and 2-3 re-offenders who would not be housed in the PRC but at a nearby formal prison (as re-offenders will not be given a second chance to be trained in the PRC; as a policy).

The first stage of the analysis was to use Ann Jacob’s matrix (Phase 1 of the study) and is used as the starting point of this discussion. As shown in the matrix, most of the prisoners interviewed were occupying the North-West portion of the table i.e. still in the “basic life areas”

**Table 1: Ann’s Rehabilitation Programme Matrix**

		BASIC LIFE AREAS					
		1) LIVELIHOOD	2) RESIDENCE	3) FAMILY	4) HEALTH & SOBRIETY	5) CRIMINAL JUSTICE COMPLIANCE	6) SOCIAL/CIVIC CONNECTIONS
PHASES of REHAB	a. SURVIVAL	A52, B4, C3, D4	A15,	A4	A5		C2
	b. STABILISATION	A46, B5, C3, D3	A14	A4			
	c. SELF SUFFICIENCY	A23, B2, C1, D1					
	d. GOAL	A2,					

Source: Matrix originally developed by Ann L. Jacobs, Director of Women’s Prison Association New York, John Jay Reentry Institute. [A=Supervised prisoners; B=Supervisors; C=Community members; D=Trainers; A52 represents 52 responses from the SPs]

and “early phase of rehabilitation”. A combination of thematic and content analysis were performed on the qualitative data gathered from the various interviewed personnel. These were then slotted into Anne’s matrix (shown in Table 1]. This table is used as the basis of analysing the program content and rationalising the low recidivism rate.

The data gathering on the perception and opinion on the facilities and training (spiritual, discipline, skill and others) programmes were more direct and straight forward, and the final wish list solicited from the prisoners however were quite creative in nature and probably challenging to management, but felt to be worth considering.

### **Findings and Recommendations:**

The records of the interviews by five different researchers in five different PRCs, were gathered and consolidated and many overlapped and are repetitious. Being exploratory in nature, the questions are open-ended and so are the expected responses and suggestions. As an outcome of the content and thematic analyses, the responses were condensed and consolidated, and presented as shown in Table 1. Grouping and prioritising them were and this was actually dependant on which stakeholder’s platform that one would like to stand on. This paper chose and made priority on the prisoner platform as they are the focus of this study.

Based on Ann Jacobs’s matrix (Table 1), true enough, the majority of the answers conveyed were categorised onto the early phases of rehabilitation and basic life areas. The Department did well as almost all the training and facilities made available were focused on these cells. BUT why the low recidivism rate as many other PD in other countries are giving almost the same package. Though the intensity of each activities probably differ by countries, the Malaysian PD wanted to highlight their higher spiritual content (mainly on religiosity and morale issues; including time slots for other religions in Malaysia as well). But was this the trump card needed?

Additional probing on recidivism were done on the prisoners and family members. Some of the answers conveyed were quite noble and unique and could be that factor that are being sought!

- a. The Open Prison System was a 'Golden Buzz'. Three years of enjoying the facilities available in the PRCs were psychologically and spiritually invaluable. The absences of the 15-foot concrete wall itself were of high value and the prisoners were clearly informed that re-offenders will never get a second chance to be housed in a PRC. This gave them a tremendous incentive booster in not wanting to be a re-offender.
- b. The 'feeling of freedom' (but still confined within the Army Camp premise) to move out of the PRC compound to deliver the service needed by the Army Camp was highly valued and gave them the true appreciation what it all means. These according to them gave the added incentive not wanting to be re-offenders.
- c. Entrepreneurial training on skill development as well as to produce consumable products were not only highly appreciated but also of high value as they provide the elements of sustainability for them to depend on when being released.
- d. HOWEVER although they were happy on the skill training given, they were disappointed with the lack of the skill upgrading aspects. The majority of the trainers were outside personnel (from government departments or voluntary organisations) and would bring the training equipment and accessories back with them when they leave at the end of the training sessions as they were not owned by the PD. The prisoners questioned or rather requested that the PD buy them to be used for the training. When told of the budget constraints faced, they came up with noble suggestions including their willingness to invest in the buying of the equipments (to be deducted from the monthly pocket allowances that they get from PRCs probably portioned out from the

services rendered to the Camp), so that they can use the equipments and accessories for the continuation of skill upgrading. This reflects their desire to have the training to be continued so as to upgrade the respective skills acquired.

In fact it was suggested that the products produced (food and other consumable items) can be sold to those outside the PRCs, specifically targetting the army family members and the surrounding civilian community. These are potential additional generation of income activities for the prisoners (which they are sure can be made to good use like returning the amount of loan taken from them).

Further noble thoughts given by the prisoners themselves were that during a quick calculation with them, it was found that the cost of equipment could be recovered within one year. They recommend that the machines be given to the PRC after the loans are recovered as their token of appreciation for what they believe are the invaluable experiential entrepreneurial training given if the suggestion become a reality.

- e. Organising regular markets for the prisoners (twice a week or even weekly) have been recommended by them and this experiential platform can be done only in PRCS (the synergy of the two departments and the security assurance). It will increase their entrepreneurial skills which all of them believed (including the supervisors and trainers) will contribute further to the lowering of the recidivism rate as the sustainability component will be greatly enhanced. Some of the PRCs are located adjacent to the civilian community and they suggest that why are they not allowed to sell to the public as that will increase the potential market size and further give them the incentive to do well in the development of their entrepreneurial skills.

Three of the Army Camps have a sizeable parking space at the entrance. If these are converted for the said marketing activities after the formal office/visiting hours either on selected days or even daily then it would have satisfied the prisoners.

Another dimension of entrepreneurial training is the recording of the transactions made during the weekly/daily market planned. These should be given to the prisoners themselves for them to get the skill of keeping records (of course after some training), which were not in the training programmes yet.

Probably this would be the first time in Malaysia to have such an experiential entrepreneurial training programme for prisoners (if not in the world!). Of course there are risks to be mitigated such as security and safety issue but the benefits and the costs need to be balanced out. As the saying goes; “no risks no gain”, “a mile journey begins with the first step” or use “Lindblom’s muddling through”. BUT neither do we want to stand on a principle that “if you do not know where you are going, then any direction will be the right direction”, as the target in this endeavour is very clear; the need to cut down the recidivism rate”. The prisoner entrepreneurs will fall, stumble, trip and come up in some way but all these are part of the sustainability training that not many rehab centres provide. It is better to stumble and fall when still in prison (PRC).

## **Conclusion**

There are additional findings and recommendation abstracted from the different groups of respondents. But when focussing on the cause for the low recidivism rate, the ‘open-prison system’ and the experiential activities of the entrepreneurial training (to fulfil the sustainability component) top them all. The last two recommendations are only at the suggestion levels but have been received favourably by the relevant authorities. If the PD of Malaysia is to maintain its low recidivism rate, or to sustain this outstanding achievement, then the last two

recommendation can be that vehicle. It is not only of low costs but the Army Camp's surroundings can make it happens provided the security risks are mitigated. If such NBOS collaboration is successful then similar collaboration can be duplicated in other countries.

## References

- Abu Hassan, R., Hamin, Z., & Othman, M. B. (2017). "Doing good" for the parolees: Some evidence from Malaysia on the predicament in community rehabilitation. *Pertanika Journal of Social Science and Humanities*, 25, 59-70.
- Adler, F., Mueller, G. O., & Laufer, W. S. (1991). *Criminology* New York.
- Andrews DA et al, (1990), Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis, Wiley Online Library
- Andrews DA et al, (1990), using clinical correction principles in rehab programmes.
- Andrews, DA (1989). Recidivism is predictable and can be influenced: Using risk assessments to reduce recidivism. *Forum on Corrections Research*, 1(2), 11-18 ...
- Ann Carson, (2014), The growth of number of prisoners overall but a drop in incarceration number, Bureau of Justice Statistics, Sept 2014.
- Anthony WA et al, (1972), Efficacy of psychiatric rehabilitation, *Psychological Bulletin*, 1972,
- Antonowicz DH and RR Ross, (1994), Essential components of successful rehabilitation programs for offenders, *International Journal of Offender*,
- Bales WD and DP Mears (2008), Does Visitation Reduce Recidivism, *Journal of Research in Crime*.
- Bernama, (2015), Ninty percent convicts succeeded in increasing their skills, local Daly 18.08.2015.
- Bernama, (2017), Prisoners earning their diplomas, degrees, and PHDs, getting references and research from the internet, in a class in the Kajang Prison, July 20, 2017. — Bernama
- Bosworth, M. (Ed.). (2004). *Encyclopaedia of prisons and correctional facilities* (Vol. 1). Sage.
- Bulten et al, (2008); Goal-directed care within prison system,
- Conklin, J. E. (1995). *Criminology* (Fifth Edition). Allyn and Bacon. London.
- Craig SC, (2004), Rehabilitation versus control; An Organizational theory of prison management *The Prison Journal*, journals.sagepub.com
- Craig, L. A., Gannon, T. A., & Dixon, L. (Eds.). (2013). *What works in offender rehabilitation: An evidence-based approach to assessment and treatment*. John Wiley & Sons.
- Crow, I. (Ed.). (2001). *The treatment and rehabilitation of offenders*. Sage.
- Cullen FT et al, (1989), The correctional orientation of prison guards: Do officers support rehabilitation? *Probation*, 1989, Hein Online
- Cullen FT, et al, (2011), Prisons do not reduce recidivism: The high cost of ignoring science, *The Prison Journal*, 2011 - journals.sagepub.com
- Curley C., The Prison System Merry-Go-Round: America's Recidivism Rates Are Insane, 2017 GenFKD publication special feature.

- Erik Bulten et al, (2008), A Theoretical Framework for Goal-directed Care within the Prison System, *Mental Health Review Journal*, 13, 3, 40
- Garland, BE, and WP McCarty, (2009), Job satisfaction behind walls and fences: A study of prison health care staff, *Criminal Justice Policy Review*.
- Grinstead O, et al, 2001, Role transitions and the wives of prisoners. *Environment and Behaviour* 24 (2), 239–259.
- Grinstead O et al, Exploring the link between visits and parole success: a survey of prison visitors, *International Journal of Offender Therapy and Comparative Criminology* 38 (1), 17–32
- Incardi et al, (1997), An effective model of prison-based treatment for drug-involved offenders, *Journal of Drug*, pp. 3
- Inrid Irawati et al, (2006), Indonesia Sets Up Prison Methadone Maintenance Treatment, *International Journal of Prisoner Health*. 2006, 2 (3): 243-249.
- Johnson, B. R. (2004). Religious programs and recidivism among former inmates in prison fellowship programs: A long-term follow-up study. *Justice Quarterly*, 21(2), 329-354.
- KOSMO, 2013; Local bulletin on 31.05 2013 reporting on the collaboration between the two departments in building the first 5 open-prison system in Malaysia.
- Lewis, S. (2005). Rehabilitation: Headline or footnote in the new penal policy?. *Probation Journal*, 52(2), 119-135.
- Looman, J., & Abracen, J. (2013). The risk need responsivity model of offender rehabilitation: Is there really a need for a paradigm shift? *International Journal of Behavioural Consultation and Therapy*, 8(3-4), 30-36.
- Lynch M, (2000), Rehabilitation as rhetoric: The ideal of reformation in contemporary parole discourse and practices, *Punishment & Society*.
- Matt Ferner, 2015, These Programs are helping Prisoners live again on the Outside, article in Huffington Post Sept 09 2015. In this article, **Ann L Jacob**'s rehab matrix was inserted. Ann Jacobs was the Executive Director of Women's Prison Association, New York, at that time and also Director of the Prison Re-entry Institute at the John Jay College of Criminal Justice, New York.
- MacKenzie, D. L. (2000). Evidence-based corrections: Identifying what works. *Crime and Delinquency*, 46(4), 457-471.
- Maruna, S., & LeBel, T. P. (2002). Welcome home-examining the re-entry court concept from a strengths-based perspective. *W. Criminology Rev.*, 4, 91.
- McGee, R. A. (1969). What's past is prologue. *The Annals of the American Academy of Political and Social Science*, 381(1), 1-10.
- Mohammed, H., & Mohamed, W. A. W. (2015). Reducing recidivism rates through vocational education and training. *Procedia-Social and Behavioural Sciences*, 204, 272-276.
- O'Connor et al, (2002), Prison religion in action and its influence on offender rehabilitation, *Journal of Offender Rehabilitation*.
- Petersilia J, (2001), Prisoner re-entry: Public safety and reintegration challenges. *The Prison Journal*,

- Raynor, P. (2004). Rehabilitative and integrative approaches. *Alternatives to Prison: Options for an Insecure Society*. Cullompton: Willan Publishing.
- Rotman, E. (1990). *Beyond punishment: A new view on the rehabilitation of criminal offenders* (p. 115). Westport, CT: Greenwood Press
- Sarah Lamey, (2010), HIV-infected male prisoners in Indonesia: A highly constrained choice, *Drug and Alcohol Dependence* 149, 71-79.
- Skogstad P et al, (2006), Social cognitive determinants for mental health problems among prison inmates, *Criminal Behaviour and ...*, Wiley Online Library
- Star on-line (2016); Malaysia to showcase blue ocean achievements. 14.07.2016.
- Sundaily, (2017), International community recognises Malaysia's effort in reducing recidivist rate, *Sundaily* , Feb 27.
- Wexler HK and GP Falkin, (1990), Outcome evaluation of a prison therapeutic community for substance abuse treatment, *Criminal Justice and ...*, 1990.

# **Socioeconomic characterization of Aquaculture opportunities and incentives in Kenya's fish value chains in the context of Entrepreneurship**

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## **Abstract**

The potential for aquaculture investment in Kenya is good, despite sub-optimal environmental conditions in certain regions for aquaculture development. There is growing demand for fish in Kenya, with relative high market prices. The Kenyan economy provides opportunities for aquaculture enterprises investments, with government incentives and support the sector has potential for aquaculture enterprises value chain growth. The objective of the study was to establish the opportunities and incentives available in Kenya to spur entrepreneurs' investment in the aquaculture sector. Information presented was gathered through secondary means literature review and primary data, observation and interviews during field visits in various aquaculture enterprises. Focus group discussions were also conducted with various stakeholders. Simple random sampling, stratified sampling and purposive sampling methods were used to collect data with use of questionnaires and interview schedules. The findings were; there is lack of entrepreneurial culture among youth and women in aquaculture enterprises in Kenya. Aquaculture is steadily expanding with opportunities in feeds, fingerlings and other aquacultures input. Other opportunities are; fast growing fish species Nile tilapia, African catfish; extensive freshwater resources suitable for the cage, pond and tank-based aquaculture systems. Government incentives are minimal for aquaculture enterprises.

## **Key Words**

**Opportunities, Incentives, Entrepreneurs, Aquaculture, Fish Value Chain, Investments**

## **Introduction**

Kenya's population is growing fast, increasingly so in cities. This growth is set to continue over the next forty years. At the current rate, Kenya's population will reach 63 million by 2030 (up from an estimated 41 million in 2011) (Rothuis et al, 2011). This provides for opportunity for aquapreneurs to provide food and other livelihoods demands from aquaculture enterprises for the urban and peri-urban residents. It calls for strategies and alternatives by entrepreneurs in fish value chains for provision and variety for this fast growing population. In 2009 the average Gross National Income per capita in Kenya was USD760. Social inequality is significant, with 47% of the population living below the poverty line (2009 estimate). One third of Kenya's population lives in urban areas, out of which 40% reside in slums. A large proportion of urban dwellers are unable to meet food needs on a sustained basis over an extended period of time.

Total production of farmed fish is still only a small fraction of total supply in Kenya, and in all other African countries apart from Egypt. And the numbers of farmers with ponds is a minute fraction of the number of smallholder farmers in Africa. Growth of the sector continues to be limited by the water and other resource constraints of small-scale farmers and by weak input and output markets and limited access to technologies and knowledge. Analysis of performance success in Egypt, Cameroon, Ghana, Nigeria and Uganda shows that fish production begins to significantly contribute to fish supply and trade where conditions support the emergence of small and medium-scale aquaculture enterprises with a more commercial orientation. Where links to output markets are strong such as near urban centers and where the technologies and expertise have been available, entrepreneurs have seized opportunities to specialize in fish production (Beveridge et al., 2010).

The entrepreneurs are handy in addressing this diminishing food supply through creativity and innovation of food production strategies. There exist unexploited food value chains in aquaculture that have yet to be exploited by the entrepreneurs. These value chains provide significant opportunity for investments in the Kenyan economy. The challenge has been minimal government incentives for aquaculture investments, high import taxes, poor transport systems and insecurity in some parts of the country discourage potential investors. The Kenyan economy is basically agricultural based with now aquaculture contributing a significant level as a result of government intervention. This trend is likely to improve because of; active involvement of government and private sector in aquaculture, adoption of aquaculture specific policy and legislation and Infrastructure development coupled with increased funding. There are also regional and international interventions, transformation from subsistence to commercial ventures, culture species and systems diversification from pond to tank and cage. There is increased investment into quality seed and feed production and distribution (Charo, 2014)

However, the high inflation (7.4% in 2018) and the weak shilling are a major concern. Land is the most important resource in Kenya. In densely populated regions, there is a major concern that land may have become too scarce to make any meaningful contribution to household incomes and aquaculture development. Only companies that are 100% domestically owned can acquire land for aquaculture enterprises. Foreign companies seeking to access land in Kenya have the option to lease land from private and public landholders (Rothuis et al, 2011).

The fisheries subsector plays a significant role in the Kenyan economy and for the health of its population. The sector supports about 80,000 people directly and about 800,000 people indirectly. In 2006, fisheries and aquaculture contributed 0.5% to the GDP. Per capita fish consumption is 5kg in Kenya, which is low compared with other countries in the region. The fisheries sector largely depends on capture fisheries from inland waters, which are concentrated on Lake Victoria (85% of captured volume versus only 4% from marine fishing). Major species from Lake Victoria are Nile perch (mainly for export), sardines and tilapia. Catches in Lake Victoria are declining due to pollution, overfishing and sedimentations in breeding sites. There is constant conflict between neighboring countries especially Kenya over fisheries resources, to minimize these, aquaculture investment in specific countries is inevitable. Capital intensive aquaculture production systems by entrepreneurs such as Race ways and recirculating systems (RAS) would provide large volumes of fish to compliment the dwindling stocks in Lake Victoria and other internal water bodies. However, such effort should be supported by government incentives in investment in production of high quality fingerlings and feeds, infrastructure development, security and funding as the case of Rwanda (Esiara, 2015)

In 2009, the Kenyan government launched the Economic Stimulus Programme (ESP). The aquaculture component of the ESP was rather successful and elicited fresh interest and focus on aquaculture as a viable economic activity. The costs for construction of fish ponds were subsidized, as well as the costs for fingerlings and feeds. Although many of the new fish ponds were constructed at unsuitable locations, the total aquaculture production in 2010 rose to approximately 5,000 tonnes. Aquaculture in Kenya consists of three subsectors: fresh water aquaculture in warm waters (mainly tilapia and African catfish in earthen ponds), cold fresh water aquaculture (trout in raceway culture systems) and marine aquaculture (underdeveloped). The marine sector that produces species of economic value like shrimps, herring has opportunity for entrepreneurial investment in Kenya. Culture of high-value fish and shrimp targeted for export markets continues to receive substantial policy incentives such as cheap land leases, credit supply and low tariffs on imported inputs and infrastructure, where benefit tends to favor the richer entrepreneurs (Ahmed, 2002, 2003). These policies provide economic incentives to the rich fish farmers to operate at a low level of marginal productivity from the subsidized inputs (e.g., land) and offer a higher price for competitive inputs such as feed, which involve diverting food-fish into fishmeal and animal feed. Their products are often targeted to up-scale (e.g.,

urban) and export markets, implying a net transfer of food and income away from the poor (Ahmed et al, 2003).

Fresh water aquaculture in warm waters is mainly practiced at semi-intensive levels using feeds and fertilizer as input, with production levels at about 3 tonne/ha. Ponds and farm size are usually small, catering for local markets. Mariculture farms are very limited in number and small in size (usually back yard ponds). There are only a few large-scale commercial fresh water fish farms and there are no commercial mariculture farms. There are a number of companies that supply inputs for aquaculture (feeds, fingerlings, materials), but still many fish farms produce their own feed.

Kenya has a significant potential for development of a commercial aquaculture industry, one which could produce critical volumes of fish to fill the growing gap in national fish supply as wild fish catches continue to decline, the population grows and demand for raw material for value addition continues (Rothuis et al, 2011).

The country has fast growing fish species (Nile tilapia, African catfish), extensive freshwater resources suitable for the cage, pond and tank-based aquaculture systems and its agriculture and fisheries sectors produces most of the raw materials needed for locally made fish feeds. Local and regional market potential is also huge with growing populations and declining wild fish catches. The Kenya population is used to eating fish, and it is strategically placed in the EAC Region for regional exports. Kenya also has a highly developed fish processing sector and quality assurance laboratories that until now have been focused on the export of Nile perch products to Europe. A productive commercial aquaculture industry could supply a new source of high-quality raw material for 'added value' products for local, regional and international markets. Kenya is food insecure requiring imports of various food commodities and does not export any aquaculture products (KMFRI, 2017).

The Blue Economy is a global emerging economic frontier. In Kenya, the blue Economy represents a huge opportunity and potential to achieve economic growth and generate jobs. The concept recognizes productivity of healthy freshwater and ocean ecosystems is a pathway for freshwater aquatic and maritime-based economies and promotes the conservation, sustainable use, and management of associated marine resources (UNECA, 2016). In aquaculture, the approaches for actualizing the aspirations embodied in the Blue economy concept include; Cage

culture (Ocean, Lakes, Dams, and Rivers), Integrated RAS, Aquaponics/Greenhouse, Pens, Breeding and restocking of commercially important indigenous species and live fish market.

### Methodology

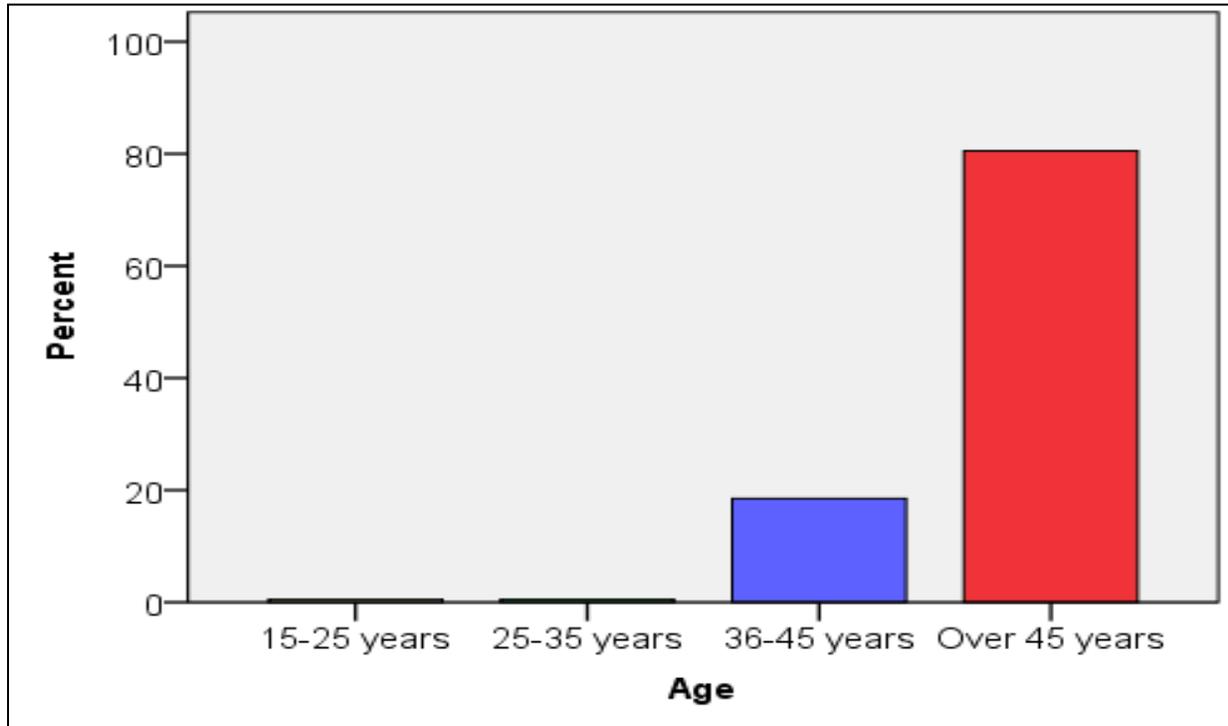
Information presented in this paper was gathered through secondary means (literature review), observation and interviews during field visits in various fish farms by use of questionnaires. Focus group discussion was also conducted with various stakeholders. Aquapreneurs were randomly sampled from various strata involving hatcheries operators, agro dealers, and processors. Government officials, creditors and development partners were purposively sampled as key informants. Data analysis was done using excel spreadsheet.

### Findings

#### Age of respondents involved in aquaculture enterprises

The study sought to establish the age of the respondents involved in aquaculture enterprises. The subjects were asked to state their age findings are presented in Figure 1.

**Figure 1 Age of the respondent involved in aquaculture enterprises**



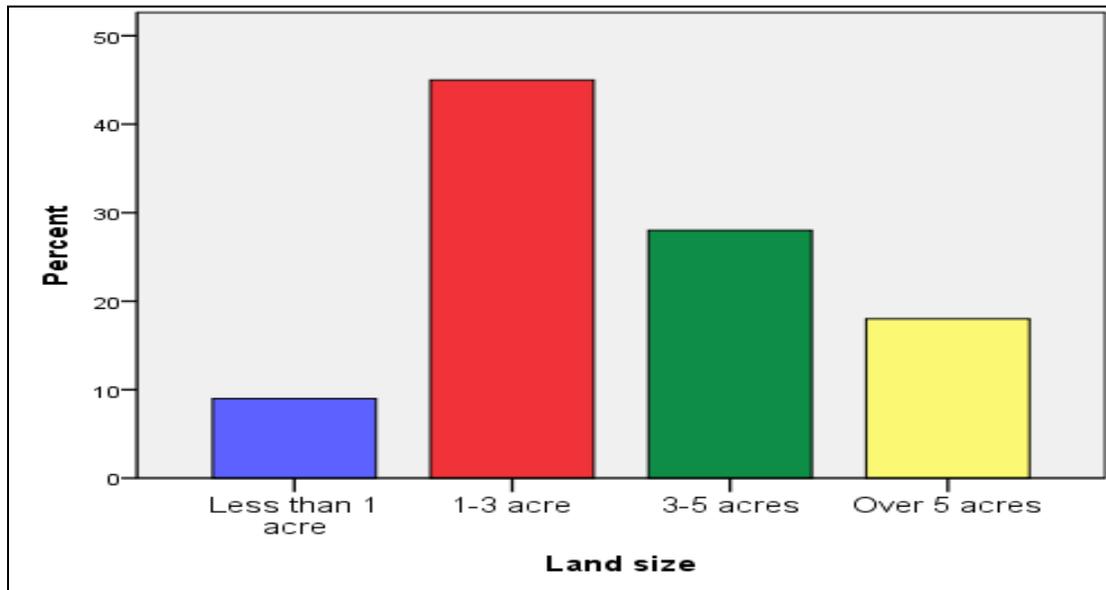
Most 80% of the respondents involved in fish farming enterprises are forty five years and above. The youths 2% participate less in fish farming enterprises this could be attributed to the

stereotype about agriculture where most youth view agriculture as a job for the less privileged in society. The findings also showed women were less involved in aquaculture enterprises at 25% while the majority of the enterprises are owned by men.

### Area under fish farming

The study also determined the area under fish farming enterprises by asking the respondents to state the area under fish farming. Findings are presented in Figure 2.

**Figure 2 Land size under fish farming**



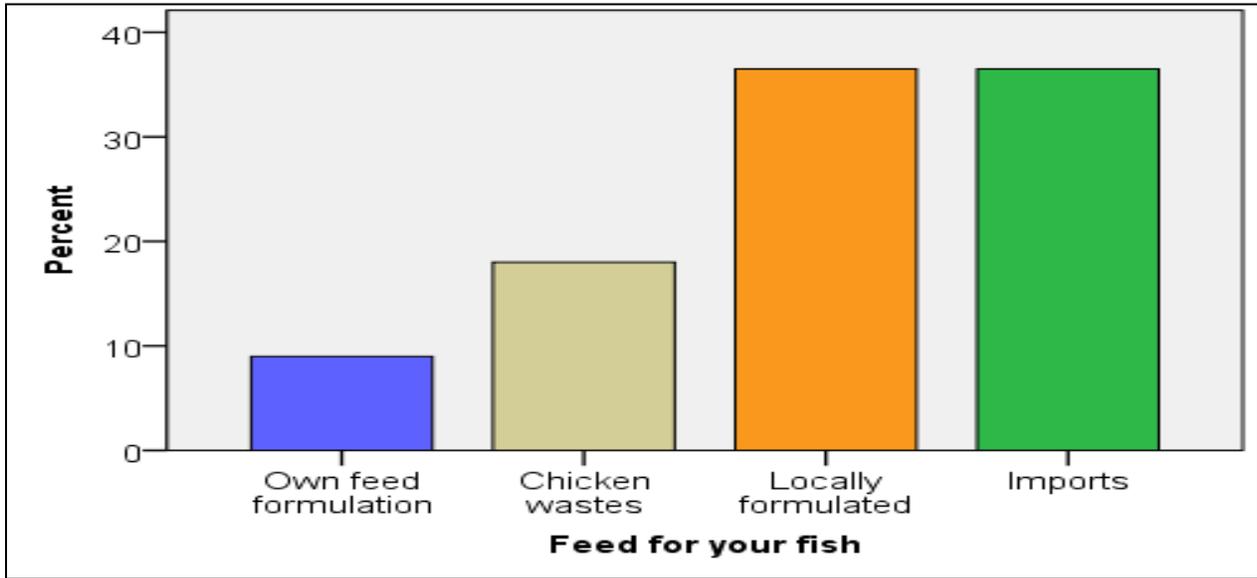
Most 45% of respondents had 1 to 3 acres of land under fish farming enterprises, this was closely followed by those who had 3 to 5 acres at 25% and another group of 20% had over 5 acres of land under fish farming enterprises. This clearly shows fish farming is quickly becoming a significant enterprise in Kenya. This growth could be attributed to the government effort to scale up aquaculture development in the country. The finding agrees with GoK literature, in 2009, the Kenyan government launched the Economic Stimulus Programme (ESP). The aquaculture component of the ESP was rather successful and elicited fresh interest and focus on aquaculture as a viable economic activity.

### Source of fish feeds

Feed supply plays a crucial role in aquaculture enterprise, the study therefore sought to determine the source of the fish feeds. Findings are presented in Figure 3. Most 70% of the respondents either had their feed formulated locally or imported the feeds, those practicing integrated fish farming 20% utilized chicken wastes as alternative fish feed and 10% formulated their own feeds. This clearly shows the potential opportunities that exist in aqua feed fish value chain in Kenya. There is the opportunity for importers and for those who wish to establish feed

manufacturing enterprises. This finding concurs with Charo (2014) he established, there is increased investment into quality seed and feed production and distribution in Kenya, however, the high inflation (7.4% in 2018) and the weak shilling are a major concern.

**Figure 3 source of fish feeds**

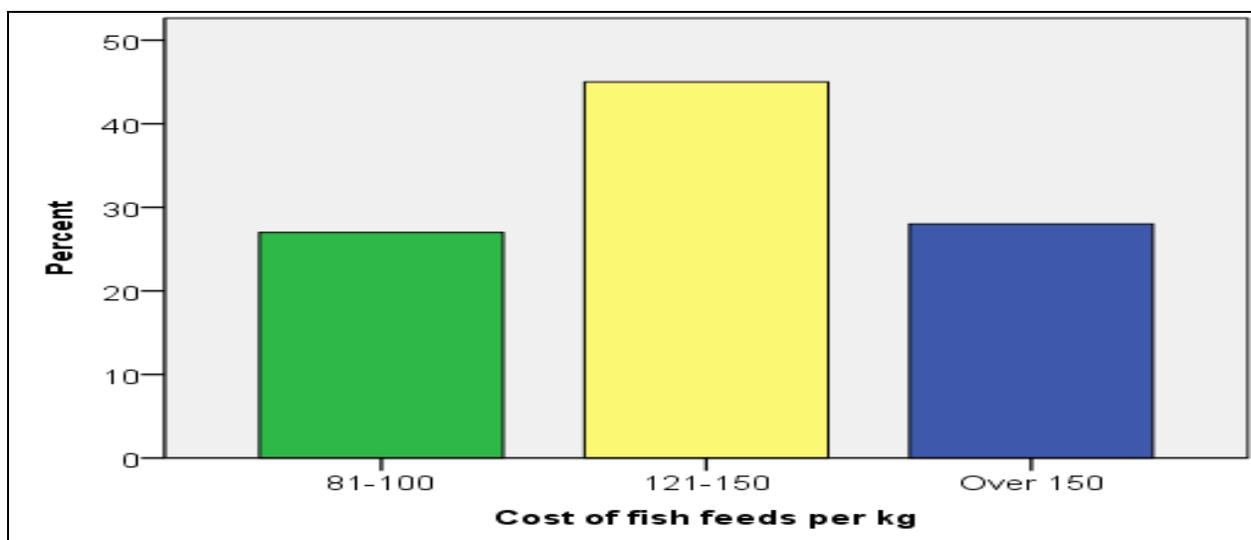


A survey with importers, manufacturers and farmers showed pelleted feeds were most preferred due to their stability in water which ensures maximum utilization as opposed to the ones in mash form.

**Cost of fish feeds**

The study again established the cost of the fish feed, to establish the frequency of purchase and the ability to purchase quality feeds. Findings are presented in Figure 4

**Figure 4 Cost of fish feeds**

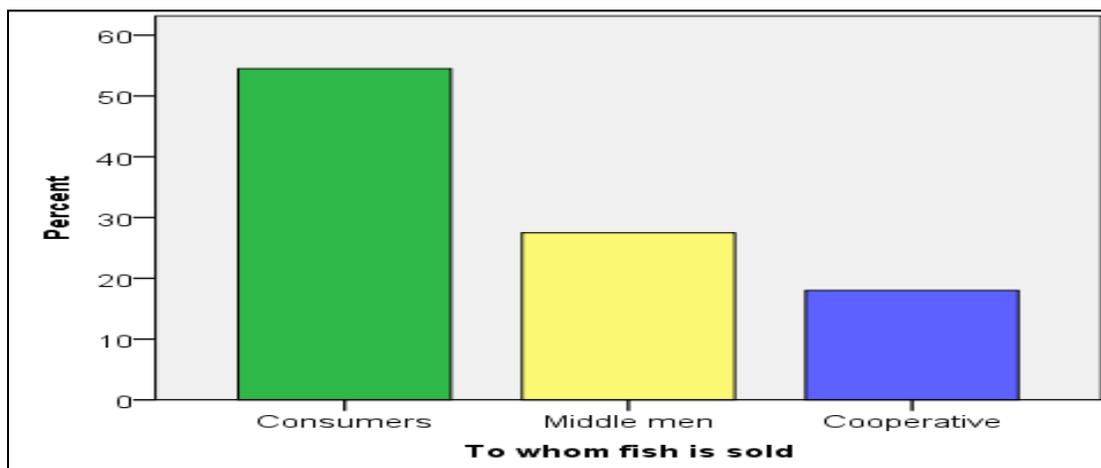


Most 45% of the feeds in the market had a cost price of Kshs 121 to 150 approximately USD1.5 while 30% had a cost price of over Ksh 150 and least 25% had a price of kshs 100 and below. Findings show the most expensive feeds were mostly imported while the cheaper ones were local formulations. These again agrees with charo's findings that, minimal government incentives for aquaculture investments, high import taxes, poor transport systems and insecurity in some parts of the country discourage potential investors in fish value chains. Subsequently the cost of fish feeds becomes very expensive.

### Preferred Fish market

The most preferred fish market was established by asking the respondents to state where they either sell or buy fish and fish inputs. Findings are presented in Figure 5

**Figure 5 Preferred Fish market**



Consumers 55% bought fish and fish inputs at the farm gate providing the main market for the fish and fish inputs, while middlemen 30% and cooperative 15% were also the alternative market for fish and fish inputs. This scenario provides huge opportunity for entrepreneurial business investment in western Kenya. It was established the County government and local companies were a main player in the aquaculture enterprises development. The findings disagree with Beveridge et al, who assert the challenge has been minimal government incentives for aquaculture investments, high import taxes, poor transport systems and insecurity in some parts of the country discourage potential investors. However, the Kenyan economy is basically agricultural based with now aquaculture contributing a significant level as a result of government intervention. This trend is likely to improve because of; active involvement of government and private sector in aquaculture, adoption of aquaculture specific policy and legislation and Infrastructure development coupled with increased funding.

### **Fish species preferred in Kenya**

Fish species of economic value preferred in Kenya were also investigated to establish their market demand. The findings are presented in table 1

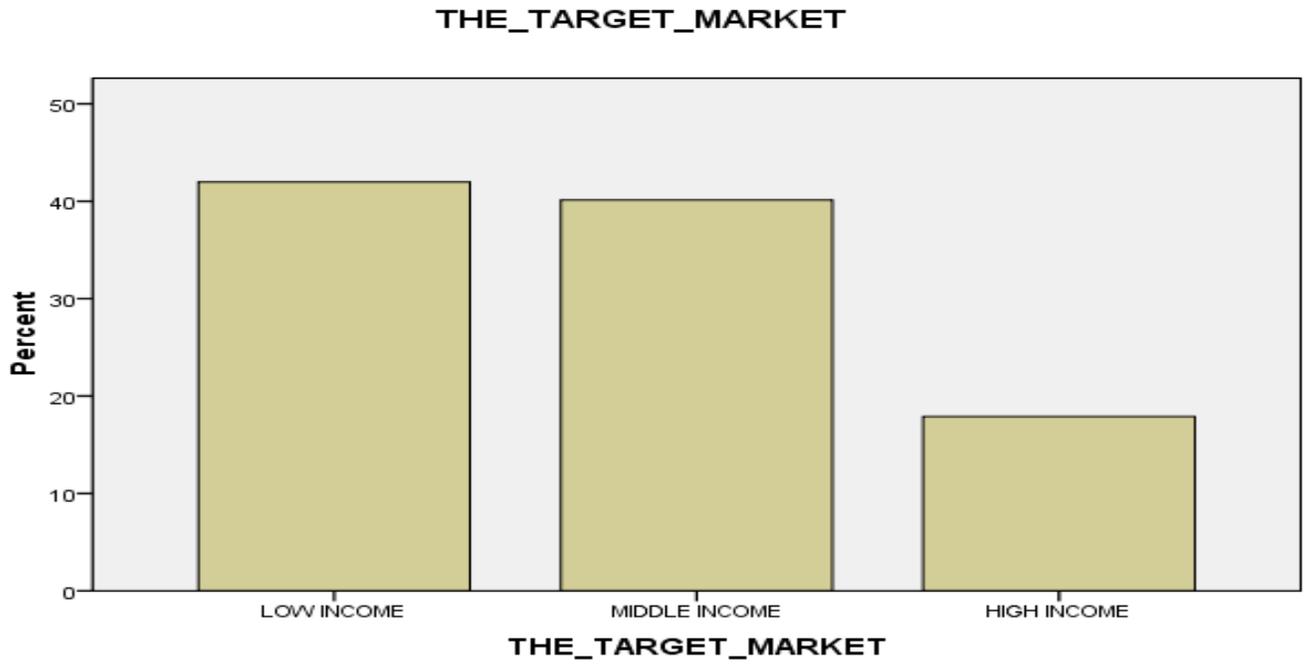
	<b>Frequency</b>	<b>Percent</b>
TILAPIA	141	87.0
CATFISH	16	9.9
others	5	3.1
<b>Total</b>	<b>162</b>	<b>100.0</b>

**Table 1 Fish species preferred in Kenya**

A majority 87% of the respondents preferred tilapia in terms of consumption and business investment, 9.9% preferred catfish while least 3.1% preferred other fish like trout and carp. This findings is in agreement with KEMFRI; the country has fast growing fish species Nile tilapia, African catfish, extensive freshwater resources suitable for the cage, pond and tank-based aquaculture systems and its agriculture and fisheries sectors produces most of the raw materials needed for low earners as their fish target market locally made fish feeds. Main fish market was composed of 42% low income earners and 40% middle income earners. The high income 16% earners buy less fish as seen in Figure 6

### **Target market**

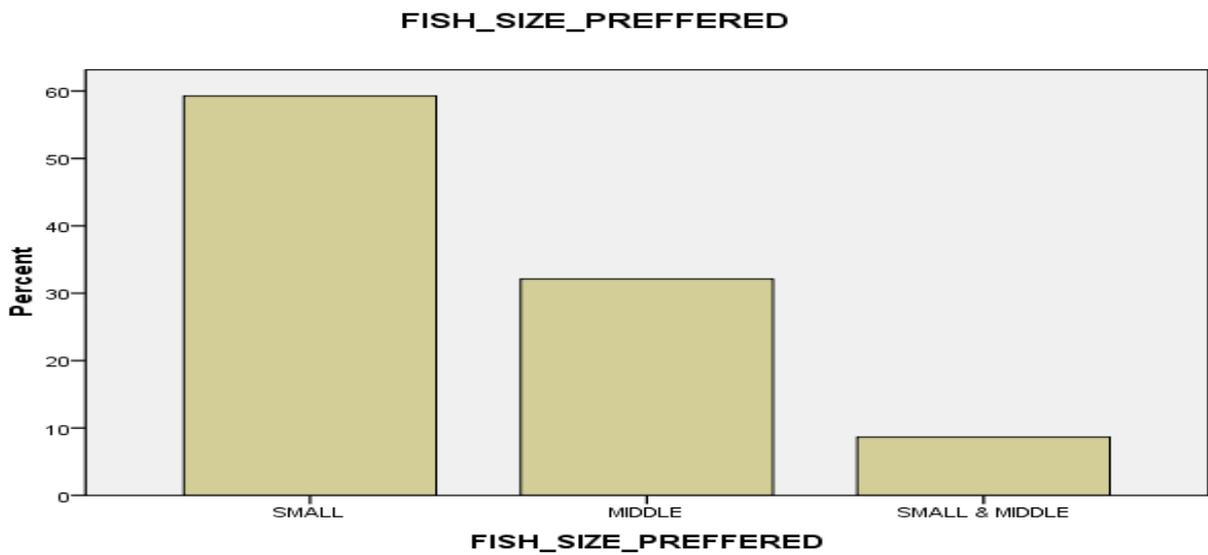
**Figure 6 The target market**



**Market for fish size preference**

The size of fish preferred by the market was determined by asking the respondents to state their preference. Findings are presented in Figure 7

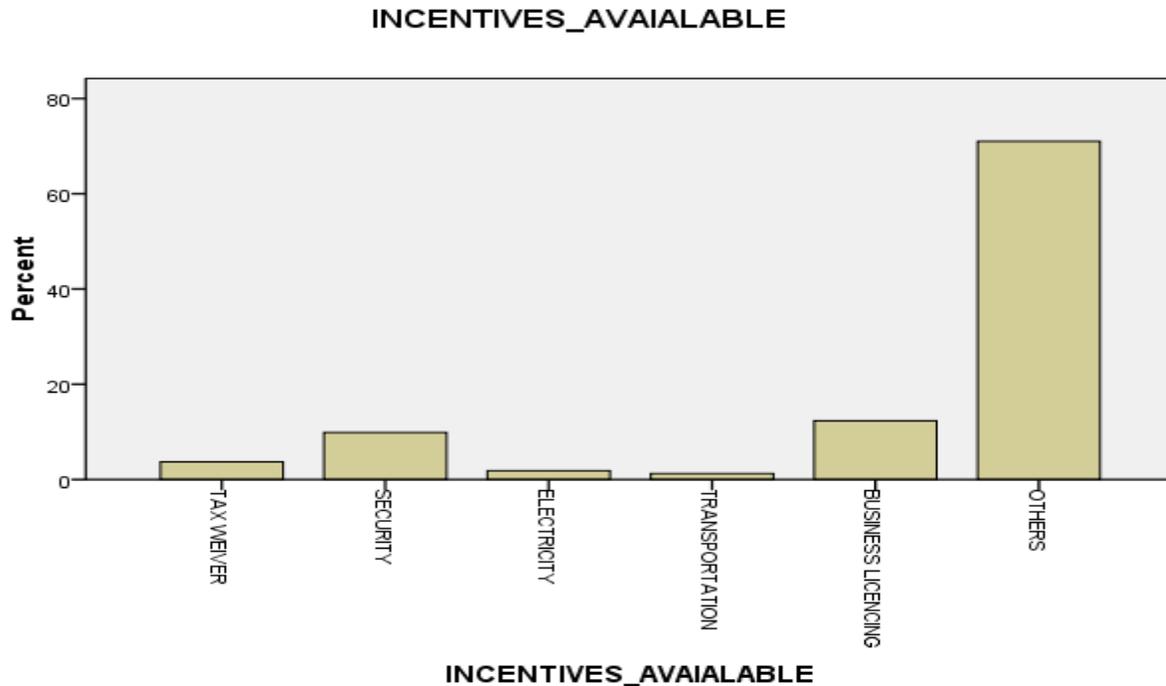
**Figure 7 Market for fish size preferred**



## Incentives for entrepreneurs

The study further investigated the incentive the government was providing to promote entrepreneurship in the aquaculture and fisheries sector. The respondents were asked to list the incentives provided by the government in the fish value chain. Findings are presented in Figure 8

**Figure 8 Incentives provided by the government**



From findings there is little incentive for entrepreneurs investing in fish value chain in Kenya. Business licensing 10% and security 5% were the only significant forms of incentives provided by the government. The finding concurs with Charo (2014) who explains minimal government incentives for aquaculture investments, high import taxes, poor transport systems and insecurity in some parts of the country discourage potential investors. Esiara (2015) suggests capital intensive aquaculture production systems by entrepreneurs should be supported by government incentives in investment in production of high quality fingerlings and feeds, infrastructure development, security and funding.

## Conclusion

Youth and women entrepreneurs are less involved in aquaculture enterprises, therefore there is need to enhance entrepreneurial culture; aquaculture is steadily expanding as most enterprises have 3 to over five acres of fish production area. This growth provides investment opportunity in feeds, fingerlings and other aquaculture value chain. The country has fast growing fish species (Nile tilapia, African catfish); extensive freshwater resources suitable for the cage, pond and

tank-based aquaculture systems. Its agriculture and fisheries sectors that produce most of the raw materials needed for locally made fish feeds. To spur growth of aquaculture enterprises there is need for government incentives in terms of investment in production of high quality fingerlings and feeds, infrastructure development, security and funding.

## Reference

Ahmed, Lorica. Improving developing country food security through aquaculture development – Lessons from Asia. *Food Policy* 27 (2002) 125–141 137 [http://static.sdu.dk/mediafiles/Files/Om\\_SDU/Institut/Miljo/fame/workshop/jun05/](http://static.sdu.dk/mediafiles/Files/Om_SDU/Institut/Miljo/fame/workshop/jun05/)

Ahmed, M., Delgado, C.L., Wada, N., Rosegrant, M.W., Meijer, S.(2003). *Fish to 2020. Supply and demand in changing global markets*. IFPRI: 226 pp. Washington, D.C.

Beveridge, M. and Phillips, M. (2010). *Aquaculture and climate change: what are the challenges for the WIO region?*

Charo, K. H., 2014 Government intervention for aquaculture development in Kenya; VLIR-UOS (VLIR-INCO 2014), Mombasa, Kenya, 27-29 October, 2014

Esiara, K. (2015) *Incentives to promote fish farming in Rwanda, Kigali, Rwanda*

KMFRI (2017). *Kenya's Aquaculture Brief 2017: Status, Trends, Challenges and Future Outlook*. Kenya Marine and Fisheries Research Institute, Mombasa, Kenya. 12 pgs.

Rothuis, A. et al 2011 *Business opportunity for Aquaculture in Kenya, with special reference to food security*, Wageningen, UR, Netherlands.

UNECA, 2016, *economic Report on Africa 2016*; <https://www.uneca.org/publications/economic-report-africa-2016> accessed 14/5/2018

## **Dwindling Significance of Tax Rate in Financing the Outward Foreign Direct Investment by Indian MNEs**

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### **Abstract**

In the wake of increasing outward foreign direct investment (OFDI) from India the paper attempts to find the host country-specific advantages that shape the financing of OFDI by Indian MNEs. By adopting random effects probit model on 63 Indian multinationals for a period 2008-09 to 2013-14 we find dwindling significance of tax rate in affecting their financing decision. The reason could be attributed to the growing tax competition resulting in harmonizing of tax rates worldwide. Indian multinationals are rather found to be lured by the fundamental factors of the host country viz., credit market development of the host country than the tax rate which is amenable to changes by host government directly.

### **1. Introduction**

With the increasing outward foreign direct investment (OFDI) from emerging economies, various studies have focussed on the motives and determinants of OFDI (Buckley et al., 2007; Elango & Pattnaik, 2007; Pradhan, 2004; Kumar, 2007). It is important to study financing of FDI because one of the impediments to FDI by multinationals is the difficulty in financing their FDI (Welch, Benito, and Peterson, 2007). The firms may finance their OFDI either from external capital market i.e. raising finance from the host country or third world countries or from internal capital market i.e. from parent firm itself which is undertaking OFDI or from other affiliates situated worldwide that belong to the multinational system. Internal capital market is a multinational-specific advantage that offers funds at low price, reduces scrutiny by external creditors, and provides more leverage to firms in managing their funds, thereby avoiding potential conflicts between units of a multinational system and external creditors.

However, due to opacity of flows within a multinational system, capturing the flows from various affiliates of a multinational is empirically challenging and hence the paper limits itself to the flows from parent **to its** affiliates abroad. The flows may be financed by debt provided by parent firm, called as parent debt, or by purchasing equity of foreign affiliates by parent firm, called as parent equity. We believe that host country's market imperfections could alter the financing decision of parent firm – the decision of financing the OFDI (Tripathi & Thukral, 2016). The study takes up the case of MNEs from India, an emerging economy that has witnessed exponential increase in outward foreign direct investment (OFDI), catapulting it to 21<sup>st</sup> position in global outflows (UNCTAD, 2010). Accordingly, the objective of the study is to analyse the impact of the host country factors on OFDI financing by Indian parent firms.

### **2. Review of Literature**

#### **Choice between Internal financing and External financing**

The financing decision of foreign affiliates encompasses the decision of whether the foreign affiliate should resort to financing from its parent, or its sister subsidiary constituting the internal capital market, or from the external capital market. Various studies have noted the influence of country factors on the choice between external and internal financing (Robbins and Stobaugh, 1972; Errunza, 1979). Chowdhry & Nanda (1994) develops a tax-based mode of the choice between using intra-firm debt or external debt when financing subsidiaries. Though most studies have focused on tax differentials to determine whether financing is taken from parent or subsidiary, the decision is also based on legal environment (Banerjee & Noe, 2012, Akbel & Schnitzer, 2011). The impact of political risk internal financing has also been studied by Desai, Foley, and Hines Jr. (2008) and Kesternich & Schnitzer (2010).

#### **Multiple Determinants Impacting Financing Decision – choice between external and internal financing**

Desai, Foley, and Hines Jr. (2004) undertakes a pioneering study that addresses the effect of country factors on affiliate's capital structure choice. Further, Aggarwal and Kyaw (2008) examines total debt, external debt, and parent debt ratios and the relative role of internal capital markets of an MNE in financing their foreign affiliates. In case of German affiliates, Buettner, Overesch, Schreiber, & Wamser (2009) finds that the elasticity of external borrowing is less than the elasticity of internal borrowing.

#### **Choice between Parent Debt and Parent Equity**

When considering the financing from parent, the affiliates may decide to raise funds from the parent by raising debt or offering their equity to the parent. Chowdhry and Coval (1998) model the effects of tax regime differentials on the choice between debt and equity financing at the subsidiary level i.e. a choice between parent debt and parent equity. They suggest that if the tax rate in the host country exceeds tax rate in the home country, the multinational company benefits if it has high parent debt in the subsidiary. Aggarwal and Kyaw (2008) also analyses factors that affect parent's choice of debt versus equity financing to determine the capital structure of the

foreign affiliate. They note that more debt is provided by multinationals to their affiliates in high tax countries, though the relationship is weak. High accessibility to local credit market results in a lower use of parent debt as a proportion of total parent financing. However, when controlled for tax rate, accessibility to credit market becomes insignificant. The only empirical study that focuses specifically on financing of OFDI is by Tripathi and Thukral (2016). It assesses the impact of varied host country factors on parent debt financing and notes that tax rate and credit market development in host country significantly affects parent debt financing of Indian MNEs. Thus, there exists a dearth in studies that studies the financing of OFDI. We argue that with increasing financial integration of economies worldwide, significance of variables may change over time in guiding their financing decision. Owing to the erratic nature of FDI across countries and industries we control for time and industry effects in studies relating to FDI that employ short panels like the present study (Altomonte, 2000; Amighini, Rabellotti, & Sanfilippo, 2011).

### **3. Data and Methodology**

By employing the dataset provided by Reserve Bank of India that reports the outward direct investment by Indian firms, out of 152 countries that have attracted OFDI from India over the period 2008-09 to 2013-14, 63 firms have invested incessantly in six year sample period and for which the data is available.

The 63 Indian parent firms belong to 40 industries as per National Industrial Classification (NIC). These were then clubbed into six broad industries at three-digit NIC level. These are viz., Industrials, Fast Moving Consumer Durables (FMCG), Health care, Information and Communication Technology (ICT), Energy and Utilities, and Materials. For data on these industries we referred BSE Industrial indices from Prowess maintained by CMIE that reasonably represent a particular industry. Data related to the explanatory variables of all firms in that index was taken and then median of the respective explanatory variables for each industry was taken.

#### **3.1 Dependent Variable (DVdtoc)**

Dependent variable is defined as relative proportion of debt used in parent financing (Aggarwal and Kyaw; 2008; Tripathi & Thukral, 2016). Since most of the companies were either debt oriented or equity oriented (i.e. the ratio of parent debt to total internal financing was mostly 0 or 1), we converted these ratios into dichotomous variable with 1 for firms whose parent debt ratio to total parent financing is at least equal to the median of parent debt to total internal financing ratio.

#### **3.2 Independent Variables**

##### **Tax Regime in Host Country (TAX)**

Literature strongly suggests that tax is one of the major considerations behind financial decisions of a firm. Robbins and Stobaugh (1972) states that one of the reasons for employing internal loans to finance overseas subsidiary is to reduce tax burden. Chowdhry and Nanda (1994) considers tax rate in foreign country (where subsidiary is located) and tax rate in parent country to study what determines the choice between parent debt and external debt. Chowdhry and Coval (1998) model the effects of tax regime differentials on the choice between debt and equity financing at the subsidiary level i.e. a choice between parent debt and parent equity. Studies have shown a positive relationship between tax rate in host and parent debt (Aggarwal & Kyaw, 2008; Buettner et al., 2009; Desai et al., 2004). We hypothesize: H<sub>01</sub>: There exists a significant impact of tax regime in host country on OFDI financing.

##### **Credit Market Development (PvtCredit)**

A developed credit market in host country increases the accessibility of capital in external markets and hence impacts the financing decision of the parent firm. Desai et al. (2004) and Aggarwal and Kyaw (2008) find that a well-developed credit market in host country reduces the borrowing from parent. Buettner, Overesch, and Wamser (2009) also notes significant impact of local lending conditions on the financing decision. We hypothesize:

H<sub>02</sub>: There exists a significant impact of credit market development in host country on OFDI financing.

##### **Stock Market Development (DStMkt)**

The impact of stock market development on financing decisions has been extensively studied in literature (Booth, Aivazian, Demirguc-Kunt, & Maksimovic, 2001; Subrahmanyam & Titman, 1999). Well-developed stock market in host country may reduce risks and fear of raising funds abroad and hence reduces reliance on parent debt. We hypothesize: H<sub>03</sub>: There exists a significant impact of stock market development in host country on OFDI financing.

Stock market development of host country is measured by market capitalization of listed companies as percentage of Gross Domestic Product (GDP). Country with market capitalization more than the median value have been taken as high market capitalization firms and are assigned a dummy with value one and zero otherwise.

##### **Exchange Depreciation (ExchDep)**

Host country experiencing currency depreciation reduces the ability of obtaining loans (Bernanke & Gertler, 1989) which steers them to their parent for obtaining loans. Desai et al. (2004), and Shafik and Weichenrieder (2010) confirm that affiliates of multinationals raise funds from parent firms to circumvent financial constraints. Exchange rate depreciation is calculated as log of previous year's nominal exchange rate divided by current year's nominal exchange rate. We hypothesize:

H<sub>04</sub>: There exists a significant impact of exchange depreciation in host country on OFDI financing.

### Political Risk in Host Country (PolStab)

Raising debt in politically unstable economies by affiliates is expensive and so they tend to rely more on parent borrowing (Desai et al., 2004; Aggarwal & Kyaw, 2008). Foreign affiliates are funded more by parent debt than parent equity in case of politically unstable host country (Robbins & Stobaugh, 1972). Foreign affiliates tend to borrow heavily in local markets to reduce asset exposure to political risks (Eiteman, Stonehill, and Moffett, 2010). We hypothesize: H<sub>05</sub>: There exists a significant impact of political risk in host country on OFDI financing.

### Legal Environment (CRights)

Weak creditor rights raise the cost of borrowing, thereby reducing debt issuance in the host country (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997). Desai et al. (2004) and Aggarwal and Kyaw (2008) finds that increase in the creditor rights protection decreases borrowing from parent. Banerjee and Noe (2012) elucidates that mix of parent and subsidiary financing can be explained by the differences between legal systems. Akbel and Schnitzer (2011) finds that the choice between centralized (local) or decentralized borrowing (parental) is affected by creditor rights and bankruptcy costs. We hypothesize that strong creditor rights reduces cost of borrowing in host country, thereby reducing provision of parent debt.

H<sub>06</sub>: There exists a significant impact of legal environment in host country on OFDI financing.

### 3.3 Econometric Strategy

Since the nature of dependent variable is dichotomous and we have a panel dataset with 63 Indian parent firms for the six year period, we employ panel probit model. In short panels, consistent estimation of fixed effects models is not possible in probit model, therefore we estimate random effects probit model (Cameron & Trivedi, 2005). We run two models: one without time and industry effects and second with time and industry effects. Various studies on FDI that employ short panel employ random effects probit model controlled for time and industry effects (Altomonte, 2000; Amighini, Rabellotti, & Sanfilippo, 2011). The functional form of the binomial regression that we propose is:

$OFDI_{it} = f(\text{Tax rate, Credit market development, Stock market development, Legal environment, Political risk, Exchange rate depreciation})$

We estimate the following equation:

$$\Pr \{(OFDI_{it}) = 1 | x_{it}, \alpha_i, \beta x_{it}\} = \Phi(\alpha_i + \beta x_{it} + \varepsilon_{it})$$

where,  $OFDI_{it}$  represents OFDI from parent firm 'i' in time,  $t$  ( $i=1,2,3..63$ ) and time  $t$  ( $t=1,2....6$ )

### 4. Results and Discussion

Table 1 indicates that when controlled for time and industry effects, the credit market development of host country continues to remain a significant factor. However, the significance of tax rate fades away as guiding factor in financing of OFDI indicating that tax rate may not be powerful factor to lure the parent firm to finance their OFDI by parent debt.

We note that when controlled for time and industry effects, significance of tax rate as an important guiding factor in financing decision of Indian parent firm reduces. The results are contrary to studies on MNEs from developed countries that find a positive impact of tax rate on affiliate's capital structure (Desai et al., 2004; Aggarwal & Kyaw, 2008; Buettner et al., 2009). Our research is similar to Aggarwal & Kyaw (2008) and Chowdhry and Coval (1998) that finds weak impact of tax rate on parent debt financing.

We also perform cross-sectional analysis for all six years separately. Plotting p-values we find a declining trend in significance of tax rate. The dwindling significance of tax rate supports the fact that tax rate is no longer an important factor in influencing financing decision of Indian MNEs. The significance of credit market development is reinforced by cross-sectional analysis.

Recent study by Chen Cuestas, and Regis (2014) finds convergence in tax rates across Asian and Pacific countries by studying 15 countries for the period 1980 to 2014. The dwindling significance of tax rate in our empirical results supports the tax convergence among countries in response to the growing tax competition between host governments which may have reduced the significance of tax rate as the guiding factor in making financing decision of Indian parent firms. As per Tax Foundation (2016), a research organization, every region in the world has seen a decline in its average corporate tax rate in the past thirteen years. Asia has witnessed the largest drop in average top marginal corporate tax rates.

Results also reveal that Indian parent firms are guided by market factors like credit market development of the host country in taking their financing decisions. Thus, Indian parent firms are mainly lured by the fundamentals (credit market development) of the host country and not by the tax incentives or lower tax rate. The plausible reason is that tax incentives may not be followed by the host government as a long term strategy. The host government may withdraw or reduce the incentives at any time because a lower tax rate and tax incentives reduces the tax base and tax revenue to the host government.

Another implication of dwindling significance of tax rate is that if exploiting tax benefits is the motivation of Indian firms, then they would have done so by transferring funds from one location to another to minimize taxes which would have added on to the transaction cost. So, Indian parent firms seem to take a sustainable financing decision that relies on factors like credit market development that can be sustained in long term than the policy factors like economy fundamentals viz., tax rate that can be influenced by government directly.

Thus, the study has implications for studying determinants of OFDI financing for which the empirical literature is sparse. Also, with the increasing tax competition and ensuing tax convergence between nations, the study contributes to the literature on tax convergence in Asian countries which is at a nascent stage, and finally to the literature relating to the internal capital market in a multinational system.

## 5. Conclusion

By employing random effects probit model controlled for time and industry effects on a panel of 63 Indian parent firms investing in 34 countries for the period 2008-09 to 2013-14 the study finds that fiscal incentives (lower tax rate) do not prove to be a major factor in the decision related to the choice of finance for undertaking the OFDI in foreign affiliates. Rather, market-related variable i.e. credit market development seem to be a stronger determinant of financing of OFDI than policy variable, tax rate. The reason could be attributed to the convergence of worldwide tax rates brought about by tax competition between host governments. The study suggests that Indian parent firms must be guided more by host economy fundamentals than being lured by the tax incentives offered to them by host government. In this manner they seem to efficiently utilize their internal capital market and adopt a sustainable financing strategy. Also, the host government must not rely solely on tax incentives to attract FDI into their country. The study could be conducted only for six years, and for an emerging economy, India, due to data limitations. A study that shall increase the time horizon and increase the number of countries shall heighten the richness of the study.

## Appendix

**Table 1: Robust Random Effects Probit Model Results: Impact of host country factors on OFDI financing (with time and industry effects)**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TAX	-0.010 (0.253)	-0.010 (0.259)	-0.009 (0.346)	-0.009 (0.384)	-0.010 (0.417)	-0.010 (0.433)	-0.010 (0.403)	-0.010 (0.442)
PvtCredit	-0.051*** (0.000)	-0.051*** (0.000)	-0.048*** (0.003)	-0.048*** (0.005)	-0.051*** (0.000)	-0.047*** (0.003)	-0.049*** (0.001)	-0.048*** (0.002)
CRights			0.027 (0.693)	0.051 (0.614)		0.057 (0.583)	0.030 (0.670)	0.066 (0.524)
PolStab					0.004 (0.988)	-0.046 (0.866)	-0.055 (0.837)	-0.062 (0.822)
ExchDep							-1.176 (0.651)	-1.560 (0.540)
DStMkt		0.010 (0.970)		-0.135 (0.732)	0.009 (0.974)	-0.137 (0.731)		-0.207 (0.598)
Dfmcg	-0.048 (0.921)	-0.047 (0.922)	-0.035 (0.942)	-0.030 (0.950)	-0.047 (0.922)	-0.029 (0.952)	-0.028 (0.954)	-0.018 (0.970)
Denergy	0.429 (0.446)	0.429 (0.446)	0.425 (0.448)	0.418 (0.456)	0.429 (0.447)	0.419 (0.456)	0.424 (0.449)	0.413 (0.462)
Dhealth	-0.872* (0.066)	-0.874* (0.068)	-0.891* (0.062)	-0.883* (0.067)	-0.874* (0.068)	-0.883* (0.068)	-0.886* (0.063)	-0.872* (0.071)
Dict	-0.884* (0.090)	-0.887* (0.097)	-0.920* (0.087)	-0.911* (0.091)	-0.887* (0.097)	-0.912* (0.091)	-0.917* (0.088)	-0.902* (0.095)
Dmat	-0.742 (0.186)	-0.742 (0.187)	-0.734 (0.193)	-0.732 (0.196)	-0.742 (0.190)	-0.725 (0.204)	-0.710 (0.212)	-0.701 (0.220)
Dt1	-1.269*** (0.001)	-1.265*** (0.001)	-1.279*** (0.001)	-1.344*** (0.003)	-1.265*** (0.002)	-1.351*** (0.003)	-1.332*** (0.002)	-1.447*** (0.004)
Dt2	-1.140*** (0.000)	-1.138*** (0.000)	-1.113*** (0.000)	-1.110*** (0.000)	-1.138*** (0.000)	-1.111*** (0.000)	-1.064*** (0.000)	-1.044*** (0.000)
Dt3	-0.459* (0.071)	-0.458* (0.071)	-0.455* (0.075)	-0.463* (0.070)	-0.457* (0.064)	-0.473* (0.054)	-0.516* (0.064)	-0.546** (0.048)
Dt4	-0.582** (0.034)	-0.581** (0.034)	-0.579** (0.035)	-0.586** (0.033)	-0.581** (0.037)	-0.582** (0.037)	-0.641* (0.057)	-0.673** (0.048)
Dt5	-0.438** (0.038)	-0.438** (0.038)	-0.437** (0.038)	-0.437** (0.039)	-0.438** (0.039)	-0.436** (0.041)	-0.416** (0.046)	-0.410** (0.049)

Constant	1.809*** (0.000)	1.801*** (0.001)	1.552* (0.060)	1.422 (0.129)	1.796*** (0.006)	1.439 (0.131)	1.614* (0.060)	1.430 (0.135)
Obs.	378	378	378	378	378	378	378	378
No. of firms	63	63	63	63	63	63	63	63
Log Lik	-201	-201	-200.9	-200.8	-201	-200.8	-200.7	-200.6
Wald chi2	45.21	45.25	45.40	45.03	45.25	45.05	45.68	45.18
Pval	9.49e-06	1.90e-05	1.79e-05	4.04e-05	3.72e-05	7.51e-05	5.97e-05	0.000130

Robust pval in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## References

- Aggarwal, R., & Kyaw, N. A. (2008). Internal capital networks as a source of MNC competitive advantage: Evidence from foreign subsidiary capital structure decisions. *Research in International Business and Finance*, 22(3), 409-439.
- Akbel, B., & Schnitzer, M. (2011). Creditor rights and debt allocation within multinationals. *Journal of Banking and Finance*, 35(6), 1367-1379.
- Altomonte, C. (2000). Economic determinants and institutional frameworks: FDI in economies in transition. *Transnational Corporations*, 9(2), 75-106.
- Amighini, A. A., Rabellotti, R., & Sanfilippo, M. (2011). *China's Outward FDI: An industry-level analysis of host country determinants*. Retrieved 2012, from CESifo Working Paper Series No. 3688.
- Banerjee, S., & Noe, T. H. (2012). *Legal-system arbitrage and parent-subsidiary capital structures*. Retrieved 2013, from Social Science Research Network: <http://ssrn.com/abstract=2022875>
- Bernanke, B., & Gertler, M. (1989). Agency costs, net worth, and business fluctuations. *American Economic Review*, 79(1), 14-31.
- Booth, L., Aivazian, V., Demircuc-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance*, 56(1), 87-130.
- Buckley, P. J., Clegg, L. J., Cross, A. R., Liu, X., Voss, H., & Zheng, P. (2007). The determinants of Chinese outward foreign direct investment. *Journal of International Business Studies*, 38(4), 499-518.
- Buettner, T., Overesch, M., Schreiber, U., & Wamser, G. (2009). Taxation and capital structure choice- Evidence from a panel of German multinationals. *Economics Letters*, 105(3), 309-311.
- Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*. Cambridge, United Kingdom: Cambridge University Press.
- Chen, Y., Cuestas, J. C., & Regis, P. J. (2014). Corporate Tax Convergence in Asian and Pacific Economies. *TUT Economic Research Series*, (8).
- Chowdhry, B., & Coval, J. D. (1998). Internal financing of multinational subsidiaries: Debt vs. equity. *Journal of Corporate Finance*, 4(1), 87-106.
- Chowdhry, B., & Nanda, V. (1994). Financing of multinational subsidiaries: Parent debt vs. external debt. *Journal of Corporate Finance*, 1(2), 259-281.
- Desai, M. A., Foley, C. F., & Hines Jr., J. R. (2004). A multinational perspective on capital structure choice and internal capital markets. *The Journal of Finance*, 59(6), 2451-2487.
- Desai, M. A., Foley, C. F., & Hines Jr., J. R. (2008). Capital structure with risky foreign investment. *Journal of Financial Economics*, 88(3), 534-553.
- Eiteman, D. K., Stonehill, A. I., & Moffett, M. H. (2010). *Multinational Business Finance* (10th ed.). New Delhi, India: Pearson Education
- Errunza, V. R. (1979). Financing MNC subsidiaries in Central America. *Journal of International Business Studies*, 10(2), 88-93.
- Kesternich, I., & Schnitzer, M. (2010). Who is afraid of political risk? Multinational firms and their choice of capital structure. *Journal of International Economics*, 82(2), 208-218.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The Journal of Finance*, 52(3), 1131-1150.
- Pradhan, J. P. (2004). The determinants of outward foreign direct investment: A firm-level analysis of Indian manufacturing firms. *Oxford Development Studies*, 32(4), 619-639.
- Robbins, S. M., & Stobaugh, R. B. (1972). Financing foreign affiliate. *Financial Management*, 1(3), 56-65.
- Shafik, H., & Weichenrieder, A. J. (2010). Debt financing and sharp currency depreciations: Wholly versus partially-owned multinational affiliates. *Review of World Economics*, 146(2), 281-302.
- Tax Foundation (2016). Corporate Income Tax Rates around the World. Tax Foundation Fiscal Fact, 525. Available at: <http://taxfoundation.org/sites/taxfoundation.org/files/docs/TaxFoundation-FF525.pdf>
- Tripathi, V., & Thukral, S. (2016). Financing the internationalisation of Indian MNEs. *Transnational Corporations Review*, 8(3), 215-229.
- Welch, L. S., Benito, G. R., & Petersen, B. (2007). *Foreign operation methods: Theory, analysis, strategy*. Cheltenham, Northampton: Edward Elgar.

## THE USE OF PATENT AS A STRATEGY IN ENTREPRENEURIAL ORGANIZATION

### **ABSTRACT**

The biopharma sector in India is in the sunrise phase and has the ultimate objective of narrowing the bio-economic divide. This study analyses the use of patents as a strategy for an Indian entrepreneurial organization, a biopharma major - Biocon. At the onset, it analyses the certain core competency and the role of patents in its entrepreneurial journey. It further elaborates upon how the company uses its patent to obtain sustained competitive advantage. The case further goes on to discuss the strategic moves as adopted by the company which effectively help it generate Intellectual Property (IP) wealth from its R&D activities and which have helped it to move up the drug discovery and development value chain. In the next step, the study elaborates the example of Insulin, where the company has carved its niche and the role played by patents herein. Finally, the study analyses the framework for patent portfolio for the company from the publicly available patent data. This elaborates on aspects on how patents are used. These further details the present IP profile of the company.

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## 1. INTRODUCTION

“If I can deliver oral insulin to India at a level people can afford, then I will have done my job. Without patents, I couldn't do it at all.”<sup>1</sup> - Ms. Kiran Majumdar-Shaw

India's biotech industry is a sunrise sector and has taken significant strides in human health biotech products, like pharmaceutical and medical which account for 60% of the country's total biotech market.<sup>2</sup> The bio pharmaceuticals dominate and are about 76% of this biotech industry with about 30% year on year growth.<sup>3</sup> Biocon is an entrepreneurial organization in India's innovative health biotech industry. The company is created by Ms. Kiran Majumdar-Shaw, who could envision the opportunity through her creativity, drive and vision to create this company of economic wealth and social value. It is based out of Bangalore and manufactures generic active pharmaceutical ingredients and products and which are marketed in the United States and Europe. The company is a forerunner at bringing new medicines into the market. These medicines have been researched and developed entirely in India. Biocon, has a culture that facilitates entrepreneurial activity and puts together teams of people with the right combination of entrepreneurial characteristics.

The company's investment in R&D is greater than 10% of its turnover and is the highest among its peers. It owns IPs in form of product patents, process patents, licenses and registered trademarks. The net profits for the company grew by 14% during the year (FY 2016) and has had a turnover of 35699 million INR and has a human capital of about 8300 employees. The analysis of the annual growth rate trend charts for Biocon show that the company's compound annual growth rate in revenue in terms of percentage has increased by 13% and the net Income has risen by 80%. The retained earnings growth for the year have also increased by 25%. The numbers show that the company is stable enough to maintain its current operations and to invest in new ventures.<sup>4</sup>



Figure 1: 2016 Financials for Biocon ( Source : (Biocon, 2016) )

An entrepreneurial organization can be defined as: *An organization that places innovation and opportunism at its heart in order to produce economic or social value.*<sup>5</sup> Intellectual Property (IP) is creation of human mind and the result of substantial research, inventive effort and investment in sophisticated laboratories. Therefore, such an entrepreneurial organization like Biocon, is an ideal scenario to investigate because it has built its foundations on the intellectual wealth based on the spirit of innovation and the ability to control and describe biotechnological processes and products and its inventions.

## 2. OBJECTIVES OF THE STUDY

This study aims to understand how patents as a form of IP right are used by this entrepreneurial organization as a strategy and the role they play as a strategic lever. Biocon, has patented solid state fermentation process technology using their proprietary bioreactor is called Plafractor. Till 2016 there were 1200+ patent applications filed by the company globally and of these 984 patents have been granted. This company is driven by the spirit of innovation. Its efforts at protecting and using its IP capabilities have helped it carve a niche. These were convincing factors

<sup>1</sup> (WIPO, 2005)

<sup>2</sup> (FICCI, 2015)

<sup>3</sup> (Shah, 2012)

<sup>4</sup> (Biocon, 2016)

<sup>5</sup> (Metaprofiling Ltd., 2013)

for the authors to investigate the same through the academic lenses. The strategic conflict theories of management could have possibly helped to complement and recognize the company's ability to manipulate its market environment and the way it is improving its competitive outlook. However, for this study the reactions of the competitors which are a resultant of the actions which Biocon has taken is not anticipated and is as well not within the purview. Further, the factors like - quality of patents and patent value extraction are as well not considered. However, if these factors are evaluated it may give further clarity in understanding. The study has significant implication for India. This is because India is one of the top twelve biotech destinations of the world and is the third largest in the Asia-Pacific region. Therefore, the study also opens an enquiry. In our efforts to narrow the bio-economic divide are we ready to handle the innovation led growth model in the biopharma sector?

### **3. LITERATURE REVIEW & METHODOLOGY**

Only publicly available information was used and analysed for the study and no insider information was obtained. The snowball method of literature review was used to search for systematic literature from the company website, academic literature, journals and industry reports. The activity was aimed at information seeking. After this the principles of analysis were applied to identify unbiased and valid data. The aim of information seeking was to widen the search but not to include the irrelevant material. At the information assimilation phase the case-study approach was used to analyse and understand how Biocon has deployed the use of patents in its entrepreneurial trajectory. It was understood by analysing certain aspects in which they used their patents and from the publicly available patent data using the Patentscope database of WIPO, the framework for patent landscape for the company was drawn to analyse how the patents were used to obtain competitive advantage.

### **4. THE ENTREPRENEURIAL JOURNEY OF BIOCON AND THE ROLE PATENTS**

Biocon was founded in 1978 and has had the first mover advantage. It marked the onset of bio revolution in the India. In its continuing journey, the company developed and protects its significant intellectual property most important being- patents and trade secrets (confidential business information) for their manufacturing processes and their products(enzymes). The Biocon limited was incorporated in the year 2002. Since its inception, Biocon has evolved from an enzyme manufacturing company into a fully integrated biopharmaceutical enterprise. Its competitive advantage came from its ability to manufacture enzymes. Its fermenting capability enabled it to scale up an industrial process and provided it the platform to pursue discovery-led growth. The company focussed on the manufacture and marketing of APIs (APIs are the core materials in the formulation of final dosage form drugs). These require advanced fermentation and other niche skills and offer a large market potential in the regulated markets once the products are off patent. Its offerings could be divided into the following categories.

#### **1. Complex small molecule generics:**

The small molecule generics constitute fermentation-derived APIs, molecules requiring complex characterization and potent molecules. Biocon is focussed on the use of process patents for manufacture of key generic small molecules. They target APIs for drugs that have large markets and strong pricing and margin characteristics while on patent and which require sophisticated production techniques.<sup>6</sup> The company believes that once off patented these products continue to offer attractive pricing and margins for some time in regulated markets, as the entry of competitors is often delayed by the difficulties in developing non-infringing production processes. Further, to sell their APIs into markets where process patents have been issued or sought, the company develops non-infringing processes for manufacturing their products or uses an existing process (i.e. the process which must come off patent or be determined to be non-patentable). Their intent is to extend their capability to enable movement up in the value chain.

#### **2. Biosimilars**

Biosimilar medicines represent the follow-on versions of original biological medicines designed to treat the same diseases as the innovator's product. These can be developed during the period in which the originator product is protected by patent exclusivity. However, these can be marketed only after the patent protecting the originator product has expired. With the expected patent expiration of biologics by 2020, biosimilars are expected to account for 4% to 10% of the biologics market by 2020. The patents expiring on new biologics would mean another opportunity for manufacturing of the drugs for chronic diseases for Biocon. It is worth mentioning that because of their foresight, in 2015 the company has obtained the approval for the first biosimilar in the USA. This approval means the company can market their biosimilar now in the USA, as their product patents expire.

As the product patents on the first generation of blockbuster biopharmaceuticals are beginning to expire, the generic versions have found large markets. Among governments and others, the sales of bio generics are

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<sup>6</sup> (BIOCON LIMITED, 2004)

flourishing. India globally hopes to play a major role in the bio-generics market and contract manufacturing as the patented drugs go off patent. Indian companies like Biocon are upgrading their manufacturing capabilities.<sup>7</sup> Biocon had anticipated and envisioned this business opportunity coming. In their portfolio strategy, Biocon focused on early entry opportunities through patent challenges or non-infringement. As an outcome of these, it was successfully able to launch several affordable, research-driven solutions.

## 5. FROM R&D TO CREATING INTELLECTUAL WEALTH – AN EXAMPLE OF INSULIN MANUFACTURING

The company uses a presumption that the useful life of an intangible asset will not exceed its remaining patent life or ten years, whichever is lower.<sup>8</sup> It must be noted that the IP strategy followed at Biocon ensures that the brands convey the company's values like - innovation, quality, reliability, distinctiveness and an international outlook combined with pride in being an Indian company. To sustain their competitive advantage, the company's IP strategy has a major role to play. As marked by the founder herself, their IP has always been a factor in its success since the start of company. The company derives its competitive advantage from its ability to focus on research and innovate to subsequently own and use IP. For any global pharmaceutical firm like Biocon there are three areas in the drug discovery and development value chain - research and development (R&D), clinical trials and manufacturing.<sup>9</sup> Biocon has traversed these three areas through its strategic moves which have help it to continuously move up drug discovery and development value chain to obtain a proprietary position in the biopharma market in India to emerge as a major player globally.

1. During the first phase, i.e. in research and development (R&D) stage, marked a shift from conventional biotechnology to modern biotechnology. Their mastery of the solid-state fermentation technique through the building of the Plafactor has given the company unparalleled opportunities in the drug market which could not be obtained with traditional fermentation techniques
2. During the second phase, i.e. in clinical trials stage, they advanced through their unofficial philosophy of - *earn while you learn* model. In 1993 Syngene, was incorporated, which was a 99.99% owned subsidiary to conduct research for third party clients in drug discovery and development. Again in 2000 Clinigene was incorporated for clinical research. These decisions of providing custom and clinical research services, helped the company make the best use of India's globally competitive cost base and exceptional scientific people resources. This enabled it to invest in their R&D programmes.<sup>10</sup>
3. In the third stage, i.e. manufacturing capabilities stage, as marked by the chairperson herself in her interviews, the mergers with international players like Unilever have helped. Biocon improved its business by adopting to the global best practices from the very early days.<sup>11</sup> It is because of this that the company has developed a global perspective in its functioning from the very onset and has spread its manufacturing operations to various geographies (like Malaysia) and not being is concentrated to India only.

To understand further the innovation strategy of the company and how its operations focus on generation of IP wealth from its efforts in R&D, the example of human insulin production and manufacture could be seen in detail. In Insulin manufacturing, because the product patent on human insulin have long expired, it is protected by strong patents on processes of production.<sup>12</sup> As per the WHO Insulin Patent Profile, which was an outcome of the study by Addressing the Challenge and Constraints of Insulin Sources and Supply (ACCISS) of the insulin, four manufacturers have been identified worldwide who have any publicly-available patent applications related to insulin. Of these four companies, Biocon has filed the largest number of patents for insulin. The filing of these patents indicated that the company's focus is on manufacturing existing insulin, rather than developing new insulin. <sup>13</sup> Thus, it can be safely concluded that the company focusses on innovating the 'processes' of insulin production.

In words of Ms.Kiran Mazumdar-Shaw: “*We noticed that most of the patented processes used e-coli and bakers' yeast. At Biocon we had expertise in another sort of yeast, and had already licensed the IP for it from a small*

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<sup>7</sup> (Shah, 2012)

<sup>8</sup> (BIOCON LIMITED, 2004)

<sup>9</sup> (Biocon India Group, 2008)

<sup>10</sup> (Reinventing Biocon, 2012)

<sup>11</sup> (Bloomberg, 2013)

<sup>12</sup> (Building on a Foundation of IP, 2016)

<sup>13</sup> (WHO, 2016)

company in the US. So, the way was clear... We started making our own insulin using Pichia yeast. This was a new and unique process, which wasn't covered by any of the existing patents." Biocon had spotted a small hole amongst the existing patents of insulin production. This allowed them to develop a new way of creating the diabetes drug. That was the process of producing insulin through the Pichia enabled the production of humanlike recombinant proteins and high yields of well-expressed proteins. Because of their IP ingenuity and innovations resulted in the development of world's first Pichia based recombinant human Insulin called INSUGEN®. From 2002 to 2016, the company has taken steady steps in its attempts in the human insulin production and manufacture as shown in the figure below. Today, Biocon is a leader in human insulin production and manufacturing. Biocon was again the first company to market insulin made using Pichia yeast, which is the world's first recombinant (artificial DNA, or r-DNA) human insulin developed INSUGEN®. This allowed it to enter the insulin market in India (which holds 25% of the world's population living with diabetes). This also marked the start of company's efforts in treating diabetes, which is a central focus of the company's strategy towards realizing this social goal.<sup>14 15</sup> INSUGEN®, is now sold in 30 countries and holds the top of a 10 per cent share in the India market. A marketing arrangement with Bayer HealthCare has also extended its reach into China, home to around 100 million diabetics.<sup>16</sup> This example, INSUGEN® manufacturing and production clearly brings out the how the patents can result in providing competitive advantage for an entrepreneurial organization, to achieve its business objectives and social goals.

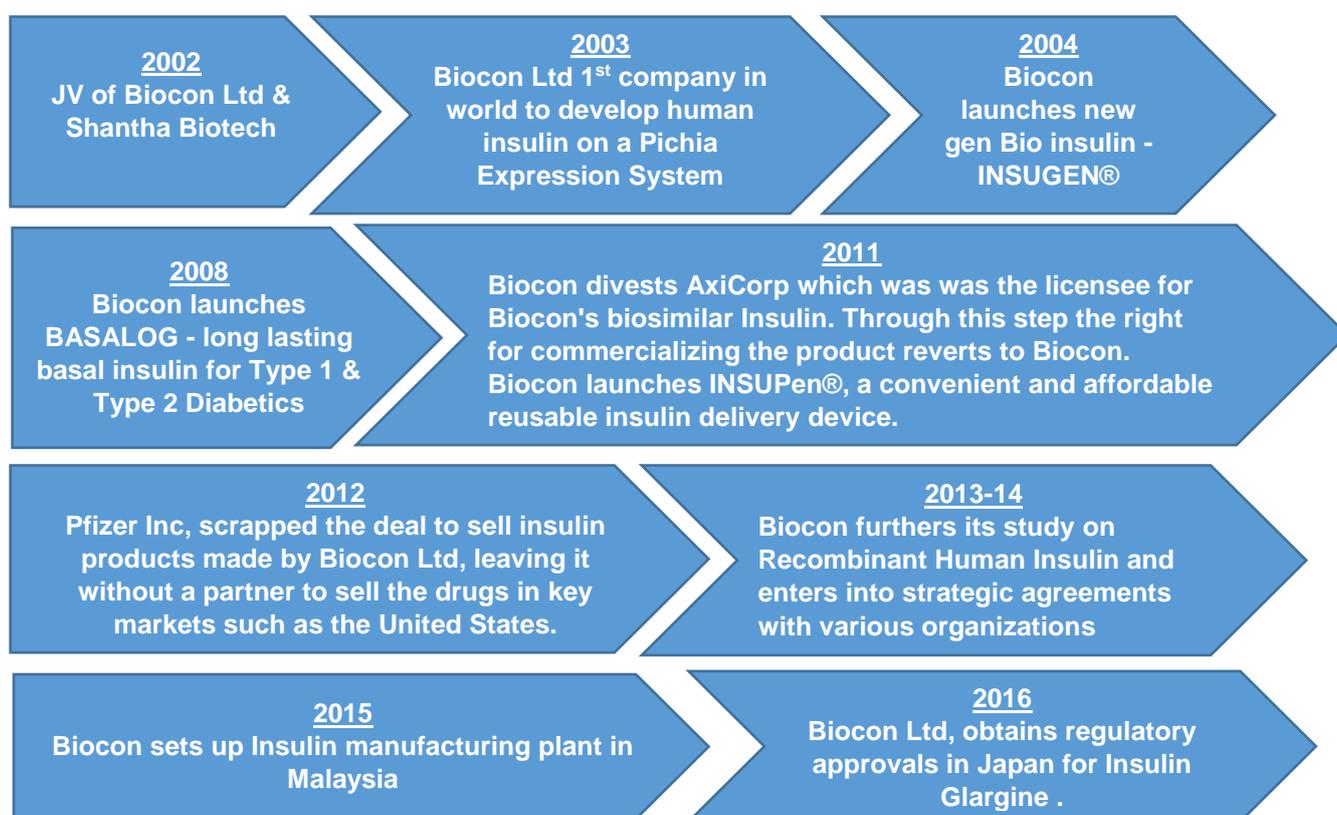


Figure 2: Stages: Biocon's recombinant human insulin program

## 6. USE OF PATENT AS A STRATEGIC LEVER - BIOCON'S PATENTS PORTFOLIO ANALYSIS

Patenting is an expensive activity. Biocon as a company is very strategic about it and this can be understood by analysing the aspects by which patents are used, like - present IP profile of the company, creation of IP and patent as a form of IP, patent enforcement and infringement, utilization of patents, licensing orientation, use of process patents, commercialization of patents, risks involved, and key challenges. The analysis of patent data using the Patentscope database of WIPO (<https://patentscope.wipo.int/search/en/search.jsf>) the framework for patent landscape for the company provides an insight on the method of use of their patents. Obtaining patent protection

<sup>14</sup> (Building on a Foundation of IP, 2016)

<sup>15</sup> (Shekhar, 2008)

<sup>16</sup> (Khan, 2016)

internationally depends on considerations such as how many countries would the company want patents in and if the company wishes to delay costs.

Biocon targets PCT, US and Canada and then the EPO. Despite their R&D centres are in India, the number of patents filed in India is relatively low compared to patents the company files abroad.<sup>17</sup> Biocon's patent registration activities and strategies are focussed on global business.

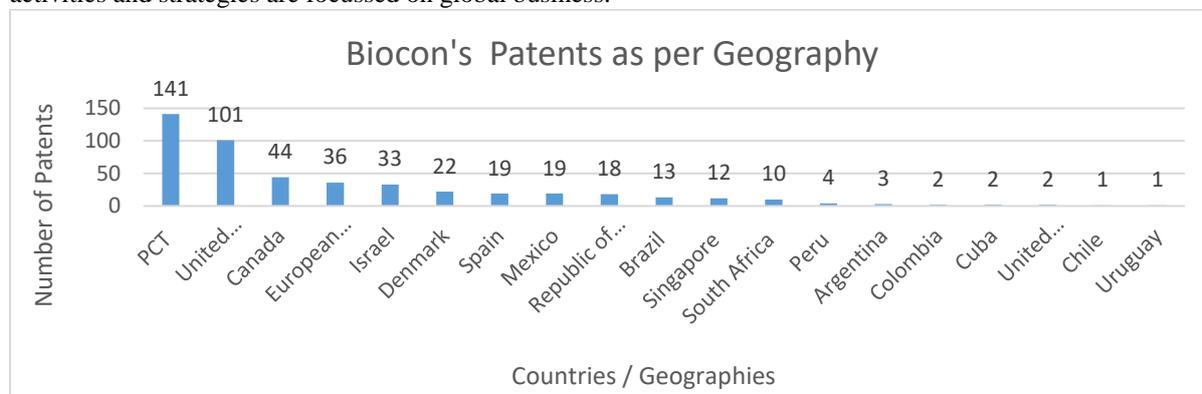


Figure 3: Biocon's Patents - Geographical Distribution

Biocon has been issued several patents covering their innovative processes and products, and has filed, and is expected to continue to file, patent applications seeking to protect its newly developed technologies and products in various countries. In a further attempt to analyse the patent data to have the framework for patent landscaping analysis the data was analysed for the number of patents filed for the various patent classifications.

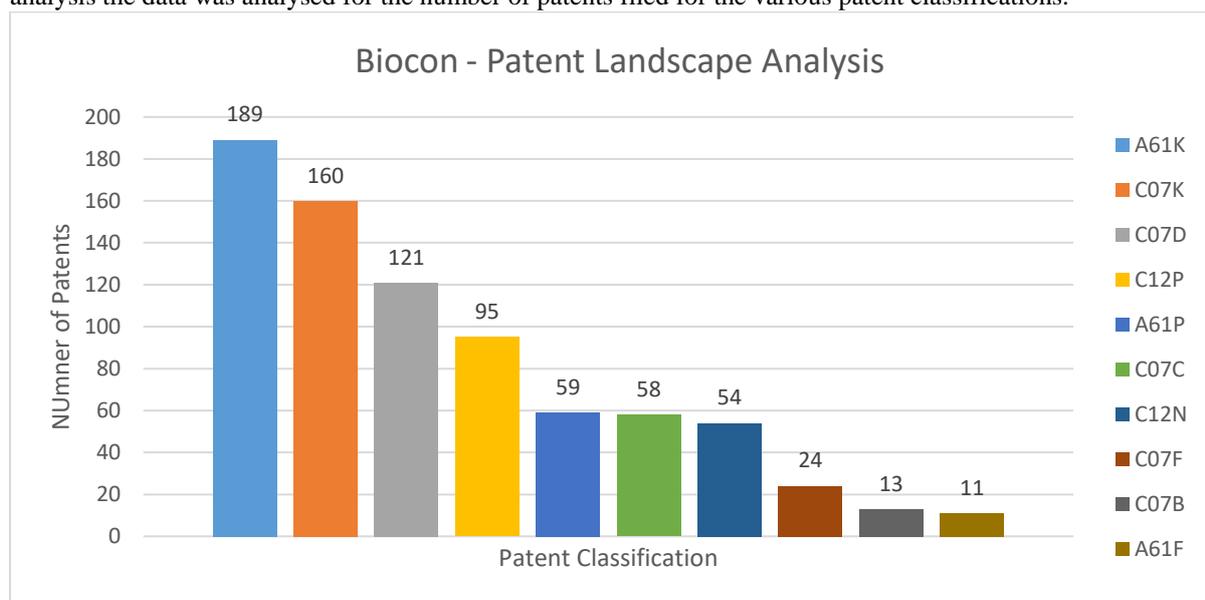


Figure 4: Biocon - Patent Landscape Analysis

Their success with the innovative processes and products depends on their company's ability to protect the current and future innovations and to defend their intellectual property rights. Therefore, patents are a key intellectual asset for Biocon and the company most likely manages them within the overall corporate guidelines. Further, there might be a process for identifying patents that can generate royalty from third parties.

For encouraging biotechnological innovation and commercialization patents are the most commonly used form of legal protection at Biocon. Although trade secret protection is also used however patents play a dominant role to provide protection for the microorganisms. Biocon is conservative about licensing out its patents. For Biocon licensing is mainly a tool for IP generation for protecting the rights of the company's innovation. Like any knowledge driven manufacturing company, a possible risk for the company could be that it cannot be sure of being able to develop economical processes that are non-infringing in the key markets of new target APIs. And

<sup>17</sup> (Fobes, 2010)

such a failure could prevent them from selling those target APIs in the key markets, which could have a material adverse effect on their business prospects.<sup>18</sup> As well, a possible risk that always remains is any existing or future patents issued to or licensed, is that they may not provide any competitive advantages for the invented processes or products or may even be challenged, invalidated or circumvented by competitors. In addition, such patent rights may not prevent the competitors from developing, using or commercialising processes or products that are similar or functionally equivalent to their innovations. There is also a possibility that the license agreements can be breached, and the company may not have adequate remedies for any such breaches. Furthermore, the trade secrets and proprietary technology may otherwise become known or be independently developed by the competitors in full or in partial.<sup>19, 20</sup> In words of its founder Ms. Kiran Mazumdar-Shaw: “*Sharing IP is the way to develop business very fast in today’s world.*”<sup>21</sup>

To date the company has not encountered significant difficulties protecting their intellectual property and have not initiated or been named as a defendant in any patent-related litigation anywhere. Therefore, protecting the patents rights cannot possibly be a challenge for Biocon. However, the challenges for the company may falls in two broad categories. First, could be enforcing the company’s IP rights and using of process patents where the product patents have expired. Second to maintain the company’s patents as a strategic factor, where the complex business questions can be answered by the patents owned by the company.

## 7. CONCLUSION

An entrepreneurial organization, like Biocon places opportunism and innovation at its heart to achieve growth. Evidence suggests that the company embraces freedom of thought and freedom of expression and value innovation to reap benefits.<sup>22</sup> Patents, which are the creation of human mind could be used as a strategic lever for such organizations. The value of IP and competitive value of IP can be obtained when the IP rights are recognised, traded and managed, nationally as well as globally and this influences how the principal benefits will flow. In the context of today’s dynamic challenges in business environment just an investment into the existing and new legal approaches alone may not suffice. However, the patent regime and governmental controls can affect the drive to obtain maximum economic benefits from the patents. Given that such high value innovation in entrepreneurial organizations, they can enable India realise its massive potential as a global centre of growth. And using patents as a strategy, may have a lot of dependencies for such entrepreneurial organizations. In the words of Ms. Kiran Mazumdar-Shaw, - *Innovation in India is doable, but needs a robust ecosystem.*<sup>23</sup>

## References

Books & Papers:

David, F. R., 2011. *Strategic Management CONCEPTS AND CASES*. THIRTEENTH EDITION ed. s.l.:Prentice Hall.

Hana, U., 2013. Competitive Advantage Achievement through Innovation and Knowledge. *Journal of Competitiveness*, March, Vol. 5(Issue 1), pp. pp. 82-96.

Jeyaprakash, K., 2016. Intellectual Property Rights – Role in Biotechnology. *International Journal of Current Microbiology and Applied Sciences*, Issue Special Issue-3: 39-43.

Makker, A., 2011. The Nanotechnology Patent Thicket and the Path to Commercialization, *Southern California Law Review*, Volume Vol. 84:1163.

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<sup>18</sup> (BIOCON LIMITED, 2004)

<sup>19</sup> (BIOCON LIMITED, 2004)

<sup>20</sup> (BIOCON LIMITED, 2004)

<sup>21</sup> (WIPO, 2005)

<sup>22</sup> (Metaprofiling Ltd., 2013)

<sup>23</sup> (The Economic Times, 2016)

- Mital, Amita, 2012. *Reinventing Biocon* (2012) Cases in Strategic Management, Volume II.
- Shah, V., 2012. Evolution of Pharmaceutical Industry: A global Indian & Gujarat perspective. Sept, Volume 2(Issue 5), pp. 219-229.
- Shapiro, C., 1989 , 2014. The theory of business strategy. *RAND Journal of Economics* , 2(Spring 1989).
- Shapiro, C., 2001. Navigating the Patent Thicket: Cross Licenses, Patent. In: *Innovation Policy and the Economy, Volume 1*. s.l.:MIT Press, pp. 119-150.
- Shekhar, C., 2008. Pichia Power: India's Biotech Industry Puts Unconventional Yeast to Work. *Science Direct - Chemistry and Biology*, Volume 15(Issue 3), p. Pages 201–202.
- Reports & Web Resources:
- Biocon India Group* (2008) Archana Kalegaonkar, Richard Locke, Jonathan Lehrich.
- BIOCON LIMITED, 2004. *RED HERRING PROSPECTUS*. Bangalore: SEBI.
- Biocon, 2016. *Biocon About Us page*. [Online]  
Available at: [http://www.biocon.com/biocon\\_aboutus.asp](http://www.biocon.com/biocon_aboutus.asp)  
[Accessed 28 November 2016].
- Biocon, 2016. *Credibly Capable - Anual Report 2016*, Bangalore: Biocon.
- Biocon, 2016. *History*. [Online]  
Available at: [http://www.biocon.com/biocon\\_aboutus\\_history.asp](http://www.biocon.com/biocon_aboutus_history.asp)  
[Accessed 27 11 2016].
- Bloomberg, T., 2013. *Inside Biocon* [Interview] (6 March 2013).
- Building on a Foundation of IP* (2016) WIPO.
- FICCI, 2015. *Biotechnology Landscape in India*, New Delhi: FICCI.
- Fisher, W., 2001. *INTELLECTUAL PROPERTY AND INNOVATION: THEORETICAL, EMPIRICAL, AND HISTORICAL PERSPECTIVES*. [Online]  
Available at: <https://cyber.harvard.edu/people/tfisher/Innovation.pdf>  
[Accessed November 2016].
- Fobes, 2010. *Cleaning Up the Indian Patent Office*. s.l.:Fobes India.
- Intellectual Property and Strategy* (2004) HBR PRODUCT #: 704493-PDF-ENG.
- Jamil, M., 2016. *General Manager and Head - Intellectual Property Right department* [Interview] (8 September 2016).
- Khan, A. U., 2016. FULFIL BIOTECH POTENTIAL. *Geneva Network*, August.
- KPMG, 2006. *The Indian Pharmaceutical Industry: Collaboration for Growth*, s.l.: KPMG.
- L'Innovation, O. a. T. I. P. P. d., 2007. *Intellectual Property Issues in Biotechnology: Health and Industry*, s.l.: OECD.
- Lanjouw, O. J. & Schankermann, M., 2002. *Research Productivity and Patent Quality: Measurement with Multiple Indicators*, London: s.n.

Metaprofiling Ltd., 2013. *The Entrepreneurial Organization : What it is and why it matters*, s.l.: s.n.

OECD, 2005. *A Framework for Biotechnology Statistics*, OECD Secretariat: OECD.

Sanyal, S. & Vancauteran, M., 2013. *Patents and R&D at the Firm Level: A panel data analysis applied to the Dutch pharmaceutical sector*. Barcelona, Spain, s.n.

The Economic Times, 2016. *How does one translate an idea into an opportunity ?*. [Online]  
Available at: <http://articles.economictimes.indiatimes.com/magazines/panache/Innovation-in-India-is-doable-but-needs-a-robust-ecosystem-Kiran-Mazumdar-Shaw/articleshow/50990067.cms>  
[Accessed November 2016].

Visalakshi, N. - S., 2008. *Indian Patents in Biotechnology*. [Online]  
Available at: <http://www.nistads.res.in/indiasnt2008/t5output/t5out12.htm>  
[Accessed 2016].

WHO, 2016. *Insulin Patent Profile*, s.l.: WHO.

WIPO, 2005. Profiles in Innovation: Building Biotech in Bangalore - Kiran Mazumdar-Shaw. *WIPO Magazine*, 5.

WIPO, 2008. *Handbook of Intellectual Property*. Second ed. s.l.:WIPO.