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Strategic Collaboration ICT in the online Transportation Services in Jakarta Area

John Tampil Purba¹, Sylvia Samuel^{1,2}, Aleksander Purba²

¹Faculty of Economics and Business, Universitas Pelita Harapan, Karawaci, Banten 15811, Indonesia

²Faculty of Engineering, the Universitas Lampung, Bandar Lampung, Lampung 35145, Indonesia

E-mail: john.purba@uph.edu

Abstract. The purpose of writing this paper is to contribute as an effort to explore the financial technology collaboration landscape used in online transportation applications that are now widely applied by a number of transport companies in Indonesia. Stability in Fintech business is the main foundation of sustainable digital transactions. Therefore this paper discusses these priorities in the issues of digitalization. Technological innovations in financial services are the result of meetings between drivers and customers. Then the customer's preference is the respondent as "digital native" who interacts with the convenience, security, speed and cost of financial services the higher the demand. This study took 8 months with respondents who had used FinTech transactions daily in the Jakarta area. Here, use quantitative data analysis to present findings and discussions. It was found that; first, the adoption of the adoption of FinTech as a rapidly growing payment tool in economic transactions. Second, developing technology, with the presence of the internet, big data, cellular, and computing power, has become a clear driver of innovation in online transportation services. The conclusion is that the benefits of Fintech are very large in serving the community at this time for that business opportunities in this field are truly great.

1. Introduction

A few decades ago the method of traveling across cities and regions could be tiring where you had to queue up at the ticket service or the travel agency for hours and added costs and time [1]. The online application of online transportation technology has become a daily part of the daily lives of people in Indonesia, especially in urban areas like Jakarta, Bandung, Surabaya, Medan and others [1,2]. This happens because of the progress of information technology based ICT enabled innovation in financial services (FinTech) is developing rapidly [3]. With its emergence, there will be both opportunities and risks to financial stability that policymakers, regulators, supervisors and overseers should consider. With the presence of this technology open new opportunities for start-up companies, family businesses that have passed down to conglomerate companies that have large capital saved for this business [4-6].

For the sake of sustainability of new systems, another thing that is very important is that there are several or may be said many innovations that have not been tested through the financial and system cycles, therefore the testing phase must be carried out properly. That is the reason why decisions made at this early stage can set an important precedent for the future [7-9]. Policymakers must continually assess an adequate regulatory framework for adopting information systems such as FinTech [10] so that



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the purpose of its use is while reducing risk. For example, the G20 Presidency of Germany, because of their focus on the digitalization system, has made written suggestions that the Financial Stability Board (FSB) builds monitoring to date and identifies issues of supervision and FinTech regulations that deserve the attention of the authorities from a financial stability perspective [11].

The existence of online transportation modes has become a part of the life style of some Indonesian people, especially those who live in big cities. The presence of Gojek, Grabbike, Grabtaxi, Bluebird, and the like both two-wheeled and four-wheeled online-based applications were welcomed by the public [13]. This is due to the collaboration of technology that makes it easier to order practically with the devices in his grasp. It is also safer because the driver's identity is printed on the application, on the other hand, which is attracting cheaper fees compared to other conventional modes of transportation.

According to the Indonesia's largest and fastest growing digital economy in Southeast Asia, with a value of USD 27 billion. As reported by Ellis [14].; Google and Temasek estimate the value of Indonesia's digital economy will grow to US \$ 100 billion in 10 years. Based on the research results of Google and Temasek the internet economy (Gross Market Value / GMV) in Southeast Asia in 2018 reached US \$ 72 billion or around Rp 1,044 trillion at an exchange rate of Rp 14,500 / United States dollar. The amount consists of US \$ 8 billion online transportation services, US \$ 11 billion online media, US \$ 30 billion online travel services and US \$ 23 billion e-Commerce. The online transportation services increased to US \$ 29 billion, then online media grew to US \$ 31 billion, online travel became US \$ billion and the e-commerce market reached US \$ 102 billion [15]. Thus Indonesia's economic growth is greatly influenced by other sources outside of natural resources such as digital technology economic activity, skill human resources', including on line transportation [16], [17], [18].

What is interesting in this study is the public interest in becoming drivers and passengers with collaboration of Fintech in online-based application for transportation is increasing in number every day, not only passengers also the needs of tires for them that contribute the income of business family [19]. Another thing is the benefits of this online-based mode of transportation are clearly felt by its users, such as, want to travel, want to order food so it is very easy and relatively fast and practically. The presence of online transportation, makes the public have transportation options, can also determine which transportation is most economical [20].

With this demand the mobility of the people who need a fast and adequate means of transportation according to taste and ability. This technological breakthrough collaboration is an online application-based transportation innovation with devices such as smartphones. The discussion on how collaboration between technologies is very beneficial for humanity on this earth, especially in the Jakarta area, is the main purpose of this paper.

2.Literature Review

The Open Innovation paradigm for collaboration will produce new knowledge in accessing and taking advantage of intellectual property that has changed profoundly in the rapid development of technology due to collaborative technology [21]. With that, companies redefined their boundaries to exploit knowledge and development rather than only investing in internal R&D. That is why new collaboration opportunities between actors have led to new business models and value creations that collaborate with each other. It is believed to increase the dynamics and openness of new market opportunities [21], [22]. The Innovation Collaboration Paradigm is the mainstay of this research to understand changes in organizational boundaries, strategies for accessing and using knowledge, business models and relationships among stakeholders [24].

Mainly established non-payments technology giants and non-banking service providers usher disruption and disintermediation in lending space. Front-end innovations, contactless technologies such as near field communication, host card emulation and wearable are the leading developments. Application of these technologies in payments services are mobile wallets, peer-to-peer (P2P) apps, retailer-based closed loop applications and mobile money. Biggest change has been observed in P2P money transfers while business-to business (B2B) segment is expected to catch up soon [25].

In civilization there are four main types of social action distinguished in sociology classifying four social actions in sociology. The four types of actions are, Instrumental Rational Actions, Value Rational Actions, Affection Actions, and Traditional Actions [26]. Of these four types of social action, this study will explain social actions carried out by users of online application-based transportation, who previously used conventional transportation.

Technology readiness is important in a person's success to do his work [27], [28] this approach is an index of the readiness of the relevant technology (TRI) [29]. The Technology Acceptance Model (TAM) has become one of the most widely used technology models, with two main factors affecting each other's intention to use new technology for their perception of ease of use and perceived usefulness. Technology readiness can be seen as a gestalt resulting from four personality dimensions: optimism, innovation, discomfort, and insecurity [28]. A person's personality factor in the organization is very influential on readiness in using new technology, [29]. Optimism functions as a mental enabler, while the feeling of discomfort and insecurity becomes an obstacle to accepting new technology.

For the technology acceptance model, it is said that perceived usefulness (PU), and perceived ease of use (PEU) are two beliefs that determine attitudes towards technology use. Davis's conclusions state that; the relationship between PU and user acceptance is stronger than PEU and user acceptance [30]. On the other hand, the construction of technological readiness can also be seen as a state of mind that results from mental gestalt enablers and inhibitors that collectively determine a person's tendency to use new technology [31].

Demirci, A. and Ersoy [32] added that through his research, it was found that there were a number of characteristics that had compliance with the acceptance of new technologies or services that resulted in interactions through technology. Lin and Hsieh [33] find that it is very important for companies that currently use, or consider using SST to address customer TR. Lin and Hsieh's results indicate that the higher the customer technology readiness, the higher the satisfaction and behavioral intentions produced when using self-service technology. Generally the level of measurement of the Technology Readiness Index (TRI) is developed to measure the person's trust and the general thinking of the community about the technology they are using.

Collaborative technology (CT) allows a person or organization to quickly unite remote workers into a virtual team to perform various tasks. Collaborative technology also creates work systems that can be done together both formally and informally using a combination of technology with humans [34], [35]. Within companies or organizations of fellow employees, students and lecturers from various places can be connected to each other, share data, and work on projects according to their individual needs.

3. Methods

This research is descriptive quantitative research. Primary data used in this research through collecting from the respondents. The framework of research starts from where the financial services that usual performed by banks are now easier with technology. Services such as payment, deposits and lending, investment management, are getting easier, cheaper, and faster without need to come to the bank, but it can be done anywhere, anytime and any device through technology. So, it can be said the customer no longer need the bank anymore. The technology called FinTech has penetrated into Indonesia. Then how the practise of FinTech in Indonesia.

There are 5 (five) hypotheses formulated based on the above theoretical foundation:

1. There is a significant influence of the Benefit variable on Fintech OL Transportation.
2. There is a significant influence of Trust variables on Fintech OL Transportation.
3. There is a significant effect of the Self-efficacy variable on Fintech OL Transportation.
4. There is a significant influence of the Ease of Use variable on Fintech OL Transportation.
5. There is a significant influence of Security variables on Fintech OL Transportation.

In achieving the objectives of this study verification of the hypothesis was carried out. Data were collected in advance from a survey of experienced respondents using Fintech for on-line transportation in the Jakarta area of 650 people but only 381 people were eligible to be counted in this study.

4. Findings and Discussions

The function of assessment of normality is to test the normality according to multivariate as one of the requirements for Maximum Likelihood. Assessment of normality evaluation can be done used criteria of critical ratio skewness value of ± 2.58 with significant level of 0.01. A data can be classified as a normal of distribution of critical ratio skewness value is below 2.58. If look up from this univariate of critical skewness is above 2.58, almost from all indicator especially indicator FIN6 to sum up this data according univariate is not categorize as a normal distribute in normal condition. According to multivariate value of kurtosis is 171.271 with critical value is - 9.452, while normality of multivariate test with CR value is 40.78, is way above 2.58. So according to multivariate distribution is not normal.

Observations farthest from the centroid (Mahalanobis distance)

This test to examine whether data is outlier or not. Mahalanobis d-squared used to measured distance between observation score from the centroid. This observant number 165 with mahalanobis d-squared 146.376, follow with p1 and p2. P1 and p2 are normal probability still bellow 0.000. Arbuckle [36] stated that even though p1 expected less value, but small value at p2 showed that observation number that farthest from the centroid classified as outlier and must drop from analysis. Criteria that we used based on Chi-squares with degree of freedoms 100, where indicator variable with significant level $p < 0.001$. Mahalanobis distance $X^2(100, 0.001) = 149.48$. Based on the output data, this data is not larger than 149.48 are multivariate outlier.

Reliability Test

Reliability is a measurement of internal consistency from variable of indicators to show degree where each indicator identified as one variable. There are two way of reliability test such as construct reliability and variance extracted. Cut of value from construct reliability with min. 0.70, while variance extracted min. 0.50

Construct Reliability	
Benefit	0.799
Trust	0.752
Self Efficacy	0.704
Ease of use	0.566
Security	0.834
Fin Tech	0.828

Construct Reliability for construct

Table 1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.894
Bartlett's Test of Sphericity	Approx. Chi-Square	5788.402
	df	465
	Sig.	0.000

Based on Kaiser Meyer Olkin Measure of Sampling Adequacy. Value of KMO from 0 to 1. Cut off value of KMO must > 0.50 to do factor analysis. SPSS Output showed that KMO = 0.894, this is acceptable value for factor analysis.

Multiple Linear Regression Test

Table 2. Multiple Linear Regression Test

Model	R	R Square	Adjusted R Square	Std Error of the estimate	Change statistic				
					R Square Change	F Change	df1	df2	Sig.F Change
1	.455 ^a	.207	.196	.672	.207	19.568	5	375	.000

^aPredictors: (constant), SECURITY1, BENEFIT1, SELF EFFICACY1, EASE OF USE1, TRUST1

The SPSS results showed model summary Adjusted R square is 0.196, this means 19.6% variable financial technology can be identified from other independent variable of Benefit, Trust, Self-efficacy, Ease of use and Security. While the rest of 81.4% cause by other reasons of out of this model. Standard error of estimate (SEE) is 0.672. The smaller SEE value make regression model more precise in projection of dependent variable.

Unstandardized beta coefficients

Five independent variables used to analysis regression model, there is one variable of Benefit has shown not significant, as can be seen from probability value is 0.199 and this result way beyond of 0.05. The other variables such as trust, self-efficacy, security, ease of use and security developed the significance of 0.05. The multiple linear regression equation is as follow:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + e$$

$$Y = 2.411 + -0.187 X_1 + 0.184 X_2 + 0.177 X_3 + 0.248 X_4 + 0.68 X_5 + e$$

The linear regression equation above can be explained as follows:

1. Constant 2.411 if the benefit (X1), trust (X2), self-efficacy (X3), ease of use (X4) and security (X5) value is zero then the financial technology value is 2.411
2. Benefit (X1) variable regression coefficient of - 0.187 means that this variables has not shown significance to financial technology
3. Trust (X2) variable regression coefficient of 0.184 means that if other independent variable will experience an increase of 0.184 financial technology
4. Self-efficacy (X3) variable regression coefficient of 0.177 means that if other independent variable will experience an increase of 0.177 in the use of financial technology by customers.
5. Ease of use (X4) variable regression coefficient of 0.248 means that if other independent variable will greatly increase value of 0.248 to financial technology.
6. Security (X5) variable regression coefficient of 0.68 means that if other independent variable will experience an increase of 0.68 to financial technology.

T – Test

The results from the T table are explained as follow:

a. Partial influence Analysis of Benefit on Financial technology.

In the table above showed sig value 0.199 which means sig is larger than the probability value of 0.005 or 0000 < 0.05 then H1 rejected, because it showed negative result, H0 is accepted. Variable X1 has t count -1.287, namely with t table = 1.649. So, t arithmetic < T table can be concluded that the variable X1 did not contribute to Y. the above value that the variable X1 did not has direct relationship with Y, so if it can be concluded that benefit did not has a significant influence on financial technology. Thus, the hypothesis (H1, which sates that dimension of benefit has a partial effect on financial technology can not be accepted.

b. Analysis of the effect of Partial Trust on Financial Technology

In the table above showed sig value 0.000 which means sig is smaller than the probability value of 0.005 or 0000 < 0.05 then H2 is accepted, H0 is rejected. Variable X2 has t count 3.748, namely with t table = 1.649. So, t count > T table can be wrapped that variable X2 has a direct contribution to Y. the value above shows that variable X2 has a direct relationship with Y, so it can be concluded that trust has a significant influence on financial technology. Therefore, hypothesis H2, which states that trust has a partial effect on financial technology, can be accepted.

c. Analysis of the effect of Partial Self-efficacy on Financial Technology

Based on the calculation showed sig value 0.001 which means sig is smaller than the probability value of 0.005 or 0000 < 0.05 then H3 is accepted, H0 is rejected. Variable X3 has t count 3.393, namely with

t table = 1.649. So, t count > T table can be wrapped that variable X3 has a direct contribution to Y. the value above shows that variable X3 has a direct relationship with Y, so it can be concluded that self-efficacy has a significant effect on financial technology. Therefore, hypothesis H3, which states that self-efficacy has a partial effect on financial technology can be accepted.

d. Analysis of the effect of Partial Ease of use on Financial Technology

Based on the calculation showed sig value 0.000 which means sig is smaller than the probability value of 0.005 or 0000 < 0.05 then H4 is accepted, H0 is rejected. Variable X4 has t count 5.882, namely with t table = 1.649. So, t count > T table can be wrapped that variable X4 has a direct contribution to Y. the value above shows that variable X4 has a direct relationship with Y, so it can be concluded that Ease of use has a significant effect on financial technology. Thus, hypothesis H4, which states that ease of use has a partial effect on financial technology, can be accepted.

e. Analysis of the effect of Partial Security on Financial Technology

This table showed sig value 0.054. Which means sig is same value with the probability value of 0.005 or 0000 < 0.05 then H5 is accepted, H0 is rejected. Variable X5 has t count 1.933, namely with t table = 1.649. So, t count > T table can be summarize that variable X5 has a direct contribution to Y. the value above shows that variable X5 has a direct relationship with Y, so it can be concluded that security has a significant effect on financial technology. Thus, hypothesis H5, which states that security has a partial effect on financial technology can be accepted.

5. Conclusion

This research proves that financial technology has a great influence on online transportation users in the Jakarta and surrounding areas. The passengers choose this technology a means of finding transportation for their respective needs. In addition, it also compares online transportation with one another to find out the differences and advantages of each. When viewed in terms of profits, such as: economic factors, where online transportation rates are cheaper, effective and efficient when compared to conventional transportation. In terms of trust and security, because of the identity of the driver and payment system that is certain without having to bargain.

The presence of Fintech is a trend in the midst of urban society is very influential in the selection of transportation to carry out mobility needs. Online transportation services supported by Fintech are utilized by various levels of society including students, housewives and home-based entrepreneurs. Fintech applications and online transportation strongly support a country's economic system and open up many business opportunities. Therefore stakeholders are expected to continue to improve this system for business growth and better service improvement in the future.

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