IRSA 2017

The 6th IRSA International Institute

IRSA — Indonesian Regional Science Association

Maritime Infrastructure and Regional Development

Manado, July 17-18 2017

Collection of Abstracts

Faculty of Economics and Business, Sam Ratulangi University
Indonesian Regional Science Association

TABLE OF CONTENTS

Agriculture and Rural Development
PAR A1: Agriculture and rural Development

Risk Preference and the Tendency of Fertilizer Overuse

Moko Nugroho, Alin Halimatussadiah
Universitas Indonesia, Indonesia

Farmers' welfare depends on crops production and soil fertility. The usage of fertilizer is expected to increase crops production, yet it may cause the soil fertility to decline. In the case of paddy, there is indication that the use of fertilizer most likely driven by productivity as the objective without taking into accounts the effect on soil fertility. Farming lands in Java have been degraded since eight decades ago.

On average, Indonesian paddy farmers consume 304 kg of fertilizer per hectare of cultivated land (National Farmer Household Panel Survey/Patanas 2007). In dry season, the figure became 307 kh/ha. It was slightly decreased in 2010 to 285 kg/ha. However, the amount of fertilizer used in for farming was still above the recommended value. Referring to Ministry of Agriculture Regulation No. 40/2007, farmers are advised to use fertilizer not greater than 250 kg/ha to balance nutrients in the soil.

Several studies examined farmer's behavior concerning fertilizer usage in Indonesia. However, those studies are limited to farmer's response towards fertilizer subsidy and impact of fertilizer usage to productivity. This study fills the knowledge gap by analysing farmer's risk preference on decision in using fertilizers.

We employ logistic regression in the main model, adopting methodology by Liu & Huang (2013), in analyzing the determinants of fertilizer overusing. Besides that, we also refer to Kumbhakar & Tveteras (2003) in estimating the farmers' risk preference (theta). We hypothesized that household with tendency to avert risk would have higher probability to use fertilizer above the recommendation. In the study, we use secondary panel data from Patanas which was conducted in 2007 and 2010.

Based on the estimation, we found that Indonesian farmers, in general, are risk averse given that the theta value is below than zero. The result is consistent with our hypothesis and Liu and Huang (2013) showing that risk preference (theta) has significant negative relationship with dependent variable. It means that farmers with tendency to be risk averse will allocate fertilizer above the recommended level to increase the productivity. Price of fertilizer has also significant negative impact to the dependent variable implying that the increase in fertilizer price may disincentive the farmers to use fertilizer excessively. Other control variables also have significant impact to the dependent variables.

To avoid further land degradation, we suggest the government to shift fertilizer subsidy to other infrastructures needed by farmers such as irrigation system, farming tools as well as crops marketing system. Shifting the subsidy may not only prevent farmers to use excessive fertilizer, but also boost the crop production given the improvement in other infrastructures.

Remittance and Rural Development in Indonesia

Inayah Hidayati
LIPI, Indonesia

In Indonesia rural society life, remittance or usually they call "kiriman" besides being sent to migrant families, is also sent to members of village society and for village's needs. Remittance sent to families is more economic and routine since it is used to meet the families' life necessities, education and health, as well as to support the life necessities of whom are taking care of the family during the migrants are in destination areas.

The data collected included qualitative data from in-depth interviews and supported by study literatures. An interview guide was formulated to facilitate the in-depth interviews and generate a better understanding of migration and remittances behavior. Expectations of this research are remittances from migrants will improve their family statues. The family left behind will have better economy situation, better education for their children left behind and social mobility in their homeland.

Remittances sent to families in migrants' homelands are ideally usable for productive and investment activities. This usage of remittances gives positive impact on homelands development, especially can be seen clearly in rural areas. Remittances used for productive investments refer to the activities which are increasing household's capacity to generate more money.

This study showed that migration from rural to urban areas had significant role towards asset ownership (including motor vehicles and lands) in migrants' homelands. Migrant's family which had more agricultural land were tending to use the remittance for investment purpose. That proved that the rural-urban migration and remittance were not only for the purpose of consumption, but also for investment purpose (Ranathunga in Bougas, 2016). Another study by Stark (2009) in Botswana showed that remittance usually be invested in the forms of fixed capital like lands, livestock, or houses.

Rural area is an important part of planning and development. Most of the people in developing countries live in rural areas, but ironically it is directly proportional to the condition of poverty, where pockets of poverty are also in rural areas. Rural communities are mostly subsistence farmer, it is very difficult to climb out from poverty. Improvement of rural economy will strengthen the national economy and development.

Remittance is not only eagerly by migrants' families, but also giving advantages for their homelands. Thus, remittance can be defined as a process migration which is sent to homeland both in the form of materials like goods or money and immaterial like the increase of skills and developmental ideas which have advantages for migrants' homeland.

This research contribute to the knowledge base through gathering lessons learned and identifying best practices in activities related to migration and rural development research in Indonesia.

The Welfare Impact of Changing Food Prices on Farmers in Indonesia: QUAIDS Model with Instrumental Variable

Albertus Girik Allo, Elan Satriawan, Lincolin Arsyad
Universitas Gadjah Mada, Indonesia

Most of the research related to the food demand model in Indonesia focused less on analyzing endogeneity of food expenditure, resulting in the biased output. Therefore, the purpose of this study was to analyze the impact of rising food prices on the welfare of farmers. This research used Quadratic Almost Ideal Demand System (QUAIDS) method with wage/sectors/region as an instrumental variable for food expenditure to analysis demand function and applying Compensating Variation (CV) method in order to investigate the impact of price change in farmer's welfare in Indonesia. This study used data in 2014 from the Survei Sosial Ekonomi Nasional (Susenas) and Survei Angkatan Kerja Nasional (Sakernas). The results showed that rice, onion, eggs, cigarettes, meat and fish, vegetables, fruits as normal goods. If the producer price increases more than consumer price, the impact on farmers welfare will be positive. Differently, if the consumer price increases greater than the producer price.

Financing Regional Development
PAR B1: Financing regional development

Analysis of Several Financing Aspects to Support
the Environmentally Maritime Sector in Indonesia

Mahpud Sujai
Fiscal Policy Agency, Ministry of Finance Indonesia, Indonesia

Maritime sector is an advance development priority of the current government. Various development programs such as coastal communities and borders empowerment, maritime infrastructure development, increased production of marine fisheries and the maritime conservation has become important program priorities. However, in implementing these programs, financing and budgetary aspects remained a major constraint both in central and local government. Therefore, various breakthroughs and alternative sources of financing are needed to support the development of environmentally maritime sector. The purpose of this study is to explore the various aspects of financing that can be promoted by the stakeholders, including the government in addressing the issue of budget constraints for the development of maritime sector. Methodology that will be used in this research is descriptive analysis that will explore various alternative sources of financing as well as benchmark analysis of both cross countries analysis and cross sectoral analysis. This study is expected to provide recommendations for stakeholders, especially the government in creating a new alternative sources of financing to support the development of environmentally maritime sector.

Efficiency of the Regional Government Owned Enterprises:
Data Envelopment Analysis on Banking Sector

Muhammad Sulistya Wibawa[1], Mustofa Mustofa[1], Irwanda Wisnu Wardhana[2]
[1]Polytechnic of State Finance STAN; [2]Indonesia Fiscal Policy Agency

This study evaluates the efficiency of Regional Government Owned Enterprises (BUMD) of the banking sector namely the Regional Development Bank. The method used is Data Envelopment Analysis (DEA) whereas the efficiency level describes the function of bank intermediation. Input Variables are Deposits (Third Party Funds), Total Assets, and Labor Costs. Output Variables are Total Credit and Revenue. The observation period is between 2013 and 2015. The results are expected to rank the most efficient entities. The recommendation of this research can improve the quality of BUMD either banking or non-banking sectors.

Promoting Private Investment to Improve Local Service Delivery in Indonesia

Rita Helbra Tenrini
Ministry of Finance, Indonesia

Indonesia ranks 62nd out of 140 economies in terms of infrastructure development in World Economic Forum (WEF)'s Global Competitiveness Report 2015-2016. In the recent years, the infrastructure sector is already being the focus and priority of the government program because it is an important factor for sustaining economic growth. However infrastructure projects require large funding, the government's ability to tackle infrastructure investment has been limited by a host of issues including fiscal constraints with significant budget commitments to mandatory spending. Therefore the development in infrastructure requires involvement from private sector through Public Private Partnership (PPP) scheme. This research objectives is to elaborates challenges and obstacles faced by the PPP scheme and how to improve Indonesia's infrastructure development through G20 cooperation. To accelerate the implementation of PPP scheme Indonesian Government has to improve the transparency of PPP scheme, the investment climate, and the bureaucracy process. Indonesian Government has to increase the competence of government official by doing capacity building program in project preparation and procurement. Furthermore Indonesian government should determine which projects will be prioritized, by analyzing the economic impact on the development of the PPP project infrastructure. Indonesia has to be able to realize the priority in infrastructure development by utilizing its membership of the G20 throught Global Infrastructure Innitiative (GII).

Health
PAR D1: Health

The Direct and Indirect Costs of
Treating Mental Illness in Indonesia

Adiatma Y.M Siregar[1], Deni K. Sunjaya[2], Sutyastie S. Remi[1]
[1]Department of Economics, Faculty of Economics and Business, Universitas Padjadjaran, Indonesia; [2]Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Indonesia

Background:

The number of people suffering from mental health issues are increasing in Indonesia. Mental health is related to high direct and indirect costs, and understanding these costs within the context of Indonesia is necessary to understand the severity of disease from economic point of view. This study estimates the direct and indirect costs of providing inpatient care to treat mental illness in Indonesia.

Method:

We conducted costs analysis in a main mental health hospital in West Java, the most populous province in Indonesia. We collected utilization, number of cases, costs, resources and equipment data and employ micro-costing analysis whenever possible to estimate the direct costs. Indirect costs calculation were derived from another study within the same setting, encompassing patients' and their families' travel costs, productivity loss, and meal costs. Our period of study is limited from October 2014 to October 2015. We divided our analysis into patients paying using social insurance, and patients paying privately.

Results:

Most patients are male (70%) and suffer from schizophrenia paranoid (almost 30%). The highest average treatment cost per person is US$481.61 (mental and behavioral disorders due to multiple drug use and use of psychoactive substances), and the lowest is US$176.81 (bipolar affective disorder, current episode manic with psychotic symptoms) for patients paying privately, while the highest average treatment cost per person is US$449.69 (schizoaffective disorder, manic type), and the lowest is US$314.50 (bipolar affective disorder, currently in remission) for patients using social insurance. The largest costs component for both patient groups is room and administration cost, thus it is consequently higher for those having longer stay. The indirect cost of patients undergoing inpatient care for mental illness is US$ 221.21, and almost 75% from this amount is the estimated productivity loss of patients and their families.

Conclusion:

The total of treatment and indirect costs are large may surpass the patients' and their families income, which may lead to substantial financial burden. Thus, understanding the severity of the economic impact of mental illness is important to support the necessity of early treatment for this crucial but often neglected disease. Early treatment for mental illness is not just low cost and may avoid the high direct and indirect costs of inpatient care, it may also lead to better productivity for the patients.

Social Capital and Mental Health in Indonesia

Mohamad Fahmi[1], Adiatma Siregar[1], Deni K Sunjaya[2], Gilang Amarullah[1], Rahma -[1], Nur Afni Panjaitan[1]
[1]Department of Economics, Faculty of Economics and Business, Universitas Padjadjaran, Indonesia; [2]Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Indonesia

Mental health is the integral part of overall health. As define by world health organization (WHO), health is a state of complete physical, mental, and social well-being. Previous studies show that mental health problem affect individual productivity, increasing risk for other illness, as well as decrease of potential role in family and community. Despite the importance of mental health, most health policy are directed for physical, while mental issues left behind.

The similar pattern is also happen in Indonesia. Indonesia's Ministry of Health (MoH) reported that in 2013 about 8% of people in age 15 and more are experience emotional mental disorder, while more than 400,000 (0,2%) suffer severe mental disorder. In addition, the goverment of Indonesia (GoI) has enacted law Law no. 18 Year 2014 concerning mental health yet government spending on mental health only 1% of total health spending.

This paper aim to examine the impact of social capital to individual mental health. We utilize IFLS 2014 database since it provide comprehensive information on mental health as well as social capital. Mental health is represented by self-reported of depression CESD-R-10 scale. The scale range from 0 – 30, individu with score 10 or more is considered depressed. Social capital represented by social trust in individual and community level as well as participation in community. The research using mixed level regression model method with number of observation 28,257 respondents. We also incorporated control variable such as age, gender, marital status, working status, household size, income, and education.

Preliminary result of the study showed that social trust and participation in community has no significant contribution to depression. On the other hand, control variables such as being older, male, and married associated with lower probability of depression.

The Cost of Not Breasfeeding in East Nusa Tenggara

Estro Dariatno Sihaloho, Rahma, Wandira Senja Larasati, Pipit Pitriyan, Dr Adiatma YM Siregar
Universitas Padjadjaran, Indonesia

The knowledge of importance of the breastfeeding is still low in East Nusa Tenggara. In 2013, there are only 42% of children with less than 6 months that got the exclusive breastfeeding in East Nusa Tenggara. While others have start to providing complementary foods like bananas or porridge, to their babies when they are only 2 months olds. Providing complementary foods will increase the possibility of diarrhea and pneumonia/respiratory of the babies. This study has three objectives. The first objective tries to estimate the economic impact of inadequate breastfeeding in East Nusa Tenggara. The second objective tries to calculate the health system medical cost and the third objective tries to calculate the patient/non-medical cost. We calculate the health system-medical cost using the costing analysis on equipment data, supplies data, salary data, and utilization data. We calculate the medical cost and patients/non-medical cost in two primary health centres and a public hospital in Kupang district. For patient cost, we collected the patient cost through interviews with 135 accompanying family members in Kupang district in 2016. This paper estimate the economic impact by combined the health system cost, patient/non-medical cost with the prevalence data from IDHS 2012 and literatures. This study finds that unit cost for societal perspective cost (health system-medical cost + patient cost-non medical cost) is higher in hospital than the primary health center (puskesmas). The unit cost per hospital outpatient visit is US$ 13.53 while the primary health center (puskesmas) is US$ 2.44 per visit. The inpatient hospital cost is higher with US$ 167.36. Total economic loss because of inadequate breastfeeding due to diarrhea cases were US$ 2,075,495 and PRD cases were about US$ 643,038. The average economic loss for diarrhea cases were US$ 9.3 and PRD cases were US$ 8.4. The total of economic loss in a year for East Nusa Tenggara was US$ 2,718,497

Keywords: Cost of not breastfeeding, inadequate breastfeeding, economic analysis, East Nusa Tenggara

Human Resource Development
PAR F1: Human Resource Development

Is Government Expenditure in Human Capital Investment of Districts/cities in DI Yogyakarta Productive to Improve the Labor Productivity?

Bambang Suprayitno, Supriyanto Supriyanto, Tejo Nurseto
Universitas Negeri Yogyakarta, Indonesia

There exists a trend of governance to decentralise the authority to local governments. The effectiveness of government spending, especially investment in human capital, affects economic growth through increasing labour productivity depends on how the local government determines the type of expenditure. This study aims to determine the influence of government spending on the labour productivity, to determine the influence of government spending in the function of education and health to the labour productivity, and also to compare the effectiveness of the total spending and the expenditure according his function, in education and health, on the labor productivity. The research utilised econometric method using OLS of panel data. This study estimated using secondary data from local governments throughout Indonesia regional budget summary provided by the Ministry of Finance, Director General of Financial Balance RI. It analysed 2002-2014 data of five districts/cities in Yogyakarta. The results showed that both of the expenditure, the total government expenditure and the expenditure by each function, influenced the labour productivity. Only government expenditure in health function affected the productivity. It improved the productivity of labour. The size of the population and the territory owned by the districts/cities in DIY proved to lower the labour productivity.

Is Contextual Character Education good for Schoolchildren's Soft-skill Formation? Evidence from Field Interventions in Indonesia's Lagging Regions

Julius Sugiharto[1], Nurman Siagian[1], Umbu Reku Raya[2]
[1]Wahana Visi Indonesia, Indonesia; [2]CREDOS Institute & Nusa Cendana University, Indonesia

Contextual character education (CCE) for children, a teaching and learning model that emphasizes formation of soft skills in children through fun learning, has been widely recognized as instrumental to the improvement of adulthood human capital outcome. However, evidence on the design, implementation, and impact of this educational model in developing country setting is scarce. This study is based on Wahana Visi Indonesia (WVI)'s 3 CCE models designed and implemented during

the last decade in poor region of Sikka, in environmentally degraded area of Sambas, and in post-conflict communities of North Halmahera. The intervention mainly comprises of in-school and off-school CCE trainings for teachers as well as CCE assistance to the pilot schools, with a series of essential preparatory steps to define a positive local value that provide overarching spirit to the CCE model.

In this study, specifically, we want to understand how the CCE work in practice, the success and challenges in implementing the CCE in lagging areas, and if the CCE intervention improves children's soft skills. The soft skills measurement comprises of the 26 elements of 'cakram harmoni' – a three dimensional skill sets on harmony with self, harmony with other people, and harmony with nature - developed by WVI and 14 life skills elements adopted by WVI from Child Trends (2014). This study employs both qualitative and quantitative approach. Data for this study is collected through key informant interviews and schoolchildren survey covering 361 elementary schoolchildren. The qualitative analysis use process chain with multi-actor approach, while the quantitative analysis use multivariate regression strategy.

The main findings are as follows: (1) The CCE intervention roadmap can be aggregated into several inter-related steps: finding the local values that all actors can agree on as the flag or spirit of the CCE intervention, training and assistance mainly for teachers and students at pilot schools, CCE implementation in school, and replication. In all these steps, the multi-stakeholder participation is among the key principles; (2) The CCE facilitates teachers with new teaching method that is based on positive local values, enjoyable, and fun for both the teachers and the students; (3) The CCE transformed certain teachers from using authoritarian and monolog teaching style to a more accommodative and communicate teaching style; (4) Students are reported to enjoy more their study time in school thanks to the changing in teachers' attitude and the fun CCE learning method; (5) CCE training for teachers is quantitatively associated with, among others, students having better self-control, persistence, problem solving ability, discipline, adhere to school rules, and being brave to voice their opinion in school setting.

Based on this evidence, we concluded that the CCE intervention is good for schoolchildren soft skill formation. However, there is still a misconception among some teachers and school principals that an adequate character building should be targeted at improving reading, writing, and math skills; otherwise the CCE is less useful.

Indonesian Air Transportation and the Standard of Living

Daniel Rumani[1], Hizkia Tasik[2]
[1]*Kementerian Perhubungan, Indonesia;* [2]*Sam Ratulangi University*

Indonesian air transport sector has been enjoying an enthusiastic annual average growth rate of 18 percent in term of number of passengers since 2009 and of 8.6 percent in term of number of airports since 2014. This growing indicates that the access to one particular province or region in Indonesia is getting wider. In many provinces, in-bound and out-bound activities ranging from business to leisure activities are increasing every year. These activities may either benefit or pose a threat to the province's standard of living. Efforts that generate direct impacts have been made to increase the standard of living. However, few studies have been made to investigate the indirect factors that have major roles in affecting the standard of living. Moreover, no one has studied the impact of air transport on the standard of living. This study will investigate the impact of air transport on standard of living which is proxied by Human Development Index (HDI) in both regional and provincial levels. This study will use the available data of 227 airports across Indonesia from 2006 to 2015 from Indonesian Ministry of Transportation as well as macroeconomic data of the associated regions and provinces. The air transport data will account both in- and out-bound activities and both domestic and international activities. This study will rely on two-stage least squares (2SLS) regression to evaluate the effects as well as to address a potential endogeneity issue coming from the demand of air transport that may be affected by individual's wealth. This study may shed light on what effects the air transport is actually carrying that may alter HDI and how the effects are varied among the provinces and regions in Indonesia. This study may help government design a good policy to increase the HDI by either widening or constraining the air transport access to any particular province and region. In addition, this study may contribute to the literatures an air transport empirical model of standard of living in Indonesia that has not been discussed in the past.

Human Resource Development
PAR F2: Human Resource Development

Early Educational Experience and Later Education Outcomes: Evidence from School Transition in Indonesia

T Yudo Wicaksono, Firman Witoelar
SurveyMETER, Indonesia

An emerging developmental literature in economics demonstrates that inequalities in cognitive development, health and socio-emotional manifest early in childhood. Indeed many subsequent social issues such as low education, unemployment, and crime can be traced to an adverse childhood experience. This paper investigates to what extent socio-economic conditions of children during their primary education affect their likelihood to continue schooling at the next level of schooling. We find that relatively favorable conditions of children during their primary education such as better household income, spending more hours at school, starting school at early age, never failing at any grade in primary school and higher numeracy skill measured during primary school increase the likelihood of continuing schooling from primary to junior high school. Salient evidence pertaining to school continuation is the effect of grade failure in elementary school and later educational attainments. In our baseline model without district fixed effects, failing a grade at primary school is associated with a reduction in the probability of progressing to junior level by 14 percentage points in 2007. This accounts for 15.7 percent reduction in school continuation from primary to junior school. Ever failing a grade at primary level is also associated with lower continuation from junior to senior high school by 9.49 percentage points. That is, as no primary student ever failed a grade, we may expect that school continuation from junior to senior level would have increased by 14.16 percent.This magnitude is very high and it tells us these variables are persistent. The policy implication is that any policy aimed at improving transition rates between school levels should target children at primary school and school quality at primary education.

Regional Education Inequality: The Case of Eastern and Western Regions of Indonesia, 2012 and 2015

Wisnu Harto Adi Wijoyo[1], Hoai Thu Bui[2]
[1]World Bank Indonesia; [2]Nha Trang University, Vietnam

In 1998, regional provinces in Indonesia received higher autonomy due to economic reformation across the country. This leads into delegation of education management into regional governments, resulting into variation of educational qualities among regions of Indonesia. Referring to Indonesian Bureau of Statistics

data, it is displayed that Eastern Indonesia generally has lower quality of education in compare to the Western counterpart. This paper aims at estimating the inequality of educational achievement between regions in Indonesia by constructing a Gini Index on educational attainments in term of years of schooling. An impact evaluation of Scholarship for Poor (BSM) to education inequality between regions of Indonesia is adopted to understand the key variables which determine the education inequality. The results show that BSM as a social protection program in education has negative and significant relationship with education inequality. In addition, access to information, private motorized transportation and electricity also potentially reduce the education inequality, while living in rural area, living in eastern Indonesia regions and poverty potentially worsen the education inequality. Therefore, policy regardings increase in household welfare, education access and infrastructure might be important to be prioritized in an attempt to reduce regional education inequality, especially for lagging regions in eastern Indonesia.

Keywords: education gini index, education inequality, eastern indonesia, susenas, education regional development

Who Needs a Second Job? Assessing Characteristics of Those Who Have a Second Job in Aceh, Indonesia

Saiful Mahdi, Nurhasanah Nurhasanah, Shafira Maulina
Department of Statistics, Syiah Kuala University, Indonesia

Using 2015 Indonesian Labor Survey (Sakernas), we investigate the characteristics of those who declared they had a second job on top of their main occupation. We use logistic regression analysis to find factors determining the characteristics. We found that level of education (OR = 6,73 ; p-value = 0,001), training experience (OR = 2,29 ; p-value = 0,000), urban-rural residential (OR = 0,45 ; p-value = 0,000), salary (OR = 1,57 ; p-value = 0,000), number of working hours (OR = 1,02 ; p-value = 0,000), relation to head of household, (OR = 2,06 ; p-value = 0,000), and the state of main occupation (OR = 60,74 ; p-value = 0,002) are all significant determinants of one to have a second job. The difference is also related to gender (OR = 1,578 ; p-value = 0,002), and marital status (OR = 1,74 ; p-value = 0,000). The model has 89.3% classification accuracy. This study shows that, for example, those having a salary of IDR 1.5 million or less are 1.57 (57%) more likely to have a second job compared to those having a salary of IDR 3.5 million or more. Also, those from rural area tend to have a second job 55% more than those from urban area. The findings seem to agree with the common thesis of low quality of job and urban-rural disparity in job opportunity in Indonesia. This study would provide one of the baselines to later investigate village funding (dana desa) impact in Aceh.

Industrial Development
PAR G2: Industrial Development

Does Business-Group Affiliation Affect a
Firm's Performance?

Akhmad Rizal Shidiq
Leiden University, The Netherlands

I estimate the impact of business-group membership on a firm's performance in the Indonesian manufacturing industry in 1996 and 2006. I find that being a member of a business group positively affected firms' performance. It appears, however, that the business-group membership premium came from providing better access to the market, rather than by having a differential effect on production activities. The result generally holds across estimation strategies. In the main specification using the propensity-score matching, being a member of a business group increased the firms' earnings by 21 percent and labor productivity by 11 percent. Business-group memberships evidently brought firms better access to the markets for imported inputs and highly educated labor, and, to some extent, the export-product market. The effects of business-group membership on firms' production activities were more ambiguous: relative to the standalone firms, the affiliated firms spent more on wages, less on materials, and generally the same amount of investment. This finding provides more evidence for the benefit of business-group membership for firms in developing economies.

Technical Efficiency of the
Indonesian Micro and Small Enterprises

Maman Setiawan, Alfi Syahrin Ario Waskito
Universitas Padjadjaran, Indonesia

This research investigates the technical efficiency of the micro and small enterprises (MSEs) in Indonesia. This research uses the survey data of the MSEs from the Bureau of Central Statistic during the period from 2011 to 2015. The technical efficiency is estimated using data envelopment analysis (DEA) with boostrapping method. The bootstrapped truncated regression is also applied to estimate the relationship between the competition and technical efficiency score. This research found that there was a low technical efficiency of the MSEs in Indonesia. Furthermore, the higher competition between MSEs also increases the technical efficiency.

Productivity, Efficiency, and Technical Change in
Indonesia's Pre-and Post-Crisis Provincial Economies

Mitsuhikko KATAOKA
Rikkyo University, Japan

On account of nation's size, insular geography, the world's fourth most population size, and its rich endowment of natural resources, Indonesia consists of the widely different socioeconomic sub-national regions: the nation's largest urban agglomeration province (Jakarta), the resource-rich provinces (Ache, Riau, East Kalimantan, and Papua), the internationally well-known tourist destinations (Bali and Yogyakarta), the emerging manufacturing cluster provinces (West and Central Java), and the labor-intensive agricultural provinces (the rest of provinces). Given extraordinary diversities, the nation is beset by a serious resource imbalance, uneven economic growth, and income inequality across provinces. To address this issue, the government has implemented various policies; however, outcomes are still far below the target level.

In the neoclassical economic framework, economic growth in a region is determined by change in two factors: production factor endowment and total factor productivity. We measure the productivity change over time in Indonesia's pre-and post-crisis provincial economies, by employing the data Malmquist productivity index (MPI), derived from envelopment analysis (DEA). It can be further decomposed into two components: efficiency change and the technical change. And we use the cumulative frontier shift component on average proposed in the Malmquist index analysis, referring to Hashimot et al. (2009).

Using the annual observations of 26 contiguous provincial GDP and factor inputs (labour, physical, and human capital) for 1990–2010, we found that Indonesia experienced favorable efficiency improvement, but deterioration in technical progress on provincial average. Further, the levels for those two components vary by provinces. The resource-poor off Java provinces such as Bengkulu, North Sulawesi, and Central Sulawesi, achieved the highest efficiency growth while the business agglomeration Java provinces, such as Jakarata, West and East Java, achieved the highest technical growth. We also identify those provinces considered most "responsible"' for the shift(s) in productivity. Moreover, the use of upper-bound DEAs enabled an evaluation of ''good'' movements in productivity. The results empirically reveal that provinces of Jakarta, East and West Java, and East Kalimantan, referred to as the main frontier shifters, were the greatest contributors to improved productivity in the best performing prefectures. Finally, we present the research discussions and policy implications based on the major findings.

REFERENCE

Hill, H., (2002), Spatial disparities in developing East Asia: a survey, Asian-Pacific Economic Literature vol. 16, 10-35.

Hashimoto, A., Sugita, T. and Haneda, S., 2009, Evaluating shifts in Japan's quality-of-life, Journal: Socio-Economic Planning Sciences, 43 (4), 263-273

Natural Resource Management
PAR L1: Natural Resource Management

Risk Behaviour, Trust and Transaction Costs in
The Artisan Tuna Fisheries in East Java, Indonesia

Dias Satria
Universitas Brawijaya, Indonesia

This study developed a transaction cost economics (TCE) model employing structural equation modelling (SEM) to investigate factors influencing the level of transaction costs, namely searching, negotiation and monitoring costs in the artisan tuna fishing economies (ATFE) in East Java, Indonesia. The model is an extension of the TCE framework since it incorporates the variables of risk behaviour and trust in the model analysis. Data from this study is gathered from the survey involving 436 artisan fishermen (AFs), in the five sampled areas, namely Malang, Pacitan, Trenggalek, Banyuwangi and Jember, representing artisan tuna fishing economies in Indonesia. The results show that trust has a role in constraining opportunistic behaviour, allowing AFs to adopt a less complicated safeguard, thereby economising on transaction costs. Furthermore, uncertainty has a significant effect on the transaction costs, as uncertainty increases the needs for safeguarding which, in turn, affects the level of transaction costs.

An Economic Analysis of
The Nomei Fish Industry

Sulistya Rini Pratiwi
Borneo Tarakan University, Indonesia

The industrial sector, especially in the manufacturing sector, is a considerable contribution to the Indonesian economy now. As part of the agro-industrial processing of fishery resources in the form of small industry and households, Nomei fish processing industry has a role in developing the fisheries sector agro-industry. Processing activities carried out by the Nomei fish processing industry in Juata Laut is turning the Nomei fish commodities into Thin Dried Fish product, which can increase plus value to the commodities. Juata Laut is one of the industrial centers Thin Dried Fish growing.

The aim of this study is to determine the plus value and benefits for Nomei fish commodities created by people in this industry. A survey was conducted to 5 Nomei fish processors in Juata, Tarakan. Analysis of the data used in this research is descriptive and quantitative research with Hayami methods. The value calculation result shows that the average value of the conversion factor used on Thin Dried

Fish Industry in Juata Laut is 0.40. This value indicates that each one kilogram of processed Nomei fish will generate 0.40 kilogram of Thin Dried Fish. Thin Dried Fish Industry in Juata Laut Tarakan city also shows that the business enables generating value upto IDR.19.469,94 with an average ratio of the plus value to the output value amounted to 71.58%. It meant that of every IDR.10.000,00 of the product would be obtained value added of IDR.7.158,00.

The Competitiveness and Potential Development of
Indonesian Fishery Products in American Market

Dian Dwi Laksani, Kumara Jati
Ministry of Trade, Indonesia

Understanding of the competitiveness and potential development of Indonesian fishery products in America is important for determining the promotion and image building to develop exports to American Market. In this research, we examine the general description of the Indonesian fishery sector; competitiveness and potential development of the American market; strategy and policy trade diplomacy for the development of the American market. The empirical results show that: Indonesia has a great potential to develop market of the American, Indonesia has strong competitiveness and high market growth in shrimp and prawns products for the North American region, The level of diversification of Indonesian products in the American Market is still not too high so as to be introduced new marine fisheries products to consumers, tariff rates are still important to be regarded as trade barriers especially for Indonesian products that are highly competitive, development of the competitiveness of fisheries and marine products are still important to support the Indonesian national exports to the American market. This study provides the following recommendations as follows: development of market extensification and intensification through the promotion and image building is needed to develop export premises to American; negotiation of multilateral, regional and bilateral forums to bring down tariffs to be very important in addition to lowering other trade barriers to entering the American market.

Public Sector and Development
PAR N1: Public Sector and Development

A Policy Analysis of Tax Incentives for
The Eastern Indonesia

Mohammad Zainul Abidin
Ministry of Finance, Indonesia

Indonesia enjoys the successful economic development. During the years from 2013 to 2015, the GDP growth rate was recorded respectively by 5.56 percent, 5.02 percent, and 4.79 percent. During the period 1988 to 2013, the economic structure of Indonesia is mostly located in western Indonesia (Kawasan Barat Indonesia/KBI), which includes the islands of Java and Sumatra. KBI contribution to economic growth over the years above 80 percent. Meanwhile, In 2016, the highest percentage of poor people in the area of the eastern Indonesia (Kawasan Timur Indonesia/KTI). On the other hand, the eastern Indonesia (KTI) contribution to the national economy of less than 20 percent. This creates a widening economic gap between KBI and KTI. The government of Indonesia (GoI) seeks to reduce the economic gap KBI and KTI, such as by setting priorities for the regional development agenda in the National Medium Term Development Plan (RPJMN) 2015-2019. In RPJMN 2015-2019, GoI has a plan to improve the business / investment climate in eastern Indonesia through tax incentives policy. This study aims to determine the effectiveness of tax incentives policy in order to support regional development in KTI. This study will use the qualitative approach with descriptive method. Data collection techniques in this research are conducted through secondary data analysis. This research will use secondary data from the literature review related to public finance and regional development, the results of previous research, regulation, government documents, media, and various other written documents. Furthermore, the data will be analyzed and arranged in accordance with the theme of the research. This research is expected to contribute ideas on the theory of public finance, particularly related to the use of tax incentives, and design of the framework for policy formulation of tax incentives for regional development in KTI.

Flypaper Effect of Unconditional Grants, Non Matching Grants and Regional Revenue To Regional Spending in
The Provinces of Western and Eastern Parts of Indonesia

Cornelius Tjahjaprijadi
Ministry of Finance, Indonesia

This study aims to determine the effect of unconditional grants, non-matching grants, and regional revenue to regional spending and to find out the possibility of flypaper on regional spending in the provinces of western and eastern parts of Indonesia. The method used is the method of explanation by using panel data from 2010 to 2015. This study uses fixed effect least square dummy variables model with the dependent variable is regional spending and the independent variables are PAD, DBH, DAU, DAK, and DPOK. Regression analysis shows that there are mixed results that PAD, DBH, DAU, and DPOK have positive influences on regional spending in some provinces both in western and eastern parts of Indonesia. The same thing also happened on DAK variable that does not affect significantly to regional spending in some provinces both in western and eastern parts of Indonesia. This study also gives answers that the counties and municipalities in the provinces on both parts have different responses related to the regional spending, regional revenue and regional transfers. The regression analysis also shows that the regional spending in some provinces in western and eastern parts of Indonesia more affected by unconditional grants and non-matching grants than the PAD. This shows that there is a flypaper effect on regional spending in mostly provinces both in western and eastern parts of Indonesia.

Potential Revenue Analysis of Goods And Services Tax to
ReplaceValue Added Tax

Naufalia Dinar Primacita
University of Indonesia, Indonesia

This research aims to analyse the feasibility of implementing Goods and Services Tax (GST) to substitute the existing Value Added Tax (VAT) in Indonesia. Besides, the estimation of potential revenues is made at both central and local government levels. This study uses panel data method through descriptive and econometrics analysis. The unit of analysis is interprovincial in Indonesia, then the findings will be correlated to Stiglitz theory. The first finding results from the analysis shows that GST has potentially feasible to be applied in Indonesia rather than VAT. Moreover, It provides a greater potential tax revenue rather than VAT. As a consequence, if GST is implemented at a regional level, thus interprovincial equity can be achieved with more equitable by empowering fiscal capacity by strengthening Gross Domestic Regional Product through an opsen system.

Trade and Macroeconomy
PAR R1: Trade and Macroeconomy

Analysis of the effect of Greece's Default and Referendum Announcement to European Union on Return of Stock of
Registered Company in Indonesia within LQ-45 Period February to July 2015

Eksa Pamungkas[1], Gamal Ramadhana[2]
[1]Padjadjaran University, Indonesia; [2]Padjadjaran University, Indonesia

The main purpose of this research is to determine the effect of the presence information of international political events (Greece default and referendum announcement) of the share of the companies which listed on the Indonesia LQ-45. This study uses event study, which was observed on the average subnormal stock returns for 10 days before, the event date and 10 days after the announcement.

The data used in this study is data from 45 companies listed on the Indonesia Stock Exchange and is registered in LQ-45. Data period is from February to July 2015, which consist of daily stock prices and daily Composite Stock Price Index. The main indicators to be tested in this study is the abnormal return during the announcement event, the Abnormal return is obtained by calculation using market model.

The result show that there is statistically no significant effect in the presence of Greece default dan referendum on European Union announcement in 2015, where it can be seen from the average value of t count every day during the event period for firms in each sample, t count lies in the area of H0 is accepted, with $\alpha = 5\%$, which mean that the announcement information on the average information content has no significant influence on the level of stock returns of companies listed in Indonesia LQ-45.

The Effect of Customs Facilitation on
Regional Economic Growth

Mohammad Fachrudin[1], Ario Seno Nugroho[1], Fardhani Hamiputri Akhzan[2]
[1]Polytechnic Of State Finance Stan, Indonesia; [2]Directorate General Of Customs And Excise, Indonesia

In general, increasing economic growth has always been one of the government's significant interests since it indicates the expansion of goods and service in the country. One of the instruments used by the government in utilizing the economic growth is customs facilitation. Customs facilitation in this term is referring to as

part of tax facilitation, playing an important role in tax reduction, especially in export and import activities. In general, tax reduction is expected to lead a country to a greater economic growth. Examining further into Indonesia's government structure, the implementation of decentralization policy has resulted in the increase of opportunities and obligations for the local government to expand its economic growth. The local government could use the customs facilitation as an instrument to boost the growth of local economy by cooperating with Directorate General of Customs and Excise, in order to utilize the customs facilitation in its area, since the customs facilitation is the authority of the central government in nature. But, the local government is in need of assurance regarding the relationship between the utilization of customs facilitation and its regional economic growth in order to optimize the benefit of this instrument. Empirical researches are needed to support the effort. In contrast, there are only limited numbers of studies that can explain the relationship between those two variables. Hence, this paper attempts to explain the effect of customs facilitation on regional economic growth in West Java using panel data in the period of 2012 to 2016. The local government revenue and transfer from central government are also taken into the account as control variables. The analysis of data in this research uses the regression analysis.

Rupiah Exchange Rates Response to
the US Macroeconomic Indicators Announcements

Anhar Fauzan Priyono, Arief Bustaman
CEDS Universitas Padjadjaran

The volatile movement of Indonesia Rupiah has been one of main issues in Indonesia financial market in the last decades. This issue has been increasing rapidly after the Asian crisis in 1997 and the implementation of floating exchange rate regime by Indonesia monetary authority. As Indonesia financial market is increasingly integrated with the world market, one would probably have interested in examining the impact of other countries news or publication to the Indonesia currency. This paper attempts to analyse the impact of macroeconomic news or publication in the US to the movement of Indonesia Rupiah. US economy is considered being important to Indonesia economy, as they play a role as one of Indonesia's major trading partner. This study employed multiple regression technique based on daily data of Indonesia Rupiah to the US Dollar exchange rate, ranging from June 2013 - May 2017. We consider two different measurements of the news. Those two measurements are: (i) the occurrence of the news itself; and (ii) shocks or surprises in the news, capturing whether the news is good, bad or no surprise. The findings of this study are as follow. Firstly, Most of US macroeconomic announcements (in lagged form) are significantly affect Rupiah/US Dollar exchange rate. Only NAPM

Non-Manufacturing index that not significantly affect Rupiah/US Dollar. Secondly, in term of shocks or surprises, the results are rather mixed.

Keywords: Rupiah Exchange rate, macroeconomic announcement

Agriculture and Rural Development
PAR A2: Agriculture and Rural Development

The Village Fund to Support Local Economic Development
in South Sumatera Province

Liliana Liliana, Inten Meutia, Bambang B Soebyakto, Abdul Bashir
University of Sriwijaya, Indonesia

This study aims to determine how the implementation of the village fund allocation in support of economic independence in the context of developing the local economy. Field data collection techniques in-depth interviews and focus group discussion (FGD) with the village government. Applying descriptive and quantitative analysis to determine the effectiveness and efficiency of village fund allocation aimed at programs to improve the economy of rural communities. The findings of this study are expected to support the realization of economic independence by leveraging innovation and appropriate technology in rural areas by facilitate of raising public awareness to improve the economy so as to form BUMDes accordance with the characteristics of the village.

The Effectiveness of the use of village fund in
Sunda Kelapa Village, Pondok Kelapa, Central Bengkulu

Akhmad Yasin
Ministry of Finance, Indonesia

One of the government's agenda is to develop Indonesia from periphery and border area by strengthening regional and rural capacity in the framework of the unitary republic of Indonesia. As a result of decentralization and the autonomy of the village, the villages need fund to carry out the authority delegated to them. Therefore, the central government needs to allocate a larger village fund to strengthen village development. Priority of use of village fund is divided into two areas, village development and empowerment of village communities. The use of village funds to develop village aimed at the people's welfare improvement, life quality improvement, and poverty reduction. While the use of village funds in the empowerment of village communities aimed to increase citizens capacity in entrepreneurship development, income increasing, and expansion of economic scale of citizens individual, and communities group.

The question research in this study is what the benefit of village fund for rural development?

The study amed to look at effectiveness of use of village fund which is allocated by government thorough regional transfer to villages. Research method was done by data collection technic thorough field research and literature review. The data come from interview in the field and secondary data from references. This research is qualitative descriptive analysis. This research was done in the village office of Sunda Kelapa. The results of field visits and interviews with village heads and village officials, shows that the village fund is very beneficial for rural development and empowerment of rural communities. The use of village funds were largely utilized for rural infrastructure development such as roads production centers, boreholes or water infrastructure, village owned enterprises (BUMDes), integrated service post (Posyandu) and Early Childhood Education (Pendidikan Anak Usia Dini/PAUD) and community empowerment that involves the participation of the whole village. They had been able to make accountability reports for use of village fund and good management for village fund the under the finance minister regulation.

Keyword: effectiveness, village fund, and village.

The Internet for Rural Development: The Life History of Poor Fishermen Families in Banten and Yogyakarta

Aulia Hadi
Indonesian Institute of Sciences, Indonesia

Java is not only well-known as the center of development, but also as the greatest Internet users in Indonesia. Around 65% of Internet users are located in Java. In fact, most of them are mostly based in the cities rather than the villages. Consequently, the use of Internet for rural development is limited. Although the government encourages the build of Village Information System or popularly known as Sistem Informasi Desa (SID), which is in line with the establishment of Law No. 6 Year 2014 on Villages, the effectiveness of this system for rural development remains questionable. This paper discusses the potency of Internet for rural development based on the findings of three years research on social resilience among the poor in the rural-urban space (2015-2017). This paper is based on literature review and primary data gathered from the life history of four poor fishermen families in the rural areas of Banten and Yogyakarta. Results indicate that poor fishermen families mostly have a lot of household members with restricted number of bread winner, low education and skills, having odd jobs and limited social networks. In fact, they have a great social and cultural capital as well as being familiar with the new media, particularly the mobile phone and the Internet. This paper aims to draw the various possibilities of Internet use for rural development, particularly to empower the poor fishermen households as well as easing the village government in mapping the poor and designing specific programs for them. This paper argues that the use of Internet for rural development can go beyond the SID.

Financing Regional Development

PAR B2: Financing Regional Development

Performance Analysis of the Developing Country's Banking Industry

Eksa Pamungkas, Elpi Nazmuzzaman
Padjadjaran University, Indonesia

The objective of this research is to analyze how strong the effect of market concentration and market share to the market performance and efficiency of the banking industry.

There are four competing hyphotesis explaining the relationship: efficiency hypothesis, ,traditional hypothesis, the product differentiation hypothesis and the hybrid efficiency/collusion hypothesis.

This research tried to prove that the market share and concentration in the banking industry as a proxy of efficiency are affecting the performance which measure by profitability. If the results shows no significant relationship between market share and profitability, while concentration significantly effect the profitability, we can say the industry reflects efficiency hypothesis. The modified efficient structure hypothesis considers that performance is as much explained by efficiency as well as by the residual influence of market share reflected by factors not related to efficiency such as market power and/or product differentiation. If there is a positive relationship between the concentration altogether with market share on profitability, meaning industry performance is influenced by the banking industry concentration as a proxy of market structure. This is consistent with the traditional hypothesis. the hybrid efficiency/collusion hypothesis, considers that concentration affects profitability as a result of market power This hypothesis furthermore affirms that efficient firms are profitable knowing that the effect of market share is negligible. It is efficiency and concentration that have an effect on performance. Differential efficiency is not the only possible cause of a market share profitability relationship. Higher profits can result not only from lower costs but also from higher prices, s, banks with a large market share may have higher quality products, enabling them to charge higher prices and earn higher profits, refer to the product differentiation hypothesis.

Data are collected from Bank of Indonesia and used to estimate the technical efficiency scores, to measure performance bank and to calculate Industrial concentration. Results from previous research which applied analysis of panel data on commercial banks during the data within period of 2005 to 2011 indicated that market concentration and market share both affects the profitability of the banking industry in Indonesia, which means that the Indonesian banking industry strongly supports the traditional hypothesis.

The Dynamics of Geographical Concentration of
Manufacturing Industry

Retno Andrini, Glenn Nathaniel Pandelaki
Bank Indonesia, Indonesia

Financial inclusion is an issue in most low-income countries and irregular. Financial inclusion can be defined where there is the tendency of most people and companies who do not have access to formal financial services to various reasons such as the limited number of banks, Automated Teller Machine (ATM) and administrative costs were relatively small.

In addition, there are problems that arise such as low-income people who are difficult to access banking due to the high costs imposed by banks or difficulty of access to banking services. In financial access to the low-cost, Bank Indonesia (2014) mapping to improve access to finance for the purpose of (1) increasing community access to financial services; (2) Providing financial services and products according to the needs of society; (3) Increasing public knowledge about financial services; (4) Encouraging increased household wealth; (5) Encouraging the growth of the local economy to support the sustainability of national economic growth; and (6) Assist the reduction of the poor.

In order to achieve financial inclusion, Bank Indonesia made some financial inclusion program in which one example is the Layanan Keuangan Digital / Financial Digital Services (hereafter LKD). LKD formed in an effort to improve the air-bank public. Additionally, LKD reach lower-income people who have the perception that complex banking services, the bank is a place for the rich and the latter is a banking location away from home.

This study aimed to analyze the availability of ATM as one of the financial instruments that can promote access to finance. This card is one of the instruments the realization of Less Cash Society (LCS) given with an ATM card can do a variety of financial transactions, such as transfer / transfer, credit purchase, payment of electricity, payment of subscription products, and so on. In addition, the ATM also has a practical nature, is open 24 hours and rapid (real time) make it easier for people to conduct financial transactions. The ratio of the number of commercial banks on the number of ATMs in South Sulawesi province from the year 2012 - 2014 at 1:12, so it can be seen that the ATM can be one solution where people can access finance in the banking and finance could encourage more inclusive.

Impact Microfinance Creadit Access to Improve Household Welfare : Evidence Longitudinal Data

Gigih Prihantono
University Airlangga, Indonesia

Evidence on microfinance services these days ironically shows a great preference for savings products rather than credit products by households. For some authors, this phenomenon is explained by the fact that microfinance products, and especially loans, from formal microfinance institutions do not fit the households demand. This paper first presents evidence on the observed phenomenon in Indonesia microfinance sector. Second, it analyses the Indonesia credit market so as to understand the determinants of the choice for credits from formal sources versus informal sources. The results reveal the size of the loan, agricultural purpose, the geographical area where households live and ethnicity as factors influencing the choice for formal sources.

The Effectivity of Indonesian Credit for Bussineses (Kredit Usaha Rakyat) Program in Maluku Province and North Maluku Province for Period of 2010-2014

Yusuf Munandar
Fiscal Policy Agency, Indonesia

Credit for Bussineses/CfB (Kredit Usaha Rakyat/KUR in Bahasa Indonesia) is credit/working capital and/or investment financing schemes specifically dedicated to micro, small and medium enterprises and cooperatives in the productive enterprise sector, where enterprises are unable to meet certain requirements set by banks (not yet bankable). The objectives of CfB program are to accelerate the development of economic activities in the real sector, to alleviate poverty, and to expand work opportunities. Viewing from amount of CfB receivers, in period of 2010-2014, CfB program was distributed successfully in which there was an increase in amount of households receiving CfB by 111,97% from 459.388,87 households in 2010 to 973.782,40 households in 2014. This research is using Susenas 2010 and Susenas 2014 data and applying qualitative and descriptive approach. This research is conducted to know the trend of effectivity of CfB distribution in period of 2010-2014 in Maluku Province and North Maluku Province. Maluku Province and North Maluku Province is determined to be object of the research because only these two provinces from all of 34 provinces in Indonesia which majority of the people live in coastal and marine area. In 2010, there were 77,02% of households in Maluku Province who lived in coastal and marine area and 70,99% of households in North Maluku Province who lived in caostal and marine area. The trend is increasing if mistargeted ratio of 2014 is lower

than mistargeted ratio of 2010 and vice versa. Mistargeted ratio is determined based on Article 5 paragraph (1) Ministry of Finance Regulation Number 22/PMK.05/2010. Mistargeted ratio is ratio of amount of households receiving CfB who are unemployment and/or receiving bank credit program other than CfB, to total amount of Indonesian households receiving CfB. The research show that the trend of effectivity of CfB distribution in period of 2010-2014 in Maluku Province was decreasing that is the mistargeted ratio in 2014 as 1,57% was higher than the mistargeted ratio in 2010 as 0,00% and the trend of effectivity of CfB distribution in period of 2010-2014 in North Maluku Province was increasing that is the mistargeted ratio in 2014 as 1,85% was much lower than the mistargeted ratio in 2010 as 23,54%.

Growth and Regional Development
PAR C1: Growth and Regional Development

Analysis of Factors Affecting Foreign Investment Foreign and Impacting on Growth Economic In West Java Province

Fryanto Anugrah Rhamdhani, Muhammad Dzulfaqori, Rachmat Hidayat
Indonesian University Of Education, Indonesia

The aim of this study analysis of factor affecting foreign direct investment and impacting on Growth Economic. The background of this study The Inequality of Foreign Direct Investment between Regencies and City in West Java Province and The Region has high Foreign Direct Investment doesnt occupy The highest Economic Growth. The method used is explanatory research through collect panel data. The population in this study are 26 Regencies and City in West Java Province. Data analysis technique used is path analysis. As result of this study (1) GDP Capita and Exchange rate have a significant effect Foreign Direct Investment (2) The Foreign Direct Investment and Wage has a significant effect economic of growth. The conclusion GDP Capita and Exchange Rate have an effect on Economic Growth through Foreign Investment, whereas Wages have direct affecting on Economic Growth. Foreign Investment Variable as Intervening variable of GDP Capita and Exchange Rate.

Determinant Analysis And Simulation of Household Electricity Consumption Efficiency Policy in Indonesia in 2017-2020

Ikhsan Gunawan Pondri
Badan Pusat Statistik, Indonesia

Economic growth need sources of energy. However, electricity consumption growth since 2001 until is more high than Indonesia's electricity production growth. Beside that, social behavior of indonesian citizen which is inefficient use of energy whereas every extravagance in the use of electronic equipment is wasteful the main energy source and produce CO_2. This study analyze the factors that influence household electricity consumption by adding variable electrical efficiency which is the percentage of households that dont turn on the lights during the day using multiple linear regression and simulation of electrical household energy savings if there is an increase 1 percent of households that dont turn on the lights during the day every year from 2017 to 2020. The result is additional variable has negative impact on electricity consumption. Saving simulations save household expenditure amount to Rp 276 billion, diesel fuel amount to 43.864 kiloliters, reduce CO_2 emission about 130.130 tons.

The Role of Physical Capital, Human Capital and Fiscal Decentralization in Indonesia Province Economic Growth Period 2002-2015

Yuvensius Sri Susilo
Atma Jaya Yogyakarta University (UAJY), Indonesia

This study aims to identify and analyze the role of physical capital, human capital, and fiscal decentralization on the Indonesian province economic growth in period 2002-2015. Data are obtained from the Central Statistics Agency (BPS) and www.econstat.com. The observation period 2002 to 2015 and covers 30 provinces. Some of the new province of the division merged with the parent province, such as West Papua Province merged with the province of Papua. North Kalimantan Province merged with the East Kalimantan. Observation period refers to the entry into force of the fiscal decentralization policy and the availability of data.

In this research used a static panel data econometric model. Results of the Hausman test resulted in the decision that the fixed effect model is used for further analysis. Based on the fixed effect model the physical capital variable positive and significant impact on economic growth in the Indonesian province-year period 2002-2015. Similarly to human capital variables and fiscal decentralization to the same conclusion. In this research using a proxy variable physical capital Gross Domestic Fixed Capital Formation real (real GDFCF). Further to human capital variables using proxies School Participation Rate (SPR). Balance Fund is used as a proxy variable of real fiscal decentralization. Provincial economic growth approximated by the variable Gross Regional Domestic Product (GRDP) per capita real.

Convergence Analysis and Spatial Dependency of Economic Growth in the Districts/Municipality in Central Sulawesi Province

Mohamad Ahlis Djirimu
Faculty of Economics Tadulako University, Indonesia

This research aims to analyze the economic growth convergence and spatial dependency in the districts/municipality in Central Sulawesi Province 2010-2014 period. The analysis used panel data regression with Fixed Effect Model and Moran Statistics approach. The results show, firstly no σ-convergence of economic growth in the districts/municipality in Central Sulawesi over the period. These result indicated by the standard deviation and coefficient of variation per capita GRDP is increasing. Second, there is β-convergence conducted by absolute convergence and conditional convergence on economic growth in all district/municipality in Central Sulawesi. Third, life expectancy, mean years of schooling

and roads have significant impact on economic growth in the districts/municipality in Central Sulawesi. Fourth, there is no spatial dependency on economic growth among districts/municipality in Central Sulawesi Province.

Health
PAR D2: Health

Does Religious Group Affect Smoking Behaviour?
The Case of Indonesian Islamic Religious Groups

Sena Farid Sudarsono, Dyanti Rizkika Andani, Putri Kemala Dewi, Iqbal Dawam Wibisono
University of Padjadjaran, Indonesia

Smoking is one of the leading causes of illness in the world, killing 6 million lives per year. One of the key factors that help to change smoking behaviour is religion. Indonesia, a country with a majority of Muslims, has many Islam-based organisations, the biggest ones being Nahdlatul 'Ulama (NU) and Muhammadiyah. These organisations issued different fatwas (religious ruling) for smoking: NU allows it (mubah) and Muhammadiyah forbids it (haram). This study aims to observe how different Islamic religious group in Indonesia affects individuals' probability of smoking. The research method is a cross-sectional regression with logistic model, using data from Indonesian Family Life Survey (IFLS) 5th wave. The result shows that the probability of NU followers to smoke is higher than Muhammadiyah followers and other Islam-based organisations.

21 Years of Health and Nutrition Transitions in Indonesia
Firman Witoelar
SurveyMETER, Indonesia

The paper documents the health and nutrition transition in Indonesia using a longitudinal household survey that spans over 21 years, one of the longest in non-OECD countries. The period covers the period of rapid economic growth in 1993-1997, Asian financial crisis in 1997, major economic expansion since 2000 followed by a period of moderate growth between 2007-2014. During the time span, Indonesia has also undergone dramatic transformation in economic and social developments.

The paper focuses on examining changes for a series of health outcomes and behaviors, over this very interesting period. A wide range of health and nutrition outcomes, mostly biomarkers, as well as other measure of non-material well-being were collected by IFLS1-IFLS5 in the last 21 years. The data provide an excellent opportunity for researchers to look short term, immediate term, but more importantly long-term consequences of policies or economic shocks.

The health outcomes that we focus on are body mass index (BMI), waist circumference (a measure of body fat, given BMI), blood hemoglobin, hypertension. We also look at an index of depression (the short CES-D) and rich set of cognition

test measures, ranging from an adaptive number series test and an abridged Raven's test, both of which are measures of fluid intelligence; to word recall, to an index of mental intactness formed from a series of questions from the Telephone Interview of Cognitive Status (TICS).

All these outcomes were collected along with information on individual economic behavior and outcomes. Therefore, we are able to study the health and nutrition transitions from multiple social science perspectives, and with much richer detail than has generally been possible. In this paper, we document the long run trends in IFLS and we examine the correlations between these health outcomes and behaviors, and a series of SES variables, principally education and per capita expenditure. We examine the data separately for men and women and include age, period, and cohort effects (normalized), and we also control for dummy variables for province and rural area, alone and interacted with year of survey.

Not Breastfeeding? An Economic Impact.
Case Study: Serdang Bedagai District

Rahma[2], Estro Dariatno Sihaloho[1], Wandira Senja Larasati[2], Pipit Pitriyan[1], Dr. Adiatma YM Siregar[1]
[1]Universitas Padjadjaran, Indonesia; [2]Center for Sustainable Development Goals Universitas Padjadjaran

According to Serdang Bedagai in Figures 2014, the health facilities in Serdang Bedagai district did not have any enhancement since 2009. The health facilities consist of 6 hospitals, 9 maternity hospitals, 20 primary health centers, 863 health posts, and 170 public clinics. This is a relatively small number of health facilities given that more than 12,000 children are born every year in Serdang Bedagai. The constraints on the health system also constrain the ability to promote breastfeeding and other healthy behaviors.

Previous study have found that breastfeeding are the best nutrition for infant (Riordan 1997), particularly only give exclusive breastfeeding in first 6 months and still continue providing breastfeeding at least until child's first year of life while giving the introduction of solid food (Victora et al. 2016). Not breastfeeding can increase the risk of negative health outcome to infants and childre (Batrick et al. 2013), Several studies has already found the evidence that breastfeeding has also lifelong effect in adulthood (Victora et al. 2016; Rich-Edwards et al. 2014).

The analysis of costs to the health system consists of both direct and indirect costs are used in this study. The facilities studied are: a primary health center (puskesmas), a private hospital, and a public hospital. We conducted interviews and secondary data collection on costs and later combined this with impact analysis, which is directed to see the implication of inadequate breastfeeding. The respondents of this study are parent, mostly married females, who bring their two-year children to health facilities.

The result indicates that the highest average patient cost in all facilities, except for the cost of treatment related in primary health, are incurred by patients suffering from acute respiratory infection (PRD). Of those visiting the private hospital, their monthly expenditure was US$174, on average. They spent an average of 35 minutes to reach the hospital and 78 minutes in the hospital; this was a much higher time in the hospital than the other facilities surveyed. Similar to the public hospital, almost half of the patients in our survey used their own motorcycle to get to the hospital.

The Length of Breastfeeding and Mental Health Status in Indonesia

Adiatma Y.M Siregar[1], Rahma[1], Nur Afni Panjaitan[1], Gilang Amarullah[1], Deni K. Sunjaya[2], Mohamad Fahmi[1]
[1]*Department of Economics, Faculty of Economics and Business, Universitas Padjadjaran, Indonesia;* [2]*Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Indonesia*

Background:
The number of people suffering from mental health issues are increasing in Indonesia. Given that mental health is related to high direct and indirect costs, it is necessary to prevent the disease at the very early stage. One of the potential prevention is to provide adequate breastfeeding to infants, which include early breastfeed initiation, exclusive breastfeeding (first six months), and breastfeed up to two years (in addition to proper nutritious food). This study attempts to provide the relation of the lenght of providing breastfeeding to mental health status of receiving childrenin Indonesia.
Method:
IFLS 1 (1993) and IFLS 5 (2014) is used in this study to estimate the relation between providing adequate breastfeeding in 1993 and the mental health of the children in 2014 using probit regression analysis. The questions on mental health is available in IFLS 4 and 5, referring to Center for Epidemiology Studies Depression Scale Revised (CESD-R-10) (in the later version of the paper, we will attempt to incorporate Rasch model calculation to better interpret the answers to mental health questions). We currently transform the mental health answers into dummy variable. Rate of breastfeeding is estimated using the number of days of providing breastmilk. Control variables such as children's current age, marital status, employment status, place of living (urban/rural), number of household members, health condition and sex, as well as parent's education during breastfeeding period is included in the regression. Unfortunately, the mental health condition of parents are not included due to data being unavailable in IFLS 1.
Result (preliminary):
The length of breastfeed seems to have a negative correlation with the mental health condition of children, although it is not significant. Other control variables, namely number of children's household member (+), children's marital status (-), health condition (-), and employment status (+) during breastfeeding period are significantly correlated to children's mental health.

Conclusion (preliminary):
Although the length of breastfeeding does not have a significant correlation with the mental health of receiving children, it does have a positive relationship. Therefore, it seems that longer breastfeeding may lead to better mental health condition of children. Incorporating Rasch model calculation may lead to a clearer result, which is our next step in this study. Other significant control variable warrant further investigation as they may have direct relationship with the mental health of children.

Households and Communities
PAR E2: Households and Communities

The Differential Impact of Economic Crisis on Men and Women, and its Connection to Intra-Household Bargaining

Sarah Dong
Australian National University, Australia

This paper has tested whether the Asian financial crisis affected men and women differently in Indonesia by estimating the effect of district level shock, in terms of drop in average consumption level during the crisis, on the change in men's and women's working status and assets. I found that in the rural areas, there seems to be no effect of the district consumption shock. In the urban areas, drop in district consumption increases women's work and decreases men's non-business assets. The effect on women's work and on men's assets are both large. I also found that intra-household bargaining may be related to the effect of crisis on men and women. Specifically, women who have sole decision power on work prior to crisis do not need to increase work as much as a response to the decrease in district consumption compared with women without sole decision power on work prior to crisis.

Poor Household Food Security and Climate Change:
The Coping Strategies

Dini Yuniarti[1,3], Yunastiti Purwaningsih[2], A.M Soesilo[2], Agustinus Suryantoro[2]
[1]Doctoral Program, Department of Economics, Sebelas Maret University; [2]Department of Economics, Faculty of Economics and Business Sebelas Maret University; [3]Department of Economics, Faculty of Economics and Business, Universitas Ahmad dahlan

Stability pillar explains that household can achieve food security in one time, but can experience food insecurity in another time. Food stability relates with a vulnerability which from several factors like trends, shocks and seasonal. One of them is climate change such as El Nino and La Nina phenomena. Its interest to know how household strategy to cope vulnerability. The aims of the study are to analysis household poor food security condition and household strategies that have to be chosen to cope vulnerability. Finally, to examine food security dynamic between El Nino and La Nina.

We used primary cross section data. Respondents have two criteria namely woman and poor household. The appropriate respondent is household which receives Family Hope Program (PHK). The location of study in Jetis and Ngloro village, Saptosari Subdistrict, Gunungkidul, Yogyakarta. Population amount is 126

poor household. The sample size was determined by Isaac and Michael method is 92 households. We use probability sampling with area random sampling method. Collecting data through Focus Group Discussion and interview using administrated personally questioner. Food security indicator using Coping Strategies Index (CSI). We use descriptive statistics to analysis household poor food security and their strategies that have to be chosen. To analysis food security position of poor household namely food secure, mildly food insecure, and moderately/severely food insecure we use K-Mean Cluster. Moreover, sample t-test examines household food security dynamic between El Nino and La Nina. It to know whether a movement of the in and out of food insecurity across phenomena.

We found that food security status when El Nino much better than La Nina. It refers to descriptive statistics that mean, median and mode El Nino lower than La Nina. Household coping strategies that often be chosen to face vulnerability rely on less preferred food and less expensive; consume wild food, hunt, or harvest immature crops; purchase food on credit and borrow food from a relative. Based on K-Mean Cluster result, household experience food security movement, where at La Nina amount of food secure household decrease. Meanwhile mildly food secure and moderately/severely food secure tend to increase. This finding was supported by sample t-test result that shows a difference food security between El Nino and La Nina. Average Coping Strategies Index (CSI) La Nina was higher than El Nino. It indicates there is food security dynamic relate to climate change. Household food security when El Nino more secure than La Nina. It possible because the location of study is karts area then household has become accustomed facing dryness. Household has several strategies to cope vulnerability used local habit. For example, household carries out food diversification when their facing lack of staple food. The findings provide information to government and rural society to cope food insecurity, especially from Climate Change.

Poor Households Food Demand in Indonesia:
A Quaids Approach

Choerul Umam[1], Eny Sulistyaningrum[2]
[1]BPS-Statistics Indonesia, Tanjung Jabung Timur Regency, Jambi Province; [2]Faculty of Economics and Business, Universitas Gadjah Mada

Food is the most important human needs than clothes and housing, so the food security on poor households should be a concern. The aim of this research is to analyze the consumption pattern and the demand responses of the changes food price, income changes and other socioeconomic factors affected the food demand on poor households in Indonesia. We used the Indonesian Socio-Economic Survey data (SUSENAS) from 2011-2014. We employ the Quadratic Almost Ideal Demand System Model which include demographic and geographical factors. We used the 9 (nine) commodities are rice, fish, chicken, egg, tofu and tempe, cooking oil, sugar, instant noodles, and cigarette. The results shows that rice and sugar is

the highest budget share, and the consumption of rice, fish, cooking oil, and sugar in rural area is larger than urban area. Household size, educational level and sex of head household, sectors of head household works, and place of household is significantly affected the food demand on poor households in Indonesia. Rice, chicken, egg is normal goods, but fish, cooking oil, instant noodles, and cigarette is luxury goods. Unfortunately, raising of cigarette consumption in line with the income raising which is the 1% of income rising will lead to consume cigarette larger than rice, chicken, and eggs, although cigarette have negative effects in their healthy life. Demand of chicken, eggs, and fish is more responsive than others to their prices changes. Sadly, if rice price is raising, the demand of cigarette is raising (substitute effect). So, the cigarette consumption on poor households still high although have negative effects in their health. The policy recommendation to stabilize the food price is more effective than the income raising on poor households.

Performance of Rural Household Economy:
The Case of Dairy Farmer in Milk Production Center, West Java

Alla Asmara, Yeti Lis Purnamadewi
Bogor Agricultural University, Indonesia

Rural households that generally still rely on traditional economic sector (based on natural resources) face increasingly heavy pressure in the current competitive situation. The objectives of this study are: (1) to identify socio-economic characteristics of farm households in the study area; (2) to analyze the performance of dairy farm business in the study area; and (3) to analyze the contribution of dairy farm in household income in the study area. The main data used is primary data. Analytical methods used include: descriptive analysis, profit analysis, and R / C Ratio. The results of the study indicate that the characteristics of the farm household are characterized by the age of the farmer as the head of the majority family at the productive age (25-45 years old) which has an high school educational background, farming experience of more than 10 years. The results also show that large scale farmer households are able to earn a positive profit (R / C> 1). Meanwhile, in small-scale households a positive profit is earned when only taking into account cash costs and obtaining a negative profit (R/C <1) if all costs are taken into account. Dairy farm business is the most dominant business in household income both in small and large-scale households.

Key words: economy, performance, rural household, dairy farm

Human Resource Development
PAR F3: Human Resource Development

Financing Higher Education in Indonesia:
Assessing the Repayment Patterns and Implementation of Income-Contingent Loan

Elza Samantha Elmira[1], Daniel Suryadarma[2]
[1]The SMERU Research Institute, Indonesia; [2]INOVASI - The Palladium Group

Background: Student loan can be an alternative system to increase higher education access. Income-contingent loan (ICL) has been practiced in many countries and has been shown to have lower default rates compared to other loan schemes, such as mortgage-type loan. The main characteristic of ICL is that debtors will only start repaying one their salary reached a certain threshold. This paper will examine the feasibility of income-contingent loan in financing higher education in Indonesia. Methodology: Using graduates income data from 2015 National Labour Survey, we model life-cycle income distribution of university graduates using unconditional quantile regression. Then, these estimates were used to simulate different ICL schemes to observe the effect, length of repayments, government subsidy, and repayment burden of male and female starting at age 22 in among different quantiles of income. We used three loan schemes to observe the effect of loan repayment, they are loan repayment without real interest, with 25% surcharge of the total loan, and with 2% real interest which starting after graduation. Result: Repayment period among all models could last up 25 years, with those whose income is among the lowest 25% starting to pay at a later age. Completion of loan repayment is shortest when non-real interest model is applied, however entails higher government subsidy when compared to other models. Implicit subsidy from government were lowest with 25% surcharge repayment model. Higher subsidy is also expected among female compared to male debtors and those among the lower income quantile. Increasing repayment burden by 2% could reduce repayment duration by 3-4 years and also reduce government implicit subsidy. Conclusion: Result shows that ICL with lower repayment rates proved more affordable, which is expected to reduce defaults. However, to implement ICL a good taxation and pension policy is expected. Therefore, government need to conceptualize a policy structure and address possible problems if we are to adapt this scheme in financing higher education in Indonesia. Potential contribution to knowledge: The concept of ICL could be the start of other public finances support from the government in other field such as in buying houses for the low income and research and development investment.

The Impact of Clean Water Access on
Children Performance in Indonesia

I Wayan Sukadana[1], Nakamura Kazutoshi[2], Ni Putu Wiwin Setyari[1], I. A. N. Saskara[1]
[1]Udayana University, Indonesia; [2]University of Nagasaki, Japan

The world's population is growing by about 80 million people a year, implying increased freshwater demand of about 64 billion cubic metres a year. An estimated 90% of the 3 billion people who are expected to be added to the population by 2050 will be in developing countries, mainly in regions that are already experiencing water stress and in areas with limited access to safe drinking water and adequate sanitation facilities. Sanitation and poor hygiene practice and unsafe drinking water contributes to 88 percent of child deaths due to diarrhea worldwide. For children who survive often suffer from diarrhea contribute to nutritional problems, preventing children to be able to achieve their maximum potential. Indonesia also experienced problems with the fulfillment of clean water for its residents. The government has done the development of supporting infrastructure for the provision of clean water to its citizens. Based on the data annually access to proper sanitation increased 2.29 percent, and access to drinking water increased by an average 1.93 percent. But infrastructure development alone is not enough, the behavior of environmental awareness among the residents is also a very important role in order to maintain the availability of clean water supply in the future. This study aims to reveal the impact of access and the demand for clean water to children performance. The study also looked at the impact of deforestation and water pollution to the water expenditure of households in Indonesia. The data used in this research is IFLS data, from the first wave (1993) until the fifth wave (2014). We performed a microeconometrics of impact evaluation in order to explain the impact of water access on the children performance, and impact of polution and deforestation on the water demand. As many studies before, we found a significant evidence that a family with pipe water access has better children performance. We also found that the demand on pipe water higher in the area that has more polution and deforestation.

Religious Majority-Minority and Schooling Survival in
Eastern Indonesia

Umbu Reku Raya[1], Budy Resosudarmo[2]
[1]Universitas Nusa Cendana; CREDOS Institute, Indonesia; [2]Indonesia Project Australian National University

Restriction and persecution toward religious minority by the power holding religious majority are on the rise in democratized Indonesia. There is concern that this increasing presence of discrimination will create inter-group gaps in human capital investment. This study analyzes the implication of being categorized into a religious majority group – Islam or Christianity - on the gap in human capital

formation of the majority versus the minority group. Specifically, using IFLS-East dataset from RAND and SurveyMetre, we examine the inter-group gap in schooling survival between children from the religious majority versus the religious minority. The sample coverage of IFLS-East makes it possible to have districts with Muslim majority and Christian majority so we can jointly examine the behavior of both groups when they are in majority position versus minority position.

Using island-group fixed effect, we found that being from a religious majority (or minority) does not necessarily imply to having higher (or lower) schooling survival. The weak link from being majority or minority on the gap in schooling survival probably stems from the fact that supply side of the education sector supervised under the oversee Ministry of Education maintains its openness toward students from mixed religious background. Moreover, the restrictions placed by the religious majority toward religious minority are not directed yet toward restricting minority from attending secular educational institution.

The limitation of this study is that it does not take into account the schooling survival gap within a micro religious definition. For example, our data does not give us any chance to analyze the gap between sects within one religious category, e.g. Sunni majority versus Shia or Ahmadiyah minority within Islam or Catholic majority versus Protestantism or Pentecostal minority within Christianity, both which are heavily mentioned in the literature on the religious restriction in the Middle East and Latin America respectively as causes to low human capital formation.

Understanding Indonesian Academics' Perception of the Value and Preference of Their Postgraduate Studies

Linda Lambey, Robert Lambey, Lintje Kalangi
University of Sam Ratulangi Manado, Indonesia

Background
Universities have increasingly important roles in the development of knowledge and regional economic development where they create human capital by educating students and training people who are already employed. Academics, therefore, have a very important role to play in society, requiring them to be highly qualified and well-motivated in their role as the human assets of universities so that they can be effective and efficient in their working life and able to produce quality graduates in response to a rapidly changing world. Indonesian Government has also realized that there is crucial to improve academics' skills and capabilities and thus, has instructed them to further their studies. Not only has the Ministry of Research and Higher Education provided scholarships, but also other international sponsors. However, there are many academics have not taken this opportunity to further their postgraduate studies and if they have pursued their further studies, many of them have chosen different majors from their previous studies. Minister of Research and Higher Education, Muhammad Nasir, recently indicated that only 13% of Indonesian academics have Doctorates as their highest qualification. In addition, Indonesian academics may have also chosen different major of their further studies from their previous studies. The Indonesian Directorate General of Higher Education (DGHE) or DIKTI has emphasized the importance of the linearity of academics' degrees. Therefore, the purposes of this study are to explore

Indonesian academics' perception of the value of upgrading their qualification and preference of their further study major.

Data

This study will be conducted in three public universities in Manado namely: University of Sam Ratulangi, Polytechnic Manado and Manado State University. Respondents will be academics who have finished undertaking their postgraduate studies but with different major from their previous degrees. Some research experts suggested that indepth interviews for a qualitative study is between 12 to 60 respondents.

Methodology

This study will explore and describe academics' perceptions about the value of undertaking their further studies or upgrading their qualifications and preference of their further study major. Thus, this study will be a qualitative exploratory research. The justification of using a qualitative exploratory method is to provide the flexibility to explore and interpret the individual's perspective on their value of their further studies and major of their study preference because every individual carries within their head a perception of the world which is a subjective representation of external reality.

Potential Contribution to Knowledge

Little is known of the phenomenon under investigation and also little understood in regard to the perception of the value of upgrading qualifications and major of their study preference in the context of Indonesian academics. It has been agreed that the human cognition that constructs the perceptions in the value of upgrading qualifications and major of study preference varies in different contexts including social context and that social context varies across cultures and nations. It is therefore scholars have argued that university academic's perception is in much need of research across different nations.This study, thus, will be useful to contribute to such knowledge.

Natural Resource Management
PAR L2: Natural resource management

Landscape Changes at The Bird's Head Peninsula of Papua: Economy vs Ecology

Jacob Manusawai[1], Freddy Pattiselanno[2], Herman Manusawai[1]
[1]Faculty of Forestry, Universitas Papua (UNIPA), Manokwari, Indonesia; [2]Biodiversity Research Center, Universitas Papua (UNIPA), Manokwari, Indonesia

Indonesia's Papua and West Papua provinces on New Guinea encompass 404,600 km2 or approximately 42 million hectares of which 80% is tropical forest. It is currently considered an area of global priority for biodiversity conservation due, in part to, the species rich forest environment for the Australopapuan fauna as well as many uniquely New Guinean species. These species comprise more than 50 percent of Indonesia's terrestrial vertebrate fauna biodiversity. Along with provincial development, the dependence on extraction and agricultural industries significantly contributes to the province economic development. The economic development escalation has led irreversible impacts on their environment because of landscape changes that may not be sustainable in the long term. This threatens the biodiversity of Papua and disturbs the ecosystem services as well. This paper provides information on the utilization of the natural resources that impacted the biodiversity. We also offers another alternative economic development using Papua's natural beauty and terrestial habitats by informing the potentials and the avifauna distribution for the development of economy creative and ecotourism.

Applying Stakeholder Analysis: Case Study of Mainstreaming Adaptation in Indonesia

Arif Budi Rahman
PKPPIM, Indonesia/CUSP

The involvement of national government in mainstreaming adaptation into development policy is pivotal. On the basis of in-depth interviews and interaction with national adaptation actors, this paper contributes to such a growing field by providing empirical evidence from Indonesia.

This paper argues that a national adaptation strategy provides a weak impetus for adaptation actions. The absence of legal basis and a clear mandate from the central government authority to respective stakeholders to develop a climate change adaptation agenda is an example of this weakness. It is left to local governments and line ministries to take the adaptation initiative as a voluntary program. This paper identified four perceived reasons why central government finds it difficult

to provide clear signals relating to adaptation policy. The challenges can be understood in the context of wider governance issues in Indonesia. Barriers to taking a stronger position in adaptation actions are stem from the combination of four factors: the absence of lead agency, the lack of accurate and detailed data on recent and future climate scenarios, no legal basis to policies, and finance and knowledge gaps.

The findings in this thesis confirm the idea that at the early stage of mainstreaming like in Indonesia, a clear and stronger approach from the national level is critical to encourage the mainstreaming of adaptation at the municipal level. The absence of national detailed adaptation strategy leads to the delay in local actions.

A Comparative Study of Australian, Chinese, and
Indonesian Mineral Taxation Regime: Which One is More Attractive?

Firmansyah Hasyimi[1], Hadi Setiawan[2]
[1]Directorate General of Taxes, Ministry of Finance, Republic of Indonesia, Indonesia; [2]Fiscal Policy Agency, Ministry of Finance, Republic of Indonesia, Indonesia

Indonesia is one of the countries that endowed an abundant natural resources, including the mineral resources. However, one distinctive characteristic of mineral sector is capital intensive. Therefore, the foreign investors play an important role in converting the mineral resources into prosperity. On the other side, the mineral producing countries are not only Indonesia. Consequently, the competition in attracting the investors is inevitable. The objective of this research are to compare the practice of Indonesian mineral taxation regime with its competitor in Asia-Pacific region; China, and Australia. Furthermore, the comparison will contribute to improving the Indonesian mineral taxation system. Australia and China are selected since they are counted as the top ten coal and tin producing countries in the world, and positioned in Asia-Pacific region as Indonesia. Therefore, it provides higher comparability with Indonesia. In addition to qualitative analysis, it also performs simulations to measure the taxation effect on the mining companies. As a result, Chinese taxation regime gives the higher portion of the mineral rent for the investors. However, the profit split is not only considerations for the investors. The stability in law and regulation, advanced infrastructure as well as a superior governance are the justification for Australia for implementing a higher rate of taxes than China and Indonesia because they will reduce the risk of failure of the investors. Indonesia also remains attractive to investors since it has a huge potential in mineral resources. Therefore the two other countries (Australia and Indonesia) are still attractive for the investors since there is always a balance between the risk borne and the expected yield by the investors.

Indonesia may learn from Australian taxation regime since it has some attractive features compare to both Indonesian and Chinese. The deductibility of expenditures makes the Australian taxation regime more attractive for investors. In addition to the deductibility or the early expenses, Indonesia may consider applying for the unlimited loss-carry forward allowance specifically for the mining

industry to mitigate the capital extensive characteristic of the industry. Indonesia also needs to learn from Australia how to prevent the abuse of transfer pricing. Finally, Indonesia also has to think to reduce the administrative burden of small companies by simplifying its fiscal depreciation rule. The immediate deductibility of small fixed assets up to a certain limit for the small companies then may be considered. This simplification already practiced in both Australia and China. This paper is beneficial for performing an initial study about mineral taxation regimes in Asia-Pacific, particularly in Australia, China, and Indonesia.

The Maritime Sector Role in The Indonesian Economy:
Input-Output Table Analysis

Hadi Setiawan, Sofia Arie Damayanty
Fiscal Policy Agency, Ministry of Finance, Republic of Indonesia, Indonesia

President Jokowi said in his inauguration speech as President on October 20, 2014 that the ocean, seas, straits and bays is a future civilization of Indonesia (Bappenas, 2016). This was then followed up by the Government to declare Indonesia as The Axis of World Maritime by focusing on five main pillars, namely (i) rebuilding the maritime culture of Indonesia, (ii) maintaining marine resources and creating food sovereignty sea, (iii) giving priority to development of infrastructure and maritime connectivity by building a marine highway, deep seaport, logistics, shipping industry and maritime tourism, (iv) strengthening maritime diplomacy; (V) building maritime defense force (Bappenas, 2016). This become priority of Government of Indonesia because of Indonesian is very rich in maritime wealth. Indonesia has 17,508 islands and 81,000 km of coastline. In addition, 70% of Indonesian territory is the sea (Simanungkalit, 1999). The very large coastal and marine areas of Indonesia has very large potency in the form of a natural resources and environmental services that have not been used optimally (Resosudarmo et.al., 2000). In addition, with world population growth and the depletion of resources for development in the mainland, the demand for marine products and services is expected to increase (Resosudarmo et.al., 2000). Therefore this research aims to analyze the contribution of the maritime sector in Indonesian economy. It will also analyze the forward and backward linkage between the maritime sector and other economy sectors, find the key product in the maritime sector, and analyze the impact of investment in the maritime sector on the construction of output, income, and labor as well. Input-output table 2010 used in this research. This data will be updated by Ricked a Stone (RAS) method to make the data more appropriate and reflect the current condition better. The input-output table then aggregated into 18 economy sectors to further simplify the analysis.

Public Sector and Development
PAR N2: Public Sector and Development

Evaluation Model Minimum Service Standards Pacitan Public Hospital in Providing Public Sector Service to the
Community in the Region Pacitan, East Java

Tetuko Rawidyo Putro, Sutyastie Sumitro Remi
Padjajaran University, Indonesia

Regional Public Hospital (RSUD) is a leading unit in providing public services such as health services to the community of Pacitan. The existence of hospitals in the quality of service is a reflection of the presence of a country, especially related services in the health sector.

This study aims to develop a model evaluation of the quality of public services in the health sector. The health sector is a sector that is vital in determining the quality of the generation and the future of a nation.

The method used in this research is Qualitative Response Model (QRM) through Focus Group Discussion with the relevant parties, namely management of hospitals, doctors, nurses, clerks and patient.

The results of this study are expected to be a complement on the performance of public sector services by the local governments pacitan to society, especially in the health sector so that services can be a comprehensive policy in formulating appropriate public policy primarily in the health care sector in public hospital in Pacitan.

Government Transfer and Income Inequality in
West Java, Indonesia

Adhitya Wardhana, Anhar Fauzan, Arief Bustaman
Economic Faculty Padjadjaran University, Indonesia

The implementation of fiscal decentralization gives local governments a broader financial assignment. However, limited local government's own revenue sources bring a result in a fiscal dependency over the central government funding, i.e. through the fiscal equalization grants. The later are in the form of general allocation transfers (DAU) and specific allocation transfers (DAK) and revenue sharing (DBH). Today, one and half decade since the decentralization was began, Indonesia faces a classical yet unsolvable development challenge, e.g. unequal distribution of income among local economy. Previous studies believed that income inequality occurs because of limited infrastructure spending due to high local budget allocation on routine spending. The availability of good infrastructures is vital for an economy to fasten up goods and service mobility. Obviously, it needs

adequate capital spending and it creates a trade-off in the local governments' budget allocation. The alternative mechanisms to finance capital spending are through grant and social transfer. This study aims to assess the impact of central government transfers and capital spending, on income distribution in regency/municipality level in West Java Province. Observing West Java is interesting as the province is the most unequal one in terms of income distribution, and its inequality rate is above the national's amount. Particularly, this study tries to answer three questions, i.e.: (1) what is the effect of DAU and DAK on local capital spending?; (2) Does capital spending, DAU, DAK, grant and social transfer each affect local economy's welfare?; (3) Does capital spending, DAU, DAK, grant and social spending have effect on income distribution?. We use 3 regression model implemented in local government level. Local economy's welfare is measured by per capita GDRP. While, income distribution is represented by Gini index. Our preliminary results are: (1) transfers fund, e.g. DAU and DAK significantly improves capital spending; (2) capital spending, DAU, DAK, social spending and grant each positively increases local economy's welfare; and (3) capital spending, DAU, DAK, social spending and grant each fixes the distribution of income.

The Effect of Local Government Expenditures on
Environment to Environment Cost of District/Municipality in West Java Province in Indonesia

Wawan Hermawan, Adhitya Wardhana, Arief Bustaman
Universitas Padjadjaran, Indonesia

The negative externalities of economic activities were excluded in the measurement of conventional Gross Domestic Regional Product (GDRP). Conventional GDRP, also known as Brown GDRP shows the value of final goods and services in the economy at a given time, which provides an overview of the regional economic activities. On the other hand, the impact of environment is incorporated in Green GDRP measurement, in the form of depreciation of capital goods, the depletion of natural resources and environmental degradation. Green represents real GRDP on the welfare of society that already take into account the impact of environmental degradation. The Government had a stake in maintaining the quality of the environment. Local government budgets have a budget in environmental affairs in each region of the provinces and districts. The proportion of the budget for environmental affairs characterizes higher on local government contribution to the environment is high. This study tests the government's role in the environmental spending to the difference between Brown GDRP with the Green GDRP using econometric models to the 2014 cross section and 27 districts or the city. Green GRDP data is not all there City District, so do the calculations themselves to the Green GDRP by the same method for districts and cities in West Java province. Depletion calculation refers to the natural resources, especially for minerals, mineral resources, petroleum and forests. Calculations for environmental degradation refers to the environmental degradation of air

by the method Industrial Pollution Projection System (IPPS). The findings of this study are as follow. Government expenditure on environmental affairs affects the environmental costs which are the difference from the GRDP of Brown with Green GRDP as positively as well as the variable of Poor Household.

Impact of the Presence of the Regional Inflation Control Team (TPID) on The Inflation Convergence Between Provinces in Indonesia

Birgitta Dian Saraswati, David Kaluge
Brawijaya University, Indonesia

Bank Indonesia began to conduct inflation targeting in 2005. This policy was conducted in order to maintain inflation stability in all Indonesia's provinces. However, inflation between provinces in Indonesia have different behaviors. By using the Generalized Method of Moment (GMM) and the Dickey-Fuller Test which is used by Kocenda and Papell (1997), this study aims to examine inflation convergence between provinces and to determine the effect of inflation targeting framework and the Regional Inflation Control Team (TPID) on the inflation convergence. The results indicate the existence of inflation convergence between provinces in Indonesia, however, the inflation targeting policy does not affect the inflation convergence. Inflation convergence that occurred in between provinces is strongly influenced by the presence of TPID. This suggests that inflation in Indonesia is not a monetary phenomenon. Rather, it caused by the riel sector shock such as the availability of basic materials including volatile food. The existence of TPID will strengthen inter-agency cooperation to ensure the availability and sufficiency of staple food so that inflation can be controll.

Trade and Macroeconomy
PAR R2: Trade and Macroeconomy

Causal Relationship Among GDP, FDI, and TRADE in ASEAN-5 COUNTRIES

Mariska Ardilla Faza
Parahyangan Catholic University, Indonesia

The more liberalized (open) a country is the larger its trade and foreign investment volume become. Theoretically, there should be interlinkages among trade, foreign investment and GDP through complementarity, substitution, and multiplier effects. Through a series of liberalization agreements ASEAN has evolved into a more open region. Yet every member state follows different pattern (stages) of openness, as shown in the open market index indicator for the region and therefore there might be different directional causality among those three variables in each member country. Knowing these interlinkages is expected to help the country shape its future policies for better society's welfare. Research in this area has not been done by other researchers in ASEAN using more recent data. The purpose of this research is to find causal relationship among GDP, investment, and trade in ASEAN-5 countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) before ASEAN Economic Community (AEC) is enacted. Using VAR and Granger causality test, it is found that there are bidirectional causal relationships among all variables in Indonesia and Malaysia. Bidirectional causality between export and import is found in Thailand and Singapore, while in Singapore there is bidirectioal causality between GDP and FDI and in Thailand there are bidirectional causalities between GDP and import and between FDI and import. Unidirectional causal relationships are found for FDI to export, FDI to import and GDP to import in Singapore, import to FDI, export to FDI, and import to GDP in the Philippines, GDP to FDI in Thailand, and GDP to export in Singapore and Thailand. No causal relation is found between FDI and export in Thailand and also among trade variables, GDP and export, and FDI and GDP in Philippines. The different results found were probably caused by different states' characteristics and policies that affect their attractiveness to investors and trading partners.

Impact Analysis of the Regional Comprehensive Economic
Partnership (RCEP) toward the Indonesian Economy

Dian Saksessia[1], Siti Nur Laila[1], Irwanda Wisnu Wardhana[2]
[1]*Polytechnic of State Finance STAN;* [2]*Indonesia Fiscal Policy Agency*

Regional Comprehensive Economic Partnership (RCEP) is a free trade agreement (FTA) consists of ASEAN Member Countries and FTA ASEAN+1 countries: China, Japan, South Korea, Australia, New Zealand and India. The integration of the 16 countries in the FTA makes RCEP as a major trading bloc with a total Gross Domestic Product (GDP) in 2016 amounted to $ 21.4 trillion, equivalent to 30% of world GDP by the total of 45% world population. In line with the ongoing RCEP negotiation process, we analyze the ex-ante (forecasting) RCEP impact on the Indonesian economy. The method used is a qualitative method and a quantitative method namely Revealed Comparative Advantage (RCA) and Software for Market Analysis and Trade Restriction (SMART) model to analyze partial equilibrium. RCEP analysis shows Indonesia has an advantage in vegetable products and mineral products, but will increase the consumption of imported products. We suggest a coordination between the government and private sectors to formulate necessary mitigation of each sector to protect its products.

Comparative Analysis of the Impact of IJEPA and AJCEP on
Macro and Sectoral Economic of Indonesia

Dian Dwi Laksani[1], Widyastutik Widyastutik[2], Syarifah Amaliah[2]
[1]*Ministry of Trade, Indonesia;* [2]*Bogor Agricultural University*

The potency of trade in goods and investment between Indonesia and Japan in bilateral scheme (IJEPA) and regional scheme (AJCEP) will provide different benefits. Therefore, this study aims to analyze the impact of IJEPA comparison with AJCEP on the performance of macro and sectoral economics of Indonesia. The study used GTAP to analyze the comparative impact of trade cooperation in the IJEPA and AJCEP. The simulations performed are tariff reduction, increased investment and increased productivity of Indonesian human resources. Productivity improvement scheme is simulated for Indonesia-Japan commitment related to capacity building. The analysis shows that the implementation of existing cooperation IJEPA accompanied by AJCEP provides higher benefits than IJEPA scheme in macroeconomic indicators (welfare, real GDP, and investment). Indonesia welfare level will be significantly increased by USD 0.344 million and Indonesia's real GDP grow at 0.04 percent. The benefits will be received by Indonesia, but there is a potential reduction in the trade balance of US $ 1,820 million as a result of the implementation of this cooperation. Among the ASEAN countries, the change in real GDP of Thailand (0.244%), Malaysia (0.321%), and Vietnam (0.171%) is the highest compared to Indonesia when implementing

full liberalization within the framework of AJCEP. The Scenario of import tariffs reduction in AJCEP to 0% and productivity increased by 5 per cent across the sector will impact the highest GDP increase of 11.985 percent. The impact of increased sectoral output at AJCEP scheme is higher than in IJEPA scheme. There is an increased output in some sectors, namely vegetables, fruit, nuts; plant base fibres; animal products nec; fishing; mineral products; petroleum, coal products; manufactures; and construction. The construction sector has the highest increase in this simulation. Among ASEAN countries, Indonesia construction sector has a high level of commitment.

Servicification in Indonesia

Arianto Patunru
Australian National University, Australia

Services sector is an underdog, especially in developing countries like Indonesia. The reasons for this are twofold. Firstly, if the economy is to follow the Fisher-Clark three-sector hypothesis, then it is only natural that Indonesia should still focus on manufacturing sector, or even agriculture given its comparative advantage and employment objective. Secondly, even if Indonesia manages to transform into the tertiary sector, it might have to face the Baumol 'cost disease' that will drag its productivity. Whether or not policymakers are consciously aware of these two narratives, they are consistent with the lack of attention to the otherwise growing services sector. This paper aims to help bringing forward the debate on the role of services in Indonesian economy. At the outset, I hypothesize that services sector has an increasingly important role and deserves more assessment. This is especially true as the country has started to join global production networks where cross border value chains require bigger contribution from service sector. I test such hypothesis by looking at the share of services sector in the economy in terms of value added and employment creation over time as well as the service value added content in gross exports. In doing so I provide comparisons with other countries' experience. The results lend support to the hypothesis.

SDGs Special Session
SP 2: SDGs Special Session

How Ready are Indonesian Provinces to
Achieve Sustainable Development Goals (SDGs)?

Arief Anshory Yusuf
SDGs Center, Universitas Padjadjaran, Indonesia

In 2016, the Sustainable Development Goals (SDGs) agenda was adopted by world leaders at the UN Summit. All countries, including Indonesia are now mainstreaming the SDGs into national development plans. National actions plan has been in preparation. In this study, we focus on how regions, in this case provinces of Indonesia stands in its preparedness to achive the global goals. In particular we project, toward 2030, various indicators of the 17 SDGs for each of the 34 provinces of Indonesia to create historical baseline against which the SDGs targets will be evaluated. We will map in which area of the SDGs and of which provinces we are relatively ready and in which area and provinces achieving SDGs are of the biggest challenges.

How Much is The Value of Whale Shark Tourism in
Cenderawasih Bay National Park?

Zuzy Anna, Dicky Surya Saputra
Universitas Padjadjaran, Indonesia

Whale sharks agregation in the waters of Cendrawasih Bay National Park, has an impact on improving the marine tourism industry in the region. On the other hands, the whale shark is one of the species listed in the red list of threatened species by the International Union for Conservation of Nature (IUCN), the vulnerable status, which means a whale shark populations have been reduced by 20% to 50% within 10 years or three generations. The decline in the numbers of whale sharks caused by human activities that damage the fish and the habitat, such as fishing and tourism activities. The cause of all this is the lack of public understanding about the function and value of these resources and its habitat. Whale shark has an inherent value as marine resources, and has an environmental services value, in relation to tourism activities. This paper measures the economic and environmental services value of the whale shark in Cenderawasih Bay National Park. Method of Travel Cost (TCM) is used to calculate the value of expenditures incurred by both foreign and local tourists. The study also measures the value obtained by tourist operators. The total economic value of Cenderawasih Bay National Park, is also measure in this study by valuing the fishing activities in Cendrawasih Bay

National Park as a habitat of whale sharks, and people's Willingness to Pay (WTP), to conserve the marine park, using Contingent Valuation method (CVM). From the TCM, can be calculated consumer surplus value, which is basicly is a proxy of Willingness to Pay's (WTP's) society, from the cost side. The results show the value of the consumer surplus of 134,926.81 Rupiahs per visit for linear models, and 123,385.96 Rupiahs, for semi log models. Thus the total WTP of whale shark conservation value using linear model is 770,162,239.63 Rupiahs per year (data in total tourist arrivals in 2015). While using a semi-log models, the total value of environmental services whale shark is 704,287,088.36 Rupiahs. The the average WTP of the value of the Cenderawasih Bay National Park resulted from CVM for local respondents is 2,513.89 Rupiahs, as for foreign respondents of, is 6,428.57 Rupiahs. Thus, if calculated for the whole region, the WTP is 35,445,812,154,345.00 Rupiahs. The value of TNTC region for artisanal fisheries activities is 2, 6 billion Rupiahs per year. From the result of the overall economic valuation can be determined the estimated value of Cendrawasih Bay National Park area by some of the benefits that are calculated in this study, amount ed to 35.5 trillion rupiahs.This research provides a significant contribution to the knowledge of the value of marine protected areas, particularly those related to whale shark tourism, using economic valuation techniques.

Disconnected Indonesian Youth:
NEET Incidence and its Determinants

Pipit Pitriyan, Armida S. Alisjahbana
Center for SDGs Universitas Padjadjaran, Indonesia

Around 17.5 million, or 27.5% out of 65 million Indonesian youth are categorized as "Not in Education, Employment nor Training (NEET)" during 2010 (ILO, 2012). This number exacerbates the high rate of Indonesian youth unemployment rate, recorded as 25% in the same year. NEET people are considered as lagging behind and become one of the most vulnerable groups prone to poverty. However, study in 2013 by Understanding Children Work (UCW) observing Indonesian youth data during 2000-2004 and 2004-2010 concluded that recent cohort of female seems to have greater opportunity to be in education longer than their predecessors. While, a more recent study in OECD (2015) reveals that the 2008 crisis affected the labor market by increasing the number of NEET in all OECD countries.

Half of a decade from the last study on Indonesian NEET, Indonesian economy significant challenges. The country faces a slowing down economy since 2013 due to slowing in the global economy. Relevant with that situation, this research tries to answer three questions: (1) Does economic growth affect the NEET among male and female differently?; (2) What is the most influential factor explaining the magnitude of NEET?; (3) What are key alternative policies channeling the youth NEET to the labor market?. We employ a multinomial probit regression using the National Labor Force (SAKERNAS) data year 2011-2015. We limit observation to

youth, i.e. person aged 15-24 years old. Our preliminary findings are: (1) economic slowing down worsen the female NEET much compared to male ones; (2) gender and location serve as the main determinant of NEET. Results of this study is expected to be inputs to policy making decision process related to labor market policy.

Measuring Preferences in Water and Sanitation Services Using Choice Modelling Approach: A Case of DKI Jakarta, Indonesia

Nur 'Aisyah Nasution, Mia Amalia, Kania Mayang Lestari, Tri Dewi Virgiyanti, Rilin Purwati
National Development Planning Agency - BAPPENAS, Indonesia

Inadequate access to water and sanitation has been characterised as a challenge to developing infrastructure and public health in DKI Jakarta, Indonesia. Access to piped-water network has only increased from 10% to 48% between 1975 to 2015. Sewer coverage, which is only available to 2% of population, has been mostly stagnant since 1989. Perceived low willingness to pay for water and sanitation services and low priority that has been put by the government of Indonesia caused the provision of water and sanitation are left behind. Improper water and sanitation may generate negative externalities imposing costs to the community and the environment. However, in developing countries, information on willingness to pay which reflect households' value of having both water and sanitation provision is limited. This study will focus estimation of citizens' value on provision of piped-water and sewer services as one bundle of goods, instead of as two separate public goods.

Agriculture and Rural Development
PAR A3: Agriculture and Rural Development

Mangosteen Farming Intensification:
Development Evidence From West Java Indonesia

Sara Ratna Qanti, Dini Rochdiani, Sulistyodewi Nur Wiyono, Gema Wibawa Mukti
Department of Agricultural Economics and Social Sciences Universitas Padjadjaran Indonesia

Mangosteen is one of main horticulture products in Indonesia. The demand for this exotic commodity has been greatly increasing in the past ten years, both in domestics and also export market. Despite the opportunity, from the production side, conventional wisdom shows that there are only limited numbers of farmers who do the technological intensification (mainly chemical inputs use) to increase productivity and meet the increasing demand. This paper contributes as an empirical study to literature that examine farmer's behavior to intensify their farming practice through the use of chemical inputs. Primary data were collected in 2016 from direct interview with 69 farmers in West Java, Indonesia. The sample was determined using multistage cluster random sampling. Since several adoption of technology and diffusion processes may occur simultaneously, the paper uses Zellner's Seemingly Unrelated Regression (SUR) analysis to examine the correlation between farmer's characteristics and other external factors with their decision in intensification that is proxied by the use of chemical inputs and the use of labor. The key findings are as follows. (1) Contrary to the conventional wisdom, it is found that most of the farmers use fertilizer for their trees to increase productivity, yet only few who use pesticides. (2) Farmers decision on the use of chemical inputs is positively correlated to their labor use and the tree productivity. (3) The labor availability in the family, physical assets ownership (number of trees that are owned, paddy field ownership, and means of transportation ownership) are positively significant affecting the use of chemical inputs. (4) The access to good quality road is negatively significant affecting the farmers decision to use the chemical inputs.

Supply Response of The Soybean in Indonesia

Wiludjeng Roessali, Titik Ekowati, Edy Prasetyo, Mukson Mukson
Diponegoro University, Indonesia

Soybean is one of the high-value food commodities. Domestic soybean production has been unable to meet the needs of the community so that the import options to meet the needs. Increased demand is growing bigger every year, causing dependence on imported soybean. This study aimed to assess

factors that influence the supply of soybeans during 1993-2015 in Indonesia. A hypothesis test is done with a partial adjustment model and the Durbin-Watson statistic is used to test for the problem of autocorrelation in the data. The results showed that the rate of land growth and soybean production decreased on average per year by 2.81 and 1.6 percent, respectively, while productivity grew by 1.4 percent. The short-term and long-term supply elasticity was influenced by the area of soybean harvest, the area of corn harvest, the productivity and the price of local soybeans, while the price of imported soybean did not show any significant effect. The coefficient of production adjustment suggests the study suggests to considering this elasticity for agricultural planning and policy assessment.

Analysis of Household Business of Moa Buffaloes at
Moa Island, Southwest Maluku Regency

Jecklin Lainsamputty[1], Wiludjeng Roessali[2], Siswanto Imam Santoso[2], Bambang Trisetyo Eddy[2]
[1]Pattimura University, Indonesia; [2]Diponegoro University, Indonesia

The objective of this research was to analyze factors that affect the business scale of Moa buffaloes at Moa Island, Regency of Southwest Maluku. The research was using a survey method with multistage random sampling. The location chosen was the District of Moa Lakor at Moa Island based on its largest buffalo population. Respondents were randomly drawn in a total of 120 respondents. The variables measured were years of experience in rearing animals, costs of production, farmer's participation in group activities, animal housing systems, farmer's income and farmer's age. The statistical test used was the multiple linear regressions. The results showed that the mean of business scale in the area of high density of buffaloes population was 12.6 AU, in the moderate was 12.4 AU and in the low was 11.0 AU. The average of production cost was IDR 1,893,536/year, the average of revenue was IDR 14,083,333/year, while the average of income was IDR 12,189,797/year. The independent variables simultaneously influence the business scale. Partially, experience, costs of production, participation and housing systems had highly significant influences on the business scale.

Financing Regional Development
PAR B3: Financing Regional Development

Behavioral Biases in Saving and Borrowing Decision:
Evidence from Field Experiment and Household Survey on Financial Inclusion

[1]SurveyMETER, Indonesia; [2]University of Arkansas
[1]SurveyMETER, Indonesia; [2]University of Arkansas

Access to modern financial instruments is critical for economic development. Studies find that greater access to savings, credits, insurance, and investment opportunities are associated with more robust economic growth. In Indonesia, access to (and adoption of) these modern financial instruments has been far from universal. Many poor and vulnerable households remain excluded from these instruments. This exclusion limits the economic opportunities of the poor.

We employ both quantitative and qualitative approaches, use secondary data as well as data collected from a small-scale household survey and field experiments to answer the following research questions: Q1: Which groups of population should be targeted, namely for whom financial inclusion will provide the most Pareto gains? Q2: What are the main reasons for the under-adoption among these groups of people? Q3: What problems do these target population group face in getting access to financial access? Q4: What have other stakeholders (government, financial industry) have done in solving the problems? Q5: What challenges remain unaddressed that can be answered through interventions?

We first analyzed secondary data sets such as the IFLS to identify the sub-groups of populations who are still unbanked or who still under-adopt financial instruments, such as savings, credits, investment, as well as insurance. The advantage of using micro data such as the IFLS is that we are be able to look at the financial behavior not only with measures of household welfare, education, and other standard characteristics, but also with risk aversion, time preference, and cognition.

Our preliminary analysis suggests that financial inclusion is positively correlated with education, wealth and welfare of the households. Households that operate non-farm business are more likely to have better access to financial inclusion. We also find that gamble aversion is negatively correlated with household assets and per capita expenditure: wealthier households are less likely to be gamble averse. Whether a household has a farm or non-farm business has nothing to do with whether the household is gamble averse.

We then conducted a small-scale household survey to elicit information about utilization, knowledge, and perceptions of the existing financial instruments or alternative access to financial services such Information on risk preference, time preference, and cognitive functioning are collected in the household survey. In the household survey, we conducted a series of behavioral experiments in the field to look deeper in to the underlying behavioral constraints related to adoption of financial instruments. We use the experiments to measure individual risk preferences and ambiguity aversion. The standard approach in economic experiments to elicit risk and ambiguity aversion is to ask respondents to choose between two possible portfolios, where one yields a certain outcome, while the other yields an uncertain outcome. The difference between risk and ambiguity attitudes depend on whether the probability of the uncertain outcome is known when the respondent makes his or her decision.

A Comparative Study of Conventional and Islamic Banking in Periods of Economic Crisis and Normal in Indonesia:
A Multidimensional Approach

Ari Tjahjawandita, Teguh Santoso, Achmad Hidayat, Luthfi Alfarizi
CEDS Unversitas Padjadjaran

Banking sector has an important role in an economy. Previous crisis, local and global, has proved its important role either for domestic's economy and global economy. Previous studies have tried to compose an index of financial stability. Yet, an index that put focus on banking industry is relatively scarce. This research compose banking stability index base on multidimensional approach. Not stopping there, it also evaluate per bank stability and compare them one another and trough period of crisis. The result of this research has shown us that Q-Index is relatively better in explaining the source of instability, whether it was coming from pressure/efficiency/intermediation dimension. It also shows us that Islamic banks in Indonesia are relatively have a better level of stability compare to conventional banks.

Credit Expansion and Its Impact on The Welfare of
The Provinces in Indonesia

Anhar Fauzan Priyono, Pipit Pitriyan, Heriyaldi Heriyaldi
Universitas Padjadjaran, Indonesia

This study aims to study the behavior of income inequality at the provincial level in Indonesia, through observing MSMEs credit, government expenditure of education and health, school participation rate, and unemployment rate.

We employed Fixed effect panel data, implementing Panel Corrected Standard Error (PCSE) and found that MSMEs credit, government expenditure on education, and school participation rate are significantly can reduce income inequality. On the other hand, unemployment has been proven to have positive impact to income inequality. However, the late implementation of National Health Insurance (Jaminan Kesehatan Nasional - JKN), relative to our period of observation, makes the result of government expenditure on health cannot be exercised.

Financial intermediation should be able to provide wider opportunities for MSMEs business actors. Empirical result found that the increase in credit distribution to the MSME sector can reduce the level of income inequality, on average in each province in Indonesia. The government is also expected to consistently pay attention to the aspects of education and health in its budget. Efforts to improve access to the education sector are also expected to continue to be noticed by the parties concerned, with the aim to improve the quality of life of the community.

Household Access to Credit in Indonesia:
A Microdata Analysis

Teguh Santoso, Irlan Adiyatma Rum, Tio Riyono
Universitas Padjadjaran, Indonesia

Improved household access to credit, especially from financial institutions is one success indicator the financial inclusion program. However, not all people can access credit from financial institutions. World Bank Survey (2010) shows that only 23% of Indonesia's population have access to financing from financial institutions, of which 21% have access to bank financing and 2% from other financial institutions. Thus, it is possible there are people who are still accessing finance informal financial institutions or individuals. This study attempt to analyze the determinants of households in access to productive credit, both from banks, other financial institutions and individuals. Microeconetrics analysis with multinomial logit model conducted in this study. Data used in this study is SUSENAS 2015 data, issued by BPS. Based on multinomial logit estimation, probability of household to obtain credit from bank is affected by productive age, marital status, higher school or university, graduate, house ownership, manufacture sector and non-poor household. Probability of household to obtain credit from non banks financial institution is affected by productive age, marital status, secondary school graduate, house ownership, agricultural sector, and nearly poor houshold. Probability of household to obtain. Probability of household to access credit from individual is affected by productive age, marital status, elementary school graduate, house ownership, service and other sector, and non-poor household. To improve household access to formal credit (banks and other financial institutions) necessary education to society less educated, nearly poor and working in the agricultural sector.

Growth and Regional Development
PAR C2: Growth and Regional Development

Effect of Physical, Human, and Social Capital on
Economic Development in Indonesia

Rudi Salam[1], Renny Sukmono[2]
[1]*Sekolah Tinggi Ilmu Statistik, Indonesia;* [2]*Sekolah Tinggi Akuntansi Negara, Indonesia*

Economic development are attempts to improve the economic welfare of a nation. At first, the physical capital has a very important role in economic development. But in its development, in addition to physical capital, human capital also proved to be a very important factor and plays an important role in economic development. However, with the decline of the relative importance of natural endowments for regional development and the convergence trend in human capital, social capital becomes increasingly importance for economic growth. Thus, this study aims to look at the effect of physical capital, human capital, and social capital to economic development.

Data are obtained from various publications available from the BPS Statistics Indonesia and the Ministry of Health in 2014. We use 33 provinces in Indonesia as observational variabel. To identify the direct influence of physical capital, human capital, and social capital to economic development, which all are latent variables, this research is processed using structural equation modeling with partial least square approach.

Results show that validation of the model measurements show that all of the 14 indicators that we used, there are two invalid for further use, that is one indicator from variables of social capital and one indicator from variables of economic development. In the evaluation of structural models, it can be shown that physical capital, human capital, and social capital directly effect the economic development in Indonesia. Approximately 77 percent of the variation in the latent variable economic development can be explained by physical capital, human capital, and social capital.

As a conlusion, although all of the capital showed a significant effect on economic development, but the physical capital is still showing a more dominant role than the other capital. We hope the results of this study provide useful information for policy makers at the regional level.

Skyrocketing Land Price: The Case of South Jakarta

Indira Nadia Simanjuntak
Presisi Indonesia, Indonesia

Land is one of non-renewable resources in the world. Compared to other economic goods, land has a unique characteristic due to its fixed-supply nature. And it is no exception to South Jakarta, which is well-known for its skyrocketing land price. This surging price of land in South Jakarta is due to its business districts nature, as it is famous for its office and service district. Overtime, South Jakarta's land use has generated city hubs, suburbs, and supporting regions in order to support the various economic activities in the city hubs. Problems arise when landowners have no specific benchmark towards their land price and are likely to set their own prices, usually by finding out the market price of nearby areas. Therefore, a spatial dependence among market prices might exist, leading to form some kind of systemic pattern.

This research attempts to examine the existence of spatial dependence among market prices of nearby areas by analyzing the spatial determinants, spatial dependence, and spatial autocorrelation of the increasing land price. Using 2015 NJOP and market price data of South Jakarta, this research uses Spatial Auto Regressive (SAR) method. The results show that distance to CBD and toll gate have negative relationship towards land price, both NJOP and market price; whereas distance to station engenders positive relationship. This latter findings might due to the fact that in South Jakarta, the station-surrounding areas are dominated by slum areas which are crowded and prone to criminal. Albeit, being close to train stations has its perks in terms of accessibility. Meanwhile, building size, total buildings, and contiguity with Central Jakarta demonstrate a positive impact on land price. Furthermore, it is also found that positive spatial autocorrelation and spatial dependence do exist in the land price in South Jakarta. There are 39 subdistricts and 45 subdistricts out of 65 subdistricts in South Jakarta that evidently form a cluster or systemic pattern of land price, in both NJOP and market price, respectively. Additionally, a simulation shows that there is huge gap between predicted and actual market price, hinting a possible subjectivity of landowners in setting the price.

The Testing of Structural Stability of Economic Growth in Kepuluan Sula; with Chow-Test Model

Laela Dinsie, Zulkifly Waibot
Khairun university, Indonesia

Undang-Undang tahun 2013 about establishment of Taliabu island regency in North Maluku, being separate of Sula island as the prime district. Area Expansion has an impact to economic sector especially the rate of economic growth in

prime district. According to econometric approach Chow-Test Model. The aim of this study to observe whether expansion of new area can change the stability of variable structure economic growth in prime district before and after the expansion that influenced by district own source revenue (PAD).

The result of study using econometric approach Chow-Test Regression Model ; F test nor LR test, both are significant which proves that there is difference or change stability of behavior structural economic growth variable. The value of statistic F test : 71.49 which greater than critical value F table, even in situation α = 5% and α = 1%. Statistical tests LR with the calculated value of chi-square statistic of 55.85 greater than the critical value of chi-square even in situation α = 5% and α = 1% amount : 21.67 . By develop Chow-Test Model through dummy variable the changes of structural stability of economic growth in this study, proven that there are differences : the intercept and the slope coefficient of regression line, or dissimilar regression category

Keywords; Economic Growth, Inflation, district own source revenue (PAD), Chow-test

A Panel VAR Approach for
Inequality, Education and Health in Indonesia

I Gede Agus Ariutama[1], Syahrul Syahrul[2]
[1]Polytechnic of State Finance STAN, Indonesia; [2]Financial Training Office of Balikpapan

Indonesian government pays high attention to education and health to achieve equitable society reflected from government's mandated budget allocation of 20% and 5% consecutively. This study aims to understand the reciprocal relationship among income inequality, education and health which is still rare in Indonesia. This study uses Panel Vector Autoregressive (PVAR) of 33 provinces from 2005-2015 using gini coefficient, average years of schooling, and life expectancy as proxies of inequality, education and health. Furthermore, Granger Causality Test is exercised to test the causality among variables using first-order model. Income inequality and education have reciprocal relationship. However, the results show that income inequality negatively influences education possibly because of government investment in human capital. Whereas, education affects income inequality positively which is likely because of education inequality and composition effect. In addition to that, bidirectional associations between health and education as well as health and inequality are insignificant.

PAR D3: Health
PAR D3: Health

The Efficiency Analysis of Health Spending in
Maluku District

Estro Dariatno Sihaloho, Dr Adiatma YM Siregar
Universitas Padjadjaran, Indonesia

Maluku province is the province with the largest island in Indonesia. BPS Maluku report that Maluku province consists of 559 islands and divided into 9 regencies and 2 cities. Geographical conditions with many islands make the health care level not optimal in all districts in Maluku province. Health sector is one of the priorities programs of the government of Maluku Province. The government tries to increase the budget for health sector to increase the output of health sector in Maluku. How the local governments to use the health budget will have impact to the health output. This paper has two objectives. The first objective is to estimate scores of technical efficiency of health spending of regencies-cities in Maluku province. The second is to analyze the environmental factors that have an important role in enhancing the technical efficiency scores of regencies-cities in Maluku province. This study calculates scores of technical efficiency using Data Envelopment Analysis (DEA) method and use the Tobit method for the analysis of environmental factors. This study calculates the technical efficiency scores of health spending in 9 districts and 2 cities in Maluku province from 2012 to 2015. The DEA method uses the health spending of regencies-cities as Input and uses percentage of baby born live, percentage of child with good nutrition status, life expectancy of regencies-cities as Output. This study using Tobit models to analyzes the environmental impact of population number and poor people number on efficiency score of health spending in Maluku regencies-cities. DEA shows that Tual City has a highest average of efficiency score. Tual city reach about 1 efficiency score. Central Maluku Regency and Aru Island regency with the highest average health budget have rank 11 and 10 respectively. Central Maluku regency has an average score with 0.23478 and Aru Islands with 0.40985. Central Maluku regency becomes the district with lowest average efficiency. The low technical efficiency scores show that the using of health funds is not optimal in increasing the health output in Maluku regencies-cities. The Tobit estimation shows that number of population and numbers of poor people have negative marginal effects on technical efficiency score. Number of population has - 0.000000626 marginal effects and number of poor people has - 0.006361 marginal effects.

Key words: Efficiency, Health Spending, Data Envelopment Analysis, Tobit

The Effect of Unemployment to Mental Health

Wandira Senja Larasati[1], Dr. Adiatma YM Siregar[2]
[1]Center for Sustainable Development Goals Universitas Padjadjaran, Indonesia; [2]Department of Economics, Padjadjaran University

Background: Promoting mental health and well-being is included in the 2030 Agenda of Sustainable Development. Data from Riset Kesehatan Dasar (Indonesia Basic Health Research) in 2013 stated that the prevalence of mental illness among adult population in Indonesia was 6%, or around 14 million people, while global studies have shown the large economic impact of mental illness. Hence, it is crucial to understand the risk factors of mental illness to prevent the disease from taking place. This study investigates the potential social determinants of mental health in Indonesia, namely unemployment. Studies have shown its potential to cause depression.

Method: Using Indonesia Family Life Survey (IFLS), the study analyses validated measure of depressive symptoms (CES-D) and unemployment and other socio-demographic factors among individuals such as gender, marital status, number of children, as well as economic factor such as income or expenditure. The analysis of the study will be using a multilevel model to take full advantage of clustering information available from the IFLS. Meanwhile, the measurement of depressive symptoms will be first using Rasch Model in order to assess the individual item fit and to make sure the consistency of the response scale used in the questionnaires.

Potential results: Although studies have shown the positive relationship between unemployment and mental illness, such study still needs to be conducted in Indonesia. We presume such results will also be applicable in Indonesia, thus warranting the significance of unemployment in our effort to control mental illness.

The Financing Need for
Expanded Maternity Protection in Indonesia

Adiatma Y.M Siregar[1], Pipit Pitriyan[1], Dylan Walters[2]
[1]Universitas Padjadjaran, Indonesia; [2]University of Toronto, Canada

Background

Only around 42% of children less than 6 months were exclusively breastfed in Indonesia in 2013 which potentially cause infant morbidity and mortality. Studies have shown that optimizing maternity protection programs may result in better breastfeeding and, thus, reduce infant deaths. This study aims to estimate the potential cost implications of optimizing the current paid maternity protection program (e.g. maternity leave, lactation room), and to show the potential challenges in its implementation in Indonesia.

Method

We used data from various literatures and data sources to estimate the potential cost implication of the current and increased maternity leave length (three and six months) from 2020 to 2030, and we simulate the budget impact to the government if maternity cash benefit are jointly paid by the workplaces and government. Cost of setting up lactation rooms was estimated using the standards developed by Alive and Thrive and the number of medium and large formal sector companies in Indonesia. Short interviews were conducted in five different provinces in Indonesia to identify current and potential challenges in applying both current and improved maternity protection policies.

Result

The cost of paid maternity leave in 2030 may reach US$166 million (three months leave) and US$333 million (six months leave). These costs will fall to the government if the cash benefit is fully paid by the government by 2030. The cost of setting up lactation room in 80% of medium and large companies in Indonesia may reach US$35 million (basic standard). Three main challenges were identified through our interview, namely strong existence of BMS marketing, lack of lactation rooms in work places, and existence local custom that may hamper successful adequate breastfeeding.

Conclusion

Our study shows that the budget to expand maternity leave may be high, but it is still far lower compared to its potential non-economic benefit (e.g. number of infant death averted) and cost savings as a result of adequate breastfeeding in Indonesia (US$ 1.54 billion). Sharing the cost of paid maternity leave between government and employers may provide a feasible solution to bring maternity protections to all new mothers across Indonesia. The challenges in implementing successful maternity protection programs need to be addressed at all levels from the government to society in general by, among others, proper coordination between stakeholders, sufficient knowledge and information dissemination.

The Impact of Natural Disasters on Child Health

Eny Sulistyaningrum
FEB UGM, Indonesia

Natural disaster always affects different aspects of individual life. It affects in almost every part of our life such as emotional, economic, physical, social, and environmental. Children are believed to be very vulnerable to disasters. The increasing frequency of disasters and the intensity of their destruction motivate an analysis of the impacts of disasters, especially on child health. This paper uses a micro level survey data set from IFLS which covers approximately 83% of the Indonesian population within the survey area. This paper contributes to the international literature in several respects. First, compared to other literature, this

study uses self-reported data, on whether households are affected by disasters or not. In this data, individuals are categorized as affected by the disasters if they reported that their households experienced death or major injuries to household members, direct financial loss to the household, or relocation of household members. That definition seems more accurate rather than only using general information before and after the shock, and there has been no sense of which individual is affected or unaffected. Second, this study presents the impact of disasters on child health using two different measures of child health: height of child as an objective measure and self-reported health condition as a subjective measure. The purpose of using these two measures that height is a permanent effect whereas self-reported health is likely to be a short effect. Moreover, arguably natural disasters are exogenous events, so we use the exogenous variation from natural disasters as a natural experiment design to estimate the effect of disasters on child health. When a certain group is exposed to the causal variable of interest, such as a disaster, and other groups are not, Difference in Difference model (DID) can be used to estimate the impact of disasters on height of child. In addition, ordered logit and Zero Inflated Negative Binomial (ZINB) are used to estimate the impact of disasters on self-reported data health condition. The results confirm that disasters have no serious impacts on child health.

Households and Communities
PAR E3: Households and Communities

Urban Woman Daily Activities to support Household Utility

Amelia Hayati Dayat[1], Pradono Pradono[2], Heru Purboyo[3], Sri Maryati[4]
[1]*Faculty of Economics and Business, Padjadjaran University, Indonesia;* [2]*School of Architecture, Planning and Policy Development, ITB, Indonesia;* [3]*School of Architecture, Planning and Policy Development, ITB, Indonesia;* [4]*School of Architecture, Planning and Policy Development, ITB, Indonesia*

Family as the smallest organization in the community has its own characteristics. Ideally, every family has a member consisting of a father as a head of the family, mother as a head of the household and children as family members. Each member of the family has each own of many activities that support sustainability and harmonization of the family.

Activities of women as housewives cannot be ignored in terms of fulfilling all the needs of the family to achieve their household's satisfaction and harmony. Every housewife's activity is expected to support the success of the family in a variety of ways, including supporting the family economy or vice versa. This activity is supported by mobility and accessibility. Today, women in Indonesia, especially in the city, has a high level of activity shown by the high mobility and accessibility, including access to the use of vehicles.

Women are referred to in this study are housewives who do not have a fixed job with a definite schedule. While the activities discussed in this paper consists of two, the mandatory activity and discretion activity made by women in big cities, such as Bandung, within the framework of fulfilling the needs of the family. Mandatory activities consist of: grocery shopping for families and households, dropping shuttle schoolchildren or activities that promote to children education, and additional business to improve the household economy. For discretion activities, consist of: recreation with family, a trip to the mall, movies, or just hang-out and gathering with friends.

Implementation of this activity is supported by modes of transport, socio-economic conditions and household demographics, government policy factor and travel patterns of women. But the factor of government policy and the travel patterns are not discussed in this paper. Random Maximum Utility Regression Model is used to approach to the quantitative data from 300 household's respondents. This model is expected to see a variety of economic and social factors, and household demographics that influence the two kinds of activities of women, which is mandatory and discretion, with the aim of achieving family satisfaction.

The Monetary Value of Housewife in Urban and the Determinants of Their Subjective Quality of Life

Tri Mulyaningsih, Yunastiti Purwaningsih, Kurnia Anggun
Sebelas Maret University, Indonesia

Despite of increase enrolment of female in higher level of education, after getting married they are under going predicament whether entering labour market or taking full role in domestic work as housewife. Married females in urban are perceived having more opportunity to engage in labour market than those living in rural areas. A larger opportunity is a result of better education of female and shifting cultural perspective due to gender equality. Meanwhile, more than a quarter of female aged 15 years and above in the city of Surakarta decided to be housewife. Married female felt obligated to looking after house and children so they decided to quit from work place. The primary data collected from survey to 385 housewives in the city of Surakarta reveals that more than half of housewives were formerly involved in the labour market with more than a half had working experience for more than five years. This study aims to estimate the monetary value of a housewife in urban areas of Surakarta, the Central Java, Indonesia using the general replacement cost. The previous studies focused on uneducated housewife in rural regions. Thus, this study contributes to examine this issues in the context of urban females with higher education and adopting modern cultural values considering more equal role between male and female. In addition, this study is keen to assess the subjective quality of live of housewives based on composite index capturing ten dimensions of life. Finally, this research will examine the determinants of urban housewives' subjective quality of life by employing demographic, education, income level and past working experiences as explanatory variables. A primary survey of 385 respondents were conducted to collect information from housewives in the city of Surakarta. The purposive sampling was applied to generate representative sample covering all five Kecamatan in Surakarta. The preliminary findings show that in average the monthly monetary value of housewives in the city of Surakarta is close to 3.3 million Rupiah. The average score of subjective quality of live is 79 using score between 0 to 100. Finally, education, income, past working experience and quality of neighbourhood contribute positively to housewives' quality of life.

Improving Elderly Community Health Post Through Village Medium Development Plan

Ni Wayan Suriastini, Endra Dwimulyanto, Nadia Fitriani, Bondan Sikoki
SurveyMETER, Indonesia

Indonesia has been experiencing the Demographic Transition, reflected from the increasing trend of the aging population proportion. The proportion rises from

7.6% in 2010 to 15.8% in 2035. At the village level, communities' resources have been utilized to develop an Elderly Community-Based Integrated Health Post for promotive and preventive care.

This study has three aims: (1) explore the development of elderly health post and it'scorrelation with the well being of the elderly. (2)indentify the problems and prospects on participation of the elderly in elderly integrated health post (3) develop solutions to improve the ealderly health post.

To reach the first aim, we will be using descriptive, and logistics methodologies and data from the Indonesia Family Life Survey (IFLS) wave 4 and 5. To achieve Aims 2 and 3 we analyse the data specially collected to anwer these reseach questions. The study was conducted in 40 villages in Yogyakarta province.

The elderly health post availability increased from 50.8% to 71.1% in the IFLS community between 2007 and 2014. The elderly health posts did not conduct all the services required by the Ministry of Health guideline. About 32% of elderly health post reported low participation of pre elderly and elderly as the challenge. Many well-being indicators of people age 45 years and over have a positive correlation with health post visits namely health symptoms, general health status, need less help in daily activity, and BMI.

The follow up study using mix method found five factors causing low levels of community participation in elderly posyandu, namely: 1) Elderly. The elderly thought that they were still healthy and posyandu activities are not interesting. In addition, they were busy working as well as not aware of benefits of the posyandu. 2) Activity program. Elderly thought that the activities of elderly posyandu were monotonous and not attractive. 3) Posyandu cadre. Mostly, posyandu cadres did not design creative and innovative activities. In addition, most of them did not know the functions and purposes of posyandu. 4) Elderly family. The family support was not optimal to support elderly to be active. The family were busy and did not motivate or even remind the elderly about posyandu activities. And the last, 5) Related parties. Counseling or socialization on the importance and benefits of actively attending posyandu activities were rarely conducted. In addition, finance support from village/kelurahan was still low or Rp 100.000 per month.

The Village Medium-term Development Plan (RPJMDes) still focuses on infrastructure. Community development and empowerment such as elderly posyandu activities are less considered. The mutual commitment between BAPPEDA (Regional Planning Board) and village government is required to increase the participation of pre-elderly and elderly in elderly posyandu activities. In this case, it is BAPPEDA who make the policy and then the posyandu activities are needed to be taken into account when designing the RPJMDes. Meanwhile, the village implements the policy in designing RPJMDes or RKPDes(the Action Plan) Finally, system or mechanism is needed to monitor or evaluate the elderly posyandu program in RPJMDes.

Human Resource Development
PAR F4: Human Resource Development

Horizontal Educational-Job Mismatch of
Science and Engineering Graduates in Indonesia

Pipit Pitriyan, Armida S. Alisjahbana
Center for SDGs Universitas Padjadjaran, Indonesia

Studies on educational mismatch and its impact on labor market outcome have been abundant in recent years. However, most of the studies have been done for advanced countries. Not many studies on this topic are done for Asia with the exception on Korea and Taiwan. This study contributes to the existing literature by estimating vertical educational mismatch for Indonesia by analyzing the data from Sakernas 2014. The study specifically focuses on university and vocational diploma science and engineering graduates who work in the formal sector. The study employs the statistical approach to measure over, required or under-educational mismatch at the 3 digit occupation level. It is shown that wage penalties exist, where over-educational mismatch receives wage premium (for university graduates only) and under-educational mismatch receives wage penalty compared to those with required educational level for the job he/she holds. The effect is greater for university graduates compared to vocational diploma graduates holding individual, employment characteristics, major of study within the science and engineering field, occupation and sector of employment constant. This shows the differential effect of educational mismatch between university versus vocational diploma graduates, where the former has less on effect on its average wage rates.

Efficiency Evaluation on Education Spending:
A Comparison Java versus Non-Java

Hidayat Amir[1], I Gusti Ayu Diah Cintya Utami[2]
[1]Fiscal Policy Agency, Indonesia; [2]PKN STAN, Indonesia

The Indonesia government stipulated the minimum of 20% government spending on education. This commitment is implemented not only for state government but also for regional government. By doing so, the budget allocation for education has a privilege to have at least 20% of total spending. The problem remains then on how is this allocation being spent to achieve the objective of education. This paper's objective is to evaluate the technical efficiency of the education spending in two different regions: Java and Non-Java. The technical efficiency is basically comparing the education spending and the expected output. The analysis employs Data Envelopment Analysis (DEA), due to its capability to cover multi-outputs

efficiency analysis. The analysis covers the primary (SD) and secondary education (SMP & SMA) and it compares for Java and Non-Java. Due to data limitation, the evaluation are represented by a sample that selected randomly between two categorized regions, high and low HDI, for both Java and Non-Java. The result shows that the Java has better efficiency than Non-Java, the gap is even higher to the higher level of education. It indicates that there is a potential to make a disparity even worse between Java as developed region in Indonesia and Non-Java as less developed region. Since education is proven as a source of economic growth. In addition, the result also indicate that the allocation of the budget is not enough, it needs to be complemented by the managerial improvement to have more efficiency in the education system.

Employers' Perspectives on Diploma Supplement to
Enhance Bachelor Graduate Employability

Mita Adhisti, Lestari Sukarniati
Universitas Ahmad Dahlan, Indonesia

Performance in Indonesia's labour market has fluctuated in years. The unemployment rate decreased from 11.2 percent in 2005 to 6.18 percent in 2015. However, the market still faces a challenging issue which is youth unemployment remaining high. Educated youth confront a higher chance of being unemployed due to a skill mismatch between graduate qualifications and the needs of employers. The Indonesian government designed the Indonesia Qualification Framework (IQF) in 2012. The IQF is one of the national standards to assess the learning outcomes and job-specific competencies of the relevant qualification levels. It will specify the graduate qualifications transparently of moral and ethics, work skills, knowledge comprehensions, as well as autonomy and responsibility, which are stated in the diploma supplement. This qualitative paper aims to discover the employers' perspectives on diploma supplement for bachelor graduates related to enhancing their employability. Data for this study would be collected via semi-structured interviews with employers. In addition, this study employed purposive sampling approach, which selected companies based on the graduate hiring rate in Yogyakarta. Thus, by identifying employers' objectivity, it would improve the relevance of the education and training to the world of work as a final goal to reduce the high rate of youth unemployment.

Human Capital and Labour Productivity of Micro-Small Enterprises in Food & Beverages Industry:
A Spatial Multilevel Analysis

Rina Indiastuti, Dini Indrawati, Fitria Purnama Sari
Padjadjaran University, Indonesia

The output value of Indonesian F&B industry in micro-small scale continuous to increase despite the problem of the slow increase in productivity. This study examines the importance of human capital factor to improve labour productivity in various regions. There are 2 models used by involving a number of variables representing internal factors of business at the micro level and macro regional factors. Estimation techniques use multiple regression and spatial multilevel analysis. The data used is firm indicators and macro regional indicators across provinces in Indonesia from the Bureau of Central Statistics.

This research found that the quality of human resources has a positive effect on labour productivity at F&B industry in micro-small level. In firm level, the level of education and workers who have received technical training, marketing, or both can improve their productivity. By adding spatial factor, the difference of human capital can explain the difference of labour productivity among regions. Other macro indicators such as unemployment rate and financial deepening do have significant effect on labour productivity. It means worse social economic condition may hamper firms' productivity, while the better quality of workers' education and financial deepening within a region can support F&B firms at micro-small scale to increase their productivity.

Migration and Demography
PAR K1: Migration and Demography

Commuting, Circular Migration or Permanent Stay?:
Evidence from Gerbangkertasusila

Devanto Shasta Pratomo
Brawijaya University, Indonesia

Surabaya is the second largest city in Java after Jakarta, which is also the second largest city in Indonesia. As a capital of East Java province, Surabaya has an important role for the economy not only for East Java but also for Eastern Indonesia. Surabaya's development has been noticed by the physical growth of the city, including the growing of important port for Eastern Indonesia and international airport connected with some important cities in Asia Pacific. The complete facilities, sufficient infrastructures, and efficient economic activities make Surabaya as one centre for regional industrial growth in Indonesia, growing beyond their formal administrative boundary. The greater Surabaya now consists of the city of Surabaya and the surrounding area, including Gresik, Bangkalan, Mojokerto, Sidoarjo and Lamongan (the acronym is Gerbangkertasusila), generating more than 40% of the Gross Domestic Product (GDP) of East Java in 2015, dominated by manufacturing and trade sectors.

The economy concentration then encourages a significant migration flows to Surabaya. According to the Central Bureau of Statistics (BPS), Surabaya is home to 2.8 million of people, with more than 46,000 in-migration in 2015. Although there is a tendency of decrease in incoming migration, the number of registered in-migration tend to be higher than the number of out-migration, suggesting a positive nett migration in Surabaya. Compared to other cities, particularly in East Java, Surabaya offers more varied employment opportunities for migrants. The higher level of wages, with the highest level of minimum wage in East Java, has also attracted for migration flows to Surabaya.

Migration can be divided into three types, namely permanent migration, circular migration, and commuting. According to the Labour Force Survey, commuting is defined as regular (daily) travel outside the district or province for work, while circular migration involves temporary absences from the district or province for more than one day (this can be weekly or monthly). In the former case the threshold is a single day, whereas circular migrants maintain their usual place of residence, but they are temporarily absence for weeks or months. One would expect the frequency of the absence to be determined by the distance involved between origin and destination, mode of transportation and job opportunities and earnings in the destination area, compared with the place of origin Commuting is more an urban phenomenon, indicated by more than 80% of commuters living

in urban areas. It can also be seen as a response to the substantial expansion of localities, such as Gerbangkertasusila around Surabaya in East Java.

The objective of study is therefore to examine the probability of migrants in Surabaya for commuting, doing circular migration, or permanent stay in Surabaya. The multinomial logit model will be estimated using three outcome including commuting, circular migration, and permanent stay. Several individual and origin characteristics are included as independent variables, such as age, gender, education, marital status, transportation accessibility, occupation at destination, wage and economic indicators at the origin. The data used in the study is mostly from the 2015 National Labour Force Survey (Sakernas).

Interregional Migration in Indonesia:
an Agent-Based Modelling Approach

Nashrul Wajdi[1], Leo van Wissen[1,2]
[1]University of Groningen, Netherlands, The; [2]Netherlands Interdisciplinary Demographic Institute, Netherlands, The

There are a number of empirical studies on interregional migration in Indonesia. However, most of these studies (see for example Darmawan & Chotib 2007, and Van Lottum & Marks 2012) have some drawbacks. First, these models are unable to incorporate the interactions between individuals as well as individuals' responses to their contextual change. Second, these models fail to capture the interrelated and dynamic nature of migration because these models do not take into account how migration decisions and their variables are continuously updated over time (Hassani-Mahmooei 2012, Wu et al. 2010). Third, these models are unable to capture the non-linearity that occurs in the migration system in Indonesia. Projecting the future pattern using these models will likely result in a linear pattern as using the simple extrapolation model. To address the limitations of the previous research, we address the question: What is the likely development of the interregional migration pattern in Indonesia and its consequences on the regional population dynamics based on the recent historical trends in interregional migration?

We built an agent-based model (ABM) of interregional migration in Indonesia based on combined information from three previous studies on interregional migration Indonesia aims to simulate the future migration pattern of the population of Indonesia. Agents represent individuals who live in a geographic area, who respond to the push factors at the origins, who are self-selected by individual characteristics, and who choose their migration destination based on the attractiveness of the destination. We include three scenarios that vary in the sensitivity of migrants for population density. We demonstrate that the model predicts not only migration rates but also the dynamics of structural changes in the spatial migration patterns. It is projected that up to 2035, urbanisation, sub-

urbanisation and metropolitan to non-metropolitan migration are in progress for the interregional migration system in Indonesia. The findings also emphasise the growing metropolitan-to-non-metropolitan movement in Indonesia, where the metropolitan areas are sending migrants to all destinations, while non-metropolitan areas are receiving migrants from all origins. One common pattern that emerges from all scenarios is the increasing importance of Sumatera (Mebidangro and Rest of Sumatera) as a receiver as well as a sender of migrants. This finding suggests a transition to a new migration pattern: from monocentric (only Java-centric) to dual-centric (Java-centric and Sumatera-centric). Another finding from the different scenarios is that the lower the population tolerance for population density (i.e., stronger negative agglomeration effects), the faster the sub-urbanisation process for metropolitan areas of Jakarta, Bandung Raya and Mebidangro.

The Impact of Urbanization on Energy Consumption in Indonesia. Evidence from Indonesian Cities

Sotya Fevriera[1,2], Peter Mulder[2]
[1]Satya Wacana Christian University, Indonesia; [2]Vrije Universiteit Amsterdam, the Netherlands

This paper studies the relationship between residential energy consumption and urbanization in Indonesia. As people urbanize and households become more affluent, patterns of consumption, commuting, housing and fuel mix change. Existing research on the relationship between energy consumption and city structure suggests that per capita energy consumption decreases when urban density increases. This so-called compact city argument is based on evidence that higher urban density leads to smaller housing units, shorter commuting distances and increasing use of public transport – all of which result in decreasing per capita energy consumption. This evidence comes almost exclusively from developed countries. But there are good reasons to believe that in developing countries the involved mechanisms lead to different outcomes. Based on existing as well as newly collected data, we present evidence on how energy use varies across a sample of 74 cities in Indonesia, as well as across districts in the Yogyakarta metropolitan area. We analyzed data across cities with the two-stage least squares regression models and employed the OLS Regression models for data across districts in Yogyakarta. We find that per capita energy expenditure for transport increases with urban density, most likely because of a strong income-effect but per capita electricity expenditure decreases significantly with urban density. On the other hand, evidence from within Yogyakarta suggests that per capita electricity use increases with district density but per capita energy use for transport and cooking decreases with district density. The negative effect on per capita energy use for transport most likely because of commuting distances and the negative effect on per capita energy use for cooking is to compensate the positive effect on per capita electricity use.

Multi-Scale Urbanization in Greater Jakarta

Yustina Octifanny[1], Delik Hudalah[2]
[1]School of Architecture, Planning, and Policy Development, Institut Teknology Bandung;
[2]Research Center for Infrastructure and Regional Development, Institut Teknologi Bandung

The paper presents the urbanization in Greater Jakarta, the most urbanized area in Indonesia, where the Jakarta Metropolitan Area (JMA) is located. There have been many studies concerning the urbanization in the JMA from regional, economy, or environment perspectives. Nevertheless, less has been done from land and property market perspectives. The land and property market represents the manifestation of global and domestic capital investment that is accumulated in the urban context thus can illustrate the effect of the global economy on urbanization in Greater Jakarta. The paper uses a mixed-method approach. The quantitative method is intended to create statistical and spatial models of the property sector in order to recognize the urbanization pattern dynamics in Greater Jakarta. The specific data analyzed include the land and property supply, demand, occupancy, rent, and take up rates. The property data cover various sectors including office, hotel, industrial, retail, and residential sectors. The analysis indicates that the urbanization in Greater Jakarta experiences a multiscale urbanization, in which the urbanization does not spread evenly throughout the region. From the spatial model, we can examine that the urbanization scales could be varying from mega-urban/ mega-regional, metropolitan, and city scales in accordance with the different characteristics of the property sectors. The city-scale urbanization sector including the office, apartment, retail, and hotel sectors are located in Special Capital Region of Jakarta. The metropolitan-scale urbanization sector including retail and industrial sector is located in Jakarta, Bogor, Depok, Tangerang, and Bekasi. Lastly, the megaregional scale urbanization from industrial sector also extends to Serang and Karawang. The paper also highlights the impact of the 1997 Asian Financial Crisis and the 2008 Global Financial Crisis on the urban development in Greater Jakarta. The study finds that both 1997 and 2008 financial crisis slows down the urbanization process in JMA, but 1997 is when urbanization was slowing down the worse. This finding indicates that the Greater Jakarta urban development influenced by the flow of the global financial capital dynamics. The paper concludes that the urban fabrics in Greater Jakarta must be understood as a new form of urbanization. It is the emergence of multiple scales of urbanization that creates a large, expanding, polynucleated metropolitan region. This urban fabric's boundary has evolved from city, metropolitan, to a mega-urban-regional scales for the past decades. Moreover, as a contemporary urban area, the hinterland of Greater Jakarta could locate beyond the traditional suburban peripheries to incorporate wider spaces for the globally-linked industrial production process and capital accumulation.

Natural Resource Management
PAR L3: Natural Resource Management

The Contribution of Community Based Forest Management to Rural Economy: The Case of Hutan Sungai Buluh in Padang Pariaman

Syofia Agustini, Arya Hadi Dharmawan, Eka Intan Kumala Putri
Bogor Agricultural University, Indonesia

Based on Minister of Environment and Forests No. P.83 About Social Forestry, which is "to reduce poverty, unemployment and inequality management/ utilization of forest areas, it is necessary Social Forestry activities through efforts to provide legal access to the local communities that aim for social welfare and forest resources". Forests not only provide the advantage of conservation for the environment, but also forests can provide economic benefits to local communities. Not only wood, fruits, honey or the other forest products that can be utilized. However, forests can also be utilized in terms of its environmental services, namely as a carbon sink, hydrological function, as well as in terms of natural beauty (ecotourism). The research was conducted at the Nagari Sungai Buluh Forest, Padang Pariaman District, West Sumatra Province with aim to know economic and social impact of community based forest management. The method used is a combination of quantitative and qualitative approach using questionnaires and in-depth interviews. Based on research that has been done, it appears that the utilization of forest environmental services into eco-tourism provides economic contribution to communities living around the forest and to improve of rural economy. Society no longer perform encroachment, however people can still benefit from these forests are of ecotourism.

Welfare Analysis by Fishermen's Houshold Needs
Perspective, Fuel Price, and Number of Fish Production

Tria Apriliana[1], Wasifah Hanim[2]
[1]Widyatama University, Indonesia; [2]Widyatama University, Indonesia

Since the enactment of the Regulation of Minister of Marine and Fisheries of the Republic of Indonesia Number 71/PERMEN-KP / 2016 about Fishing Track and Placement of Fishing Tool in Fisheries Management Region of the Republic of Indonesia, which aims to improve welfare of fishermen, the observation about fishermen's welfare becomes interesting to be obtained. Fishermen Exchange Rate/Nilai Tukar Nelayan (NTN) is one of measurement in determining their welfare. This study aims to determine the well-being of fishermen from the

perspective of basic household needs, the price of fuel, and the number of fish production. The analytical method used is the Laspeyres price ratio between the price received by fishermen with the price paid by fishermen. To determine the welfare of fishermen from the perspective of basic household needs, the price of fuel, and the number of fish production, we used path analysis. The result showed that the basic needs of the household, the price of fuel, and the number of fish production become decisive instrument of fishermen welfare.

Climate Change Impact to Socio-Economy Vurnerability in Java Northen Beaches

Evi Gravitiani[1], Sari Nur Fitriana[2], Rosalina Bernadeta[1]
[1]Magister Ekonomi dan Studi Pembangunan, Fakultas Ekonomi dan Bisnins, Universitas Sebelas Maret, Indonesia; [2]Fakultas Ekonomi dan Bisnis, Universitas Sebelas Maret, Indonesia

Beach abrasion is global threat in all Indonesian coastal areas. Forty percent of 81 thousands kilometers of beaches in Indonesia are damaged as a result of abrasion. Abrasion may drown land of about 2 up to 10 meters a year. Coastal abrasion is caused by two main factors caused by human activities, such as the increase of sea level as a result of the melt of pole ice as a result of global warming, besides the extinction mangrove vegetation in the coastal areas. Mangrove vegetation has an ability to broke down waves, thus slowing down the abrasion. The defective beach as a result of abrasion and geological aspects, the strenght of waves and winds .

The north coastal area of Java are very vulnerable to tsunami and abrasion. Vulnerability of north Java coastal areas is also caused by abrasion. This leads to socio and economic vulnerability of people who live in coastal areas also the seller who sale along the beach.

This study aims to identify the north Java coastal areas that are affected by abrasion, to presents the result in a map, and to calculate the level of socio-economic vulnerability of people living in the north Java coastal areas and also the seller who sale along beach

The methods employed in this research are geographical information system (GIS), Livelihood Vulnerability Index (LVI) and Benefit Cost Analysis (BCA). GIS needed to determine the characteristics of areas with bad climate condition. GIS basically is a special type of information system that considers the representation and manipulation of geographical realty.

LVI consists of seven main components: Socio- Demographic Profile (SDP), Living Strategy (LS), Health (H), Social Network (SN), Food (F), Water (W), Natural Disaster (ND), and Climate Variablity.,

BCA used to prepare a policy scenario. The selection of project needs to be done due to the limited funds, time, and reaources in finishing a project. The selection is performed to ensure that the selected project will provides maximum benefits from the available opportunities inside investment ability border.

People living in the north Java coastal areas and also the seller who sale along beach have high level of socio-economy vulnerability. Mitigation on abrasion needs community awareness, both of people who lives there and people who sale along the beach. Government also has responsibility to mitigate the impact of abrasion in coastal areas.

Anatomy and The Effect of Capture Fisheries' Business Competition on The Level of Proserity of Costal Community a Case Study in Puger, Jember, East Java

Gigih Pratomo
Wijaya Kusuma Surabaya University, Indonesia

It is commonly recognised that Inhabitants who reside in the coastal area are considered with the poverty issues due to the lack of education, knowledge, the productivity and the source of income (Sigalla, 2014). The research aims to observe the anatomy, the patterns and the effect of capture fisheries' business competition on the level of prosperity of community in the coastal area in Puger, Jember, East Java. The methodology approaches used is a qualitative method whereas determining the key-informants based on snowball sampling method. The findings indicated that capture fisheries were much dominated by fishermen who had a large amount of capital in which eventually created an unfair competition between the small-scale fisherman and the big-scale fisherman. In addition, the big-scale fisherman had an exclusive zone in terms of fishing activity, conversely, others were restricted to explore and exploit. Territorial water, therefore, revealed the main regulation reflecting in the domination of illegal institutional in capturing fisheries' business rivalry in Puger. Moreover, the small-scale fisherman underwent challenging circumstances to halt the illegal institutional considering most of them as labour and having a loan to the big-scale fisherman. Consequently, the detrimental effects of competition were hard eradicated because small-scale fisherman experiencing the poor of infrastructure either physic or non-physic since the model of institutional had built by the big-scale fisherman. Ultimately, regarding the exploitation, the fisheries yield, and coastline territory, influenced on the lower income and much less prosperity for small-scale fisherman.

Regional Connectivity
PAR O1: Regional Connectivity

Dynamics of Indonesia's Seaport Funding through Scheme
of Public Private Partnership

Felix Wisnu Handoyo
LIPI, Indonesia

Indonesia's infrastructure spending doubled from 2014 to 2015. Since 2015, it has been steadily increasing to reach Rp.387 trillion in 2017. Nevertheless, the government still needs additional funding on this sector. Assuming that spending on infrastructure is approximately five percent of Gross Domestic Product (GDP), Indonesia still needs around Rp.584 trillion in 2017. In total, for the five-years period from 2015-2019, Indonesia needs around Rp.2,931 trillion for investment on infrastructure. On the other hand, if the spending grows at an average of 15.64 percent from 2015 to 2019, there is a shortage of around Rp.970.30 trillion in this period. This gap can be filled by private investment. Private public partnership (PPP) is one of the ways to invite private investors to contribute to public infrastructure development. In 2019, the government aims to build 306 new seaports in Indonesia. Focus now is how to realize the investment on seaports under fund constraint.

This research uses case studies in several areas such as Jakarta, Bali and Central Kalimantan. We use quantitative and qualitative research methods. In the quantitative method, we use an econometric model to analyze the impact of economic and social infrastructure is about people's satisfaction and welfare. In addition, we also use the qualitative method by interviewing and observing the respondents.

The result shows no success in the PPP funding scheme in seaport development. There are several reasons for this. First, there is an overlap in the regulations on PPP scheme on seaports. The overlap happens between the seaport's acts and the government regulation on who will be the government contracting agency (PJPK). The government regulation says that the government contracting should be a minister or head of government institution or head of governor. On the other hand, the seaport act says that government contracting agency is port business entities. Second, there are different interpretations of the regulation among the government institution. The differences make them one against another. As a result, the process of PPP in seaport takes much longer than the expectation of investors.

On the other hand, seaports, jetty-ports, and dry-ports have significant contributions on the welfare of the people connected with these infrastructures.

In addition, road and social infrastructures like schools and hospitals are also contributing to increase people welfare.

In conclusion, seaport development is one of important contributions to people's welfare because most of Indonesia area is surrounded by waters. However, the investment on seaport still depends on state budget, and there is no evident success of seaport investment through the PPP scheme. Therefore, the government has to encourage private investors to contribute to public infrastructure development especially in seaports. The contribution of the private sector can fill the lack of funds in infrastructure development especially in Indonesia's seaports.

Does Logistic of Sea Transportation Matters for Local Economic Development?: Case Study of Loading and Unloading Main Ports in Indonesia

Noldy Tuerah[1], Antonius Lambok Sihombing[2]
[1]Universitas Sam Ratulangi, Indonesia; [2]Badan Pusat Statistik

Limited basic infrastructure such as ports and fasilities, unscheduled sea transportation and connectivity, poor sea transportation management, and unintegrated system of national institutions dealing to manage the ports, become apart of creating high economic costs of sea transportation and connectivety.

Indonesia—an Archipelagic State—sea transportation and logistic have main role on distributing and mobilizing goods and services, and connecting to thousands islands from big islands to small islands. 2014, government of Indonesia declared that sea transportation or sea toll became national priority program to reduced distribution and logistic costs and to make available all necessary goods with affordable price in Eastern Indonesia.

The study aimed to explore how role of loading and unloading sea cargo services in the sector of supported transportation services growth in Indonesia from 2008 to 2015. The analysis divided into two approaches. First, to inform general analysis of how significant loading and unloading sea cargo services contributes to Gross Regional Domestic Product (GRDP), especially supported transportation services sub-sector. Second, to elaborate how much influence loading and unloading sea cargo services can affect the local economic development from perspective of supported transportation services sector. Moreover, analysis explain how much share of freight services to GRDP, in comparison islands of Sulawesi, Ambon, Papua (Sulampua) to islands in Sumatera and Jawa. The discussion achieved by prediction output from input output table of Indonesia in 2010 and assuming input ratio supported transportation services 2011-2015 is remainly constant. Output result of sub-sector supported transportation services in Sumatera and Jawa islands tends to be slowing down, from 6.26 percent in 2010 to 4.92 percent in 2015. While growth of supported transportation services from provinces in Sulawesi, Maluku, Papua had indicated relatively sharp increasing,

from 3.65 percent in 2011 to 6.82 percent in 2015. The growth of supported transportation services indicates that sea transportation program initiated by national government gives much influences to the sea line trading. Sea lines for goods and services distributions are more opened and accessible to remote islands. The analysis is strenghtened by the regression analysis by comparing the correlation of loading and unloading cargo services sector that had significant influenced to GRDP. Especially in sub-sector of supported transportation services. The output shows that in Jawa and Sumatera provinces loading and unloading cargo of international voyages had shared contributions in increasing activities of sub-sector supported transportation services growth, while loading and unloading cargo of domestic voyages had not indicated directly impact on activities of supported transportation services. This condition had indicated differently compared to Sulampua provinces, where showed that both loading and unloading cargo for domestic and international voyages had been sharing up to 70 percent to output of supported transportation services sub-sector. Thus, supported transportation services activities as apart of sea transportation have influenced to local economic development. Strengtherning sea transportation, supporting infrastrutures and facilities, improving port authority services, developing capacity building for human resources and port management, and scheduled domestic and international voyages reaching all main ports in remote areas are become local and national governments priority tasks.

Spatial Concentration of Domestic Container Transport of Indonesia

Nuzul Achjar
Universitas Indonesia, Indonesia

Under the buzzword of sea-highway, the Government of Indonesia has determined regular shipping lines that connect ten hub ports and fifteen feeder ports from the west to east direction and vice versa. The lack of regular shipping lines especially large scale cargo shipping to the remote Eastern Part of Indonesia has caused relatively high transport cost per unit of goods that triggered high price of consumers goods at the destination. The loading and unloading of cargo was heavily concentrated in the ports of Java such as Tanjung Priok of Jakarta and Tanjung Perak of Surabaya. Although the implementation of seaway has not yet been implemented effectively, the change in the concentration of sea transportation might follow the change in the regional production. The objective of this paper is to explore the concentration of domestic sea transportation of container in some major ports Indonesia in 2005-2015 using Gini Index, based on the domestic inter-ports of cargo transportation published by the Ministry of Transportation.

Keywords: spatial concentration, Gini Index, cargo transportation, sea-highway.

Regional Economic Growth and Air Transport Activities in Indonesia

Ibnu Syabri[1], Byna Kameswara[2]
[1]Dept of Urban and Regional Planning, Institut Teknologi Bandung; [2]Urban and Regional Infrastructure System Research Group

The possibility to use transportation infrastructure and transportation services widens opportunities for interaction. Several studies (i.e, Brueckner, 2003; Green, 2007; Percoco, 2010; Lakshmanan, 2011) have suggested that an economy may benefit from these opportunities for interaction by growing its output. In an increasingly globalizing world influencing not only cities but also rural areas, such growth effects might arise through air transport connectivity, in particular.

This paper empirically studies the contribution of air transport to regional economic development in Indonesia. Air transport is a critical link to regional, rural and remote areas in Indonesia. Air services provide important economic and social benefits but very little research has been done on assessing the value of regional aviation. This research provides the first empirical evidence that there is short and long run causality between regional aviation and economic growth. The authors analysed 108 regional airports in Indonesia in the last ten years from 2005 to 2015 to determine the stimulus impacts of regional air transport on regional economic growth.

This study find that a significant bidirectional influences between airport activities and regional economic growth; and the output effects of air services and airport infrastructure differ among airports. We suggest these causal relationships matter and should be considered more when discussing the role of the airport within regional, rural or remote areas in Indonesia.

Trade and Macroeconomy
PAR R3: Trade and Macroeconomy

Impact of Foreign Direct Investment (FDI), Crude Oil Price, and Inflation to Export in Five ASEAN Countries: Evidence From Indonesia, Malaysia, Philippines, Thailand, and Vietnam

Nanda Adhi Purusa[1], Nurul Istiqomah[2], Izza Mafruhah[3]
[1]Universitas Sebelas Maret, Indonesia; [2]Universitas Sebelas Maret, Indonesia; [3]Universitas Sebelas Maret, Indonesia

This study aims to analyze the impact of Foreign Direct Investment (FDI), crude oil price and inflation on exports in five members of the Asociation of South East Asian Nation (ASEAN), namely Indonesia, Malaysia, Philippines, Thailand, and Vietnam during the years 2004-2013. ASEAN Economic Community (AEC) which will be implemented in the near future is a challenging opportunity for countries in ASEAN to achieve increased prosperity. Therefore, an increase in productivity and international trade is an important thing that must be considered.

This study uses panel data analysis. Fixed Effect Model with Generalized Least Square method are employed. These results indicate that FDI and crude oil prices has a positive and significant effect on exports, while inflation has a negative and significant effect on exports. Nevertheless, each country has different constants, and show differences conditions of each country.

Increased productivity should be undertaken by all countries to increase exports of each country. Foreign direct investment can provide a solution to the lack of capital, so that the resulting products can compete in international markets. While the use of alternative energy should also be developed on the current conditions, because of the volatility in world oil prices were erratic. In addition, the government's role in controlling inflation is essential to reduce cost of production.

Foreign Direct Investment, Productivity Spillovers and Regional Development: Evidence from Indonesia

Kazutoshi Nakamura
University of Nagasaki, Japan

Foreign direct investment (hereafter, FDI) has been recognized as a key element of economic growth in many developing countries. Thus, policy makers in them are interested in attracting FDI from advanced countries. This is because FDI contributes economic development of host countries through job creation,

introduction of new production technology, absorption of new knowledge such as managerial skill and production control as well as direct capital financing. These beneficial indirect effects on local firms are known as spillover effects.

This study investigates the spillover effects of FDI on productivity of local firms in Indonesia using micro data of "Survei Tahunan Perusahaan Industri Pengolahan 2010 (2010 Annual Manufacturing Survey)", provided by Badan Pusast Statistik (Statistics Indonesia).

There are a lot of previous studies which found positive spillover effects of FDI in both developed and developing countries. Some studies have focused on Indonesia and also found productivity spillover effects of FDI. For example, Blomstrom and Sjoholm (1999) reports local firms benefit from spillovers, while the degree of foreign ownership doesn't affect the degree of spillovers. Similar results are shown by several studies (Sjoholm (1999), Takii (2004, 2005, 2009, 2011), Takii and Ramstetter (2005), Todo and Miyamoto (2006)). However, they only analyzed the period before 2003. Thus, recent situation is not clear, while structure of Indonesian economy has been dramatically changing.

Recently, some studies that examined the spillover effects of FDI have employed Quantile Regression (hereafter, QR) approach. QR approach enable us to capture heterogeneous effects of independent variable at different points of the conditional distribution of dependent variable. In addition, QR estimator is not only consistent but also robust for outliers. Considering these advantages, we employ QR approach in the empirical analysis.

Dependent variable in our model is labor productivity. As independent variables, we use capital intensity, foreign presence, firm size, export, import inputs and other control variables, as well as spillover variables. Spillover variables are shares of size measures (output, employment, fixed capital and fixed assets) originated from foreign ownership. Capital intensity is capital stock per employee. Foreign presence is captured by the ratio of equity owned by foreign firms or dummy variable for foreign owned firm. Firm size is categorized by whether the number of employees is more than 50 or not. Export is the shares of export value to total output, or dummy variables for exporters. Import inputs represent the shares of import inputs value to total amount of inputs. Other control variables are absorptive capacity (potential ability to absorb new skills and knowledge), quality of labor force which is calculated as the share of white color employees, Herfindahl index (degree of market competitiveness), and time, industry and region dummy variables.

Using variable set above, we investigate regional and industrial patterns of spillover effects of FDI. Our empirical results based on QR approach will be shown in my presentation.

Potential Costs and Benefits in ASEAN - European Union FTA For Indonesia

Aziza Rahmaniar Salam[1], Widyastutik Widyastutik[2]
[1]Ministry of Trade, Indonesia; [2]IPB

At the 13th ASEAN Economic Ministers (AEM)–European Union Trade Commissioner Consultations in April 2015, ASEAN and the EU agreed to enhance cooperation in the form of the ASEAN-EU Free Trade Agreement (ASEAN-EU FTA). This study aims to analyze the impact of the ASEAN-EU FTA to macro and sectoral economy of Indonesia. The scope of the research is to goods trade. This study uses 9th version of GTAP - 2015. The results of the simulations show that the ASEAN-EU FTA improves the welfare, real GDP and investment in Indonesia. The highest improvement of welfare, investments and real GDP is in 100% tariff reduction simulation (full liberalization), followed by decreasing of rates by 70% and the last 50%. However, the cost paid by Indonesia is the trade deficit. The highest deficit occurs in tariff reduction simulation of 100%, followed by 70% and 50%. Indonesia leading sectors that increased output are wearing apparel, leather, textile, raw milk and dairy products. While non leading sectors that increased output include cereal grains, vegetable, fruits, nuts, oil seeds, animal products, wool, silk, cocoons, forest, fish, meat products, vegetables oils and fats, mineral products, and motor vehicles. Sectors that experienced a decline in output are wood, paper, chemical, ferrous metal and metal. Although the rate decreased to 100%, exports to the EU are still hampered by the existence of non-tariff barriers, including a certificate of Sustainable Forest Management (SFM) for wood products, labeling for chemical products, pharmaceuticals, and cosmetics and REACH for chemical products. Efforts that can be done is to increase the standard and quality through capacity building and a mutual recognition agreement in overcoming regulatory differences between ASEAN in general (Indonesia in particular) and EU.

Tariff reform, inequality and poverty in Indonesia

Yessi Vadila, Budy Resosudarmo
Australian National University, Indonesia

Empirical studies on the nexus between trade liberalization and income distribution point to an anomaly in standard trade theory. The Stolper-Samuelson theorem argues that trade liberalization will benefit developing countries with abundant unskilled labour. Yet extensive empirical work has shown conflicting results. We investigate the impact of tariff reform as a main instrument of trade liberalization on income inequality in Indonesia using a panel dataset of 26 provinces for the period of 1977-2012. We find that relative inequality reduced more in regions that were exposed more to liberalization. Furthermore, the results also suggest that tariff cut is still an important element of poverty reduction.

Agriculture and Rural Development
PAR A4: Agriculture and Rural Development

The Performance of An Economic Institution in Rural Areas:
Findings From Milk Producers Cooperative in Dairy Farm Center

Yeti Lis Purnamadewi, Alla Asmara
Bogor Agricultural University, Indonesia

Indonesia's population living in rural areas is still relatively large, but tend to decline mainly due to urbanization. Based on Central Bureau of Statistics data (2015), the population in rural areas is around 70% in 1990 and then declined to around 50% in 2015. The attractiveness of urban and rural poverty is a major factor for the population leaving the rural areas. Milk producers cooperative (MPC) is one of economic institutions in rural areas it is still developing and is expected to improve performance of the business and the welfare of rural people, especially for MPC members. Nevertheless, some studies indicate that welfare of dairy farmers who generally become cooperative members has not been as expected, whereas the livestock subsector have an important role in ensuring self-sufficiency and food security. The ability of a cooperative in encouraging the performance of member businesses depends heavily on the institutional performance of the cooperative. Therefore, the general purpose of this research is to analyze the performance of MPC in West Java and East Java as the center of the dairy farm. The research was conducted by survey method so that the main data used are primary data collected through interviews using a questionnaire to the management and members of the MPC. The analytical method used include descriptive analysis and the importance of performance analysis (IPA). The study results show that in general there is the difference in MPC performance between in East Java and West Java as well as between the perception of management and members of the MPC. Generally, the institutional performance of the MPC in West Java is relatively high. In West Java, according to the IPA analysis considering also the importance of institutional variables shows that in the judgment of management, institutional variables that are important but their performances still need to be improved are capital and networks; while according to members' perceptions of these are member participation, networks and cooperative business. In East Java, the management considers that the institutional variables that are important but their performance still need to be improved is only capital; while according to the members assessment of these are the cooperative businesses, human resource development and organizational structures. In both study area, West Java and East Java, institutional variables that already have a good performance considering to the management and the members perceptions are the cooperative management

and services to the members. Specially in West Java in addition to these two variables that already have a good performance is the organizational structure

Keywords: dairy farm, institutional, MPC, performance, rural area

A Framework of Small-Scale Vegetable Farmers Business Model in Bandung Regency Indonesia

Sulistyodewi Nur Wiyono, Gema Wibawa Mukti, Dini Rochdiani, Sara Ratna Qanti
Universitas Padjadjaran, Indonesia

Vegetable food business today is flourishing along with the increasing of consumer preference towards health. Vegetable demand in modern market increases and raising the demand for the product at the grower level. The high demand is followed by the quality and quantity that are requested. Growers are required to send the high quality vegetables in a large quantity to the modern market as their buyer. In Bandung Regency, West Java, Indonesia, a large-scale business actors can easily meet the demands of the modern market suppliers due to the availability of capital in the provision of the required production of high quality products, but the producers with a small-scale business in vegetable is difficult to meet the demand of modern market. The use of system thinking with soft system methodology showst the action takers in developing the framework of the potential business of small-scale vegetable farmers groups. This model construction is made to reach market opportunities with their potential resources based.

Moral Hazard on Implementatiom of Crop Insurance in Indonesia

Suryanto Suryanto, Amelia Choya
Universitas Sebelas Maret, Indonesia

The objectives of research were to find out the indication of moral hazard cause of implementation crop insurance in Indonesia. Indonesia has already implement crop insurance with subsidy programme by Agricultural Ministry and full operated by Jasindo Insurance on 2016. Many farmers in Jawa Tengah regencies have implement this scheme, but many others have not covered by insurance yet. This research was conducted in Desa Macanan, Kecamatan Kebakkramat, Kabupaten Karanganyar.

This research used descriptive quantitative research method with multiple linear regression which is processed with Eviews 8 software. The data used in this research were primary data collected through interviews and observations. AMount of population sample is 411 farmer who lived in Desa Macanan. Proportion of farmer who paid premium for crop insurance was 41 percent and 58 percent wasnot paid premium or not include the scheme. Purposive sampling was used to take sample of this research. The sample in this research were 80

farmers in Desa Macanan, 34 farmers are participate in crop insurance and 46 farmers are not.

The result of F-test with α =5% showed that variable of land square, length of being a farmer, age, income, length of study and participation of farmers in crop insurance influence the farmers production cost. T test with α = 5% indicated that the variable length of being a farmer and length of study have no significant influence on production cost. While variables land square, age, income and participation of farmers in crop insurance positively influence production cost as moral hazard variable. The result of dummy variabe that used to diferentiate between behaviour of farmer with covered by insurance and farm without covered by insurance.

Alternative Livelihoods for Household Food Security:
Evidence from a Small-Island Fishing Community in Indonesia

Rus'an Nasrudin[1], Budy P Resosudarmo[1], Satoshi Yamazaki[2], Wardis Girsang[3]
[1]ANU, Australia; [2]University of Tasmania, Australia; [3]University of Pattimura, Indonesia

Communities living in small and remote islands often have to face a food insecurity situation. This paper aims to know the causal impact of having an alternative livelihood that could provide an additional income on household food security in the short run. This paper employs a random evaluation method to achieve this goal in the context of fishing communities in Kei Island, Indonesia. The sample population lives in a lagging and geographically isolated region, facing limited livelihood options and food insecurity. In the field experiment, we use a random real stake that represents an alternative livelihood that could generate an additional income as the treatment and changes in household perceptions of food security as the outcome measure. The results argue that higher weekly income enhances expected food security. A twenty-one percent of their permanent household weekly income increase lowers the food insecurity scale by 2.5 out of 15. Our result is relevant for a small island in Eastern Indonesia and as well as for similar settings elsewhere in the world.

Keywords: small island communities, food security, random evaluation
JEL: C93, Q18, O10

Financing Regional Development
PAR B4: Financing Regional Development

Role of Credit to Financial Inclusion and Public Welfare of Regional Development

Yesi Hendriani Supartoyo, Bambang Juanda, Muhammad Firdaus, Jaenal Effendi
Bogor Agricultural University, Indonesia

Financial inclusion strategy aim to achieve economic development goals, such as improvement of social welfare and achieving the stability of the financial system. Development of the financial sector and expand system of financial inclusion needs to be available business opportunities and potential market for the banking sector. Rural Bank actually has good prospects but still facing difficulties where Rural Bank are relatively small and only serve the local area. Credit will be an impact on such businesses to increase economic activity to improve the welfare of society. Based on regional economic growth indicators, credit acts as a stimulator of economic growth. The role of credit is very important to encourage the real sector's role as a derivative of fiscal and monetary policy. Credit has an important role in financing the economy. Rural Banks should be encouraged to contribute to the economic development, especially in areas underserved. Financial inclusion policies undertaken to improve public access to financial services.

Effect of Access to Microfinance and Economic Welfare

Ida Bagus Putu Purbadharmaja, I Ketut Sutrisna, Setyari Ni Putu Wiwin
Udayana University, Indonesia

The leaders of Southeast Asia countires have called for the formulation of a strategic plan to accelerate and realize the vision of doubling the financial inclusion in the ASEAN region in 2020. Regional approach for financial inclusion has been identified as one important factor for national development in many ASEAN countries. In addition, it has also become an important strategy to support the broader goals of regional economic integration as contained in the blueprint of the ASEAN Economic Community (AEC). The deepening of the financial sector is one of the main objectives in the AEC. It mainly affects the capital and capacity constraints on the financial system in several ASEAN countries, including Indonesia.

Lembaga Perkreditan Desa or LPD is a traditional micro finance institution in Bali. It's called traditional because they operate based on local government regulation which is roots from traditional village rules (namely awig-awig). Both of LPD strength and weakness lies on their limited operational areas within a traditional

village as tightly regulated in awig awig. Microfinance institutions, including the LPD, became the foundation to achieve the main goals of financial inclusion in Indonesia.

This study try to look beyond the influence of access to the LPD, through public perception point of views about distance, interest rate, and service to improve Balinese people welfare . Tests carried out using partial least square (PLS) to retrieve data from interviews of 200 respondents who become LPD customers. The results of this study are expected to provide further description whether access to the LPD affect the increase in the welfare of society, especially access to microfinance institutions.

What Drives Credit Participation in Fishery Sector? Case Study of Fishery Sector in Malang Regency and Cirebon Regency

Nika Pranata
Economic Research Center, Indonesian Institute of Sciences (LIPI), Indonesia

With two-third of its territory is covered by ocean, Indonesia has the second longest coastline (estimated around 54,716 km) in the world. Given this vast geographical potential, Indonesia's marine and fishery sector should have been become one of Indonesian economy backbones. However, in 2015, marine and fishery sector only contributed IDR 292 trillion or approximately 2.5% of the nation's GDP. In correlation with that, credit disbursement to such sector is also notably low. Within the last five years, in average, only 3% from total banks' credit channelled to marine and fishery sector. The main reason behind such problem is banks tend to avoid to fund businesses or actors (such as fisherman) of marine and fishery sector as they labelled them as high risk profile clients[1].

Thus, this study is designed to investigate factors determining credit participation in fishery sector by analysing data from 184 respondents (business actors in fishery sector) consisting of fisherman, aquaculture farmers, fish products retailers, fish products processors, and others. By utilizing logistic regression (logit) [2], result shows that ratio of income over expenses[3] (proxy of bankability level), asset ownership, year of starting business, and number of family members have significant and positive effect to credit participation. Moreover, different type of jobs also shown significantly has different effect to credit participation. Fisherman has the lowest probability to obtain credit from bank, whereas the highest probability belongs to aquaculture farmers. Interestingly, level of education does not have significant effect to credit participation as average level of education in fishery sector is considerably low.

This study aims to contribute both to policy makers and to the knowledge community. To policy makers, this study recommends two main policies: (1) intensify financial literacy program improvement in fishery sector as majority of

non-credit participant have never applied a credit proposal to banks with various reasons (2) Adopt ownership system of motorized vehicle to ownership of fishing boat to mitigate bank risk as ownership proof of motorized vehicle (BPKB) can be used as collateral. To that extent, BPKB is considered safe as a guarantee; one cannot sell her/his vehicle when the BPKB is held by banks. Regarding contribution to knowledge, this study will enrich literature related to financial inclusion particularly in fishery sector which currently trying to be boosted by the government. In addition, up to this study written there is no other studies attempt to identify determinants of credit participation in fishery sector.

[1] According to statements obtained from several focus group discussions and in-depth interviews between bank actors and research team of Economic Research Center – LIPI in 2016

[2] One is considered as a credit participant if she/he has ever obtained credit form bank, and vice versa.

[3] The higher the ratio the more bankable the person, ratio value of 2 indicating that his/her income is two times larger than his/her expenses

North Sulawesi Financial Inclusion Profile:
Determinant and Barriers

Novi V. B. Kaligis, Joubert B. Maramis
Sam Ratulangi University, Indonesia

Financial inclusion is a concept that connects financial or financing aspects with marginal communities in a region in order to minimize the gap between the rich and the poor to improve economic growth and the welfare of the community. Financial inclusion is closely linked, especially with the access of banks from small societies, so that financial inclusion is very important to be studied in more depth.

Many poor people are scattered in various districts of the city in North Sulawesi province. One way to empower them is to optimize financial inclusion. The purpose of this study, firstly, to analyze the effect of age, income, education and gender on financial inclusion. Secondly, what factors are the community's barriers to financial inclusion and thirdly, how are factors affecting financial inclusion. Respondents are communities and SME in some districts and cities in North Sulawesi Province with 173 respondents. Analytical techniques used are exploratory factor analysis, multiple regression and logistic regression. The results show income and education is significant on financial inclusion but have varying outcomes depending on the financial inclusion indicator. Lack of business management skills, loans problem in banks, lack of credit support facilities, bank location, religious reasons and the number of bank credit requirements are the respective barriers to financial inclusion.

Growth and Regional Development
PAR C3: Growth and Regional Development

The Role of High-tech Exports and FDI on
Economic Growth

Dion Jogi Parlinggoman Sirait, Mahyus Ekananda
University of Indonesia, Indonesia

Increasing exports is commonly considered to be a major determinant to the economy growth. This phenomenon is generally known as Export Led Growth. This can be seen from over the past 20 years, the growth of world trade has averaged 6 percent per year, twice as fast as world output (IMF report, 2009). As every country wants to have sustainable economic growth, they desperately striving to show that their products have better qualities than other countries. Specializes in some segments of the international provide better growth outcomes because of higher income elasticity or can be interpreted as a reflection of differences in the quality and intensity of technologies (Fagerberg, 1988; Dalum et al., 1999).

Sandu (2014) describes the high-tech industry has proven its strength in times of crisis. It displayed the highest growth rate of this industry compared to medium-high tech or low-tech sectors, among the European Union countries (Jaegaers et al., 2013). In addition, the fragmentation and specialization of industrial production provides an excellent opportunity for developing countries to increase exports and FDI. According to WTO (2011), FDI flows into Asia continued to increase, since the mid-1980s with a value of US $ 5 billion per year, in 1990 reached US $ 23 billion, and in 2008 reached US $ 307 billion. At the same time, export of intermediate goods by Asian countries rose from 26 percent in 1995 to 35 percent in 2009.

Earlier studies of economic growth models are generally characterized by macroeconomics variable using the behavior of capital, population, and exports. In fact, exports in each country have its own proportion in accordance with human capabilities and the availability of technology owned by the country. Thus, this study involves FDI, high-tech and non-high-tech exports, domestic industry, and GDP using the 50 countries in the period 1992-2014.

This study finds that there are positive impacts created by foreign and domestic investment in the country's economic growth in the 50 countries while the growth of labor has negative effects. Moreover, it is discovered that the non-high-tech exports is the only export sector on the entire sample of 50 countries which affects positively on GDP growth. Different condition occurs when the sample is divided into several groups with the percentage of high-tech export as the variable. These groups then will be filtered and 2 groups of countries (the non-high-tech and the high-tech countries) will be left for further testing. For both

groups, high-tech exports clearly affect GDP through their productivities. Given this point, high-tech export industries in both countries have better productivity compared to domestic industry.

Economic Crisis and Capital Structure

Dimasti Dano, Achmad Hidayat
FEB UNPAD, Indonesia

The influence of economic crisis in 2008 on capital structure of Indonesian firms is a very interesting study. This study aims to investigate the influence of independent variable on the optimal laverage of firms in Indonesia in non crisis period and in crisis period, and to investigate their speed of adjustment.

This study is performed on 234 firms (total firms) and 34 firms that were under financial distress. All of them are registered in Indonesian Stock Exchange during period of 2005 to 2011. The 34 firms are part of the total firms. Optimal Leverage is measured by mean of debt ratio of firms. The estimation were done based on GMM first difference.

The results of this research are as follows. Both total firms and finanial distressed firms show difference of leverage in non-crisis period and in crisis period, which financial distress firms show significant difference. Relatively stable Indonesian macroeconomic condition with relatively limited effect of crisis, presumably, causing no significant different of leverage over total firms. Financial distressed firms show significant different of leverage, presumably, because they have increased their debt proportion or asset selling.

Coefficient value of Profitability on both total firms and financial distressed firms is negative and significant. It shows that profitable firms will have lower leverage. Coefficient value of Liquidity on both total firms and financial distress firms is negative. Which means it support the Pecking Order theory, which state that internal financing is the first step on capital structure of firm. In this study, coefficient value of Growth on both total firms and financial distress firms is negative and significant. Growth is the capital asset that can be an added value for the firms, but could not be used as collateral to obtain fund. In this study, the macroeconomics variables are BI Rate and GDP. BI Rate on financial distress firms shows coefficient value of positive and significant. This means that the increase of interest rate is generally well tolerated on the business. GDP on both total firms and financial distress firms shows coefficient value of positive and significant. This finding indicates that in a good economic conditions (represented by GDP), the firms are trying to increase their leverage.

Financial distress firms tend to show low speed of adjustment. This is, presumably, because the firms was having finnacial difficulties to achieve the optimal leverage.

Keywords : capital structure, optimal leverage, speed of adjustment, economic crisis, financial distressed firms

The Spatial and not Spatial approach in
Special Economic Zone (KEK)

Joubert B. Maramis, Victor P. K. Lengkong, Elizabeth Lihang
Sam Ratulangi University, Indonesia

Being a serious problem at this time that special economic rzone (KEK) Bitung has been determined based on Government Regulation (Peraturan Pemerintah) Number 32 Year 2014 About Determination of Special Economic Zone (KEK) Bitung, but in the development of local government seems slow in responding. One of the causes of this problem is the lack of understanding of the spatial and non-spatial aspects of regional development by local governments, and even all relevant stakeholders. Spatial aspect is related to zonation, while non spatial aspect is a discussion of potential analysis, both infrastructure and non infrastructure. This study is expected to provide information on how the description of spacial on KEK Bitung, and how the non-spatial concept, The existing condition and infrastructure and non-infrastructure needed in KEK Bitung, and how is the development strategy of KEK Bitung?

Regional Development Strategy for Archipelagos

Eksa Pamungkas, Irlan Adiyatma Rum, Yayan -, Estro Dariatno Sihaloho
Padjadjaran University, Indonesia

Regional Development is inseparable from Development of National Development. Growth of National Development will bring positive impact for regional development, but depends on the ability of the Region to grow. At one time there may be an increase in national development but not followed by development in an area. The ability of regions to develop into a determinant factor in the improvement of regional development. The area will grow based on the condition of existing resources.

The purpose of this study is to develop a development strategy that is appropriate to the existing regional conditions. The existing regional conditions certainly affect how the area develops, which must be based on existing resources and development planning itself.

This research develops development strategy in order to accelerate development growth. The emerging strategy is expected to be the driving force for development to grow faster.

The methodology used in this research is 1) compiling the matrix of Strength Weakness Opportunity Threat, 2) arranging economic model based on local wisdom through Focus Group Discussion, 3) conducting micro survey, data validation and mapping behavior, 4) doing scenario planning with Business analysis As Usual and Acceleration Strategies

Infrastructure Development
PAR H1: Infrastructure Development

Infrastructure Condition and It's Impact on Tourist Intention to Revisit : an Empirical Study at Marine Tourism Object of Maluku Province

Saul Ronald Jacob Saleky, Deflin Tresye Nanulaitta
Ambon State Polytechnic, Indonesia

As an archipelagic province, Maluku has many tourism object, and mostly is marine tourism. The Governments of Maluku aims to promote their tourism sector, as it is one of the sources of local revenue. Infrastructure has a main function as a support parts in tourism industry. The aims of this study is to analyzed the impact of infrastucture condition on tourist intention to revisit in marine tourism object at Maluku Province. This is a quantitative research and conducted in three months in 2016. Variables of this study is infrastructure factors, namely guests house, tourist information center, and transportation as independent variable. Then tourists satisfaction as mediated and intention to revisit as dependent variable. The data was collected used questionaire which distributed to 255 tourist from home and abroad. The data compute used SPSS 21 and analized use Path Analyzes. The results shows that transportation and guest house has a highly impact to tourist satisfaction and intention to revisit. This results indicate, if the government need to get more local revenue from marine tourism, they must pay some attention to developed transportation and guest house at each object.

Infrastructure in Heterogenous Society – Eastern Indonesia Post Decentralization Analysis

Matondang Elsa Siburian
Graduate School of Economics Waseda University, Direktorat Jenderal Pajak Kementerian Keuangan Republik Indonesia, LPDP Scholarship Awardee, Japan Economic Policy Association (JEPA)

Eastern Indonesia has different characteristics compared to the rest of the country. It consists of archipelago regions that become the home of the most heterogenous ethnic groups, which also known to have poor performance on regional development. After decentralization, Eastern Indonesia is still considered as late comers in term of provision of infrastructure compared to the rest of the country. Review on infrastructure in this region is limited only to descriptive analysis within government agencies or brief reports on national newspaper, empirical study is very rare in this area. The objectives of this study are: 1) to find the significance of decentralization, geographic factor, and demographic

factor to the provision of infrastructure, and 2) to assist local government with policy recommendations in providing infrastructure in Eastern Indonesia based on empirical analysis.

To achieve these objectives, this study employs the measure of income distribution, decentralization (balancing fund and local own revenue fund), and also taking into account specific geographic and demographic characteristic in Eastern Indonesia that differs from other region as explanatory variables. Geographically, this region consists of archipelago (small and scattered islands) and mountainous topography. Demographically, Eastern Indonesia region is considered as the most diverse society in term of difference in ethnicity compared to other regions in the country. Geographic factor is proxied by area width of each province in this region, while ethnic fractionalization index is used to measure the diversity of society. Proxy of infrastructure variables in this study cover infrastructure from several sectors such as education, health, housing, transportation, and energy.

Observing fourteen years available data of local governments in this region, this study argues that balancing fund significantly affect most infrastructure sectors, while local source revenue only affect education and health sector. Interesting result in this study is that both geographic and demographic factors seem to discourage the provision of infrastructure in all sectors. Geographical factor may negatively affect the provision of infrastructure due to challenging geographical conditions of this particular region. Ethnic diversity may hamper the provision of infrastructures in different way in each infrastructure sectors. In education sector, diverse society may lessen the effective learning time due to extra time and resource needed to facilitate more ethnically diverse students; diverse society may cause less trust between people and local governments in delivering health infrastructure; in providing transportation and energy infrastructures; diverse society may have different value/belief system that create different behaviour towards provision of public infrastructures such as road and power plant.

This study also proposes several policies related to these findings to assist local governments to provide necessary infrastructures to meet the needs of local people, while at the same time also acknowledge its distinguished characteristics.

The Success Factors of Public Private Partnership Implementation for Infrastructure Development:
The Case of Indonesia 2009-2015

Risman Mohammad Rizal[1], DS Priyarsono[2], Heny K Suwarsinah[3]
[1]Graduate Program of Management and Business, Bogor Agricultural University, Indonesia; [2]Department of Economics, Bogor Agricultural University; [3]Department of Agribusiness, Bogor Agricultural University

Infrastructure is a key factor of economic growth and distribution because it has a direct impact on production and consumption level in a country. At the global level,

infrastructure is a factor of competitiveness of a country. Based on the Global Competitiveness Index (GCI) 2016-2017, Indonesia's competitiveness is ranked 68 among 138 countries in the world. The GCI indicated that the infrastructure was the third most problematic factor for doing business in Indonesia.

By its nature, infrastructure supply requires huge investment and takes a long period of time to develop. Indonesian Government has set development goal in which infrastructure is one of the main instruments to foster national economic growth. Nevertheless, government's financial capacity is so limited that it is not sufficient for financing all infrastructure development projects. That is the reason for the government to invite the private sector to participate in the infrastructure development projects. The scheme for the cooperation between the government and the private sector is called Public Private Partnership (PPP).

Every year the government publishes a list of infrastructure development plans that are ready to be executed under the PPP schemes. Every plan in the list is a result of a feasibility study conducted by the Ministry of National Development Planning. Most of the plans, however, fail to be executed under the PPP scheme. A planned project is considered as successful if it is executed under the PPP scheme. Conversely, a planned project is considered as unsuccessful if it is not executed within the planned period of time or it is executed timely but under alternative schemes.

This paper reports the results of an econometric analysis (i.e., logistic regression analysis) to identify the factors that are responsible for the success of the infrastructures development plan under PPP schemes in the years of 2009-2015. It was found that the responsible factors were the type of contracting agency, the value of the investment, government supports, results of cost-benefit analysis, and the economic sector to which the infrastructure belongs. In addition to the results of the econometric analysis, this paper also reports the results of a literature survey on related topics about the current progress of the implementation of PPP schemes for infrastructure development in Indonesia.

Infrastructure Development In Accelerating
Tourism Development in Northern Bali

Made Heny Urmila Dewi[1], Ni Putu Martini Dewi[1], Putu Krisna Adwitya Sanjaya[2]
[1]Universitas Udayana, Indonesia; [2]Universitas Hindu Indonesia, Indonesia

Northern Bali region has abundant tourism resources. However, tourism development in this area seems to be hampered, and has not yet contributed to the improvement of local people's economy. One of major reasons for this is on the provision of tourism infrastructure, which is still notably limited. This study is aimed at mapping the needs of infrastructure for tourism, which can advance tourism development in general, which, at the end, is expected to be contributing to local people's welfare in Norther Bali region.

This research is carried out in northern part of Bali Island, which administratively covers the area of Buleleng Regency. The data obtained in this study are from both primary and secondary sources. Respondents involved in this research are 150 people, and 20 people involve as interview informants. Primary data are collected by utilizing three instruments, namely the distribution of questionnaires, in-depth interview, and non-participant observation. Meanwhile, the data are analyzed using the techniques of analytical descriptive analysis, descriptive statistical analysis, and SWOT analysis respectively.

This study indicates that infrastructure needed in order to accelerate tourism development in Northern Bali are: (a) advancement of short-cut road in the central and eastern area of Buleleng Regency, which can shorten the distance from the province capital of Denpasar to Northern Bali; (b) the provision of centers of tourist information; and (c) provision of road, clean water, electricity, and telecommunication infrastructures that reach all villages, especially those which have been designed as rural tourism attractions.

The availability of sufficient tourist infrastructure can further accelerate tourism development in Northern Bali region, and, as the result, can contribute to local people's welfare in the area.

Institutions and Governance
PAR I1: Institutions and Governance

Stock Market Volatility around Political Contest in
Indonesia, 2009—2014

Nadia Fitriani
SurveyMETER, Indonesia

Political uncertainty around national election is risky for the economy as there is political regimes' changes. The 2014 National election was believed to be more competitive compared to previous elections. Partai Demokrat (PD), the incumbent party, was experienced electability decline due to a series of corruption cases which entangled its cadres in 2011—2013. This condition pertained the rise of competency and lead competitor parties to rise.

The "Jokowi Effect" was one of the events that well documenting the rise of the PD's competitors. On 14 March 2014, there was a positive response from the capital market due to the nomination of Joko Widodo as president candidate from Partai Demokrasi Indonesia Perjuangan (PDIP) .This effect also created positive preference towards the party. Later, the national competition culminated as there were only two pairs of candidates for the national presidential elections—Prabowo Subianto and Hatta Rajasa collided with Joko Widodo and Jusuf Kalla.

Furthermore, several researches have shown that political dispute around national election have the effects towards the economy. Savita and Ramesh (2015) found that there were market reactions during the election period and regime change for 30 listed companies during India 2014 national election. Siokis and Kapopoulos (2007) also found the similar thing in Yunani during January1987—June 2004. On the other hand, similar researches are still limited in Indonesia.

This study aims to determine the relationship between political contest on the 2009 and 2014 national election with return volatility of Indonesia capital market on 5 January 2009 – 30 December 2014. This study also tries to analyze whether there was different effect during the 2014 national election. Lastly, the study want to confirm whether national presidential election brings greater effect towards volatility of the capital market.

Data is assembled from national daily stock market index during 5 January 2009– 30 December 2014 from Bloomberg. Variable political contests are represented by dummy (1=day where political events[1] occur, 0=the otherwise). The variables are estimated using Generalized Autoregressive Conditional Heteroscedasticity (GARCH) after cleared from unit root and heteroscedasticity problem.

It is found that political contest around 2009 and 2014 national election has no effect on return volatility in the capital market. It is also found that the 2014

presidential national election had a stabilization effect for the political contest's risk and lower the volatility.

[1] days where political activities occur (i.e. legislative campaign, legislative election, presidential campaign, presidential election, announcement, and other days where political activities occur)

Informal Institutions and the Challenges for Collective Actions: Some Evidence from Batik Industry Clusters in Indonesia

Prihadi Nugroho
Diponegoro University, Indonesia

For generations, the Indonesian batik industry has brought forward a salient feature as a home-based family business enterprise rooted in local traditions. The strong relationships between individual family business linkages within a particular social network have led to the building of peculiarities in the local community institutional framework. On one hand, it serves for the sustainability of the so-called batik cluster organisation where the external economies could be generated from business colocation. On the other hand, it facilitates (dys-)functional collective actions for promoting horizontal and vertical linkages. From a theoretical viewpoint, building cluster organisation necessitates collectivity to lubricate commonalities and complementarities of the co-located firms for generating localised external economies. This paper aims to discuss challenges in developing a solid institutional framework for sustainable inter-firm cooperation. A number of batik industry clusters in Central Java Province have been observed by using qualitative case study method in order to figure out the interplay between formal and informal institutions in directing the local community institutional framework. Field notes and in-depth interviews conducted with the key informants have been completed to complement reviews on statistical data publications, government reports, previous studies and media exposures. Some evidence demonstrates that the embedded socio-cultural and socio-spatial characteristics of the local traditions might have encouraged the persistence of informal institution more influential than the formal one. Despite elevated confusions in batik cluster development policy making, such circumstance contributes to brand making and the uniqueness of the local batik industry distinguished from competitors. Furthermore, narrative story-telling of the local batik industry could be beneficial to value-adding of its broader promotion.

The Influence of Corruption & Global Competitiveness on Foreign Direct Investment : a Cross-country Panel Data Analysis

Rucita Rahmah Ramadhiani, Heriyaldi Heriyaldi, Ratni Heliati
Universitas Padjadjaran, Indonesia

This paper was conducted to investigate and measure the influence of Corruption Perception Index (CPI) and Global Competitiveness Index (GCI) toward Foreign Direct Investment in ASEAN countries. The CPI is the robust indicator to measure corruption among the countries which is published in 1996 by Transparency International. By estimating panel data on 6 (six) countries in Southeast Asia countries between 2006 to 2015, we examined through Fixed Effect Model (FEM), whether CPI and GCI influence to FDI. The empirical evidence clearly indicated that CPI & GCI has a statistically significant influence on increasing FDI. Furthermore, another interesting result has been found, the magnitude of CPI was larger than GCI. In conclusion, reducing corruption is more important to increase FDI rather than increasing competitivesness level.

The Factors That Cause Fraud In Regional Financial Management: Case Study On North Sulawesi Province Government

Ivonne S. Saerang, Karamoy Herman, Victor P. K. Lengkong, Frederik G. Worang, Ferdy Roring
Sam Ratulangi University, Indonesia

The phenomenom fraud in the states or regional financial management becomes a topic never runs out. This study try to examine a number of factors that cause a fraud in regional financial management. Particularly with respect to the distribution of social assistance before and after the local elections in several districts of the city in the province of North Sulawesi. Data collection is based on depth interview technique to a number of key informants related to the distribution of relief aid policy makers, distributors and recipients of socialassistance. The results are expected to provide benefits to the government, KPU, Bawaslu for matters related to the distribution of relief aid.

Inter-Regional Disparity
PAR J1: Inter-Regional Disparity

Fiscal Disparities in a Decentralizing Indonesia

Takahiro Akita[1], Awaludin Aji Riadi[2], Ali Rizal[2]
[1]Rikkyo University, Japan; [2]Ministry of Finance, Indonesia

In order to mitigate inter-regional inequalities and cope with periodic secessionist movements, Indonesia embarked on the so-called 'Big Bang' decentralization. Under the law on fiscal decentralization (Law 25/1999), implemented in 2001, autonomous region subsidy (SDO) and presidential instruction development grants (Inpres) were replaced by inter-governmental transfers, including general allocation grants (DAU), special allocation grants (DAK) and shared revenues from natural resources and taxes (DBH). Revenues of regional governments now consist of these inter-governmental transfers, own source revenues (PAD) and regional government borrowings. Each of these fiscal revenues varies across regions (provinces and districts). However, the extent of regional variation differs between revenue sources. DBH from natural resources and taxes has a dis-equalizing effect on fiscal revenue due to the uneven spatial distributions of natural resources and tax bases, while DAU per se serves to equalize fiscal revenue across regions relative to population size, land area and some other socioeconomic indicators. On a per capita basis, therefore, DBH should have a much larger regional variation than DAU. Against this backdrop, this study attempts to analyze the evolution of inequality in per capita fiscal revenue among regions (hereafter, fiscal inequality) from 2001 to 2012 in Indonesia based on provincial and district-level fiscal revenue data. It also explores the determinants of fiscal inequality by the method of inequality decomposition by revenue sources. An inequality decomposition analysis is conducted by using the Gini coefficient and the coefficient of variation, as these indices are additively decomposable by revenue sources and satisfy several desirable properties as a measure of inequality, such as anonymity, income homogeneity, population homogeneity and the Pigue-Dalton transfer principle. Numerous studies have been conducted to analyze the evolution of inter-regional inequality in Indonesia as large disparities still exist among regions. However, most previous studies have examined income or expenditure inequalities among regions using regional accounts or household survey data. To the best of our knowledge, no studies have yet analyzed the determinants of fiscal inequality among regions by the method of inequality decomposition by revenue sources. Decentralization is expected to make the government closer to the people, thereby ensuring the effective and efficient provision of public services in line with local needs and costs. Indonesia's decentralization was implemented in an attempt to mitigate inter-regional inequalities. However, its effects remain uncertain. As the world's

largest archipelagic country, whether fiscal decentralization increases/decreases inter-regional inequalities is one of the most important policy issues.

Regional Income Disparity in Indonesia:
Comparison between Kabubaten and Kota

Hiroshi Sakamoto
Asian Growth Research Institute (AGI), Japan

This study investigates regional income disparity using county level GRDP and population data in Indonesia for over 30 years to 2014, instead of using provincial data. It is helpful to understand more detail evidence of the disparity, including population change among regions. Especially in this study, we compare income disparity for two kinds of county, Kabubaten (regency) and Kota (municipality). The disparity is analyzed using the same Theil decomposition and distribution density approach as before. These two technologies are useful to understand the regional structure of the disparity. For example, Theil index is possible to decompose the regional disparity of Indonesia into Kabubaten and Kota disparity, and inter-provincial disparity. Income distribution can also be estimated by a density curve in each geographic division.

Disparity is in the reduction tendency overall and conspicuous after 2000. The disparity between Kabubaten tends to shrink, whereas the disparity between Kota tends to expand. Moreover, the income distribution structure between Kota has become diversified. Reduction in disparity between Kabubaten is due to the disparity reduction in Sumatra and Java. Expansion in disparity between Kota is due to the widening of the disparity in Java. On the other hand, in the eastern three regions (Kalimantan, Sulawesi, Maluku and Papua), the disparity is widening both Kabubaten and Kota, but the population ratio is small, so the impact on income disparity in Indonesia is small.

Furthermore, in this study, we examine the income and population data of Kota in Java and verify the factors of widening income disparity. We will also verify the eastern three regions where the disparities are expanding.

Composite Leading Indicator of Economic Growth in
Banyuwangi Regency, Indonesia

Ciplis Gema Qori'ah[1], Adhitya Wardhono[1], Yulia Indrawati[1], M. Abd. Nasir[1], Gde Agus Dwijaya Kusuma[2], Elizabeth Marito Sagala[2]
[1]University of Jember, Indonesia; [2]Bank Indonesia

The movement of economy cannot be separated from business cycle. The movement of the business cycle can be seen from the movement of economic growth which can provide the overall economic situation. The movement of Gross Domestic Product (GDP) from time to time experiences a phase of expansion and

contraction. GDP growth cycle fluctuations cause uncertainty for the economy's performance so it is difficult to determine policies or anticipates movements of growth direction. Composite Leading Indicator (CLI) is needed to know when the economy will expansion and contraction. Banyuwangi is one of the regencies with the highest achievement of GDP value in East Java. The average rate of economic growth in the last five years of Banyuwangi was higher than the average growth in East Java.

The method used in forming a leading indicator of Bry Boschan method is by observing the data period from M1.2010-M12.2015. This method is used to determine the turning points after series of data are stated clear from seasonal elements, irregular, and trends. The algorithm of this method can identify the local minimum and maximum values of individual time series and the movement around these values forms basic identification of turning points.

The results show that Composite Leading Indicator (CLI) with series of Gross Domestic Product (GDP) reference in Banyuwangi Regency is a variable of real sector, i.e government consumption, the production of big chili, production of small chili, paddy, fish, cocoa, number of employees, the number of motorcycles, the number of bus public transports. While the banking sector is the number of third-party funds, capital loans, consumer loans and non-performing loans (NPL). Price sector is inflation and sugar price. The external sector is total exports, export of wood products and sardines export. The turning point for the Composite Leading Indicator (CLI) with series of reference to GDP produces average turning point of eight months and it can be used as a potential turning point for the movement projections of GDP to several months ahead.

Regional Disparity and the Polarization in Transformation of Regional Economic Structure in Indonesia

Ernan Rustiadi[1], Alex Octavianus[2], Jumadi Adi[1], Andrea Emma Pravitasari[1]
[1]Bogor Agricultural University, Indonesia; [2]the Ministry of National Development Planning, Republic of Indonesia,

During the last three decades, the Indonesian economy has experiencing some significant economic achievements despite a depressed economy in the late 1990s. The economic transformation has also characterized by persistent regional disparity. This research aims to study the polarization of regional economic development in Indonesia, as well as the polarization in the transformation of regional economic structure over the period 1980-2015. This research was conducted by observing the the change of shifting direction of some regional economic indicators such population growth, economic growth, poverty rate and sectors' share on gross domestic product. During this period, there was no significant change in terms of population's distribution, since more than 55 percent of the population were concentrated in Java island. The island has a better level of welfare in terms of access to basic public services, otherwise people of Papua island persistently have the worst access. In terms of poverty reduction, the island of Kalimantan has progressed most rapidly. Java Island is the only island

experiencing significant industrialization, but in the last ten years has been facing a declining trend. Except Papua, all regionsvthe were experiencing decrease trend of agriculture sector's shares. Regional development requires diverse approaches and strategies to create convergence and balanced inter-regional development.

Natural Resource Management
PAR L4: Natural Resource Management

Estimating The Economic Value of Coastal Area: Case Study Mangrove Forest in Kulon Progo Yogyakarta, Indonesia

Endah Saptutyningsih, Septina Dwi Lestari
Universitas Muhammadiyah Yogyakarta, Indonesia

Coastal ecosystem consists of coral reefs, beaches and sand, estuaries, and mangroves. Mangroves can serve as natural protector for erosion, flood and storm, and play a role in reducing the impact of pollution from land to the sea. Besides its ecological functions, mangrove forest is also potential for ecotourism development due to its unique condition by preserving the originality of the forests as well as its organism. Mangrove forest area in Kadilangu, Kulon Progo is one of tourist attractions that presents a beauty of nature as well as serves as mangrove conservation and education-based travel. There has been a rapid increase in the number of visitors to the Kadilangu mangrove forest during the 2016. Forest management has been a concern, especially in potential damage due to the increased of visitors. Policy options to increase revenue remain unclear because of a lack of information on demand parameters and user costs.

This study estimates the economic value of the mangrove forest using the travel cost method (TCM) and the contingent valuation method (CVM). Purposive sampling technique was applied in selecting the respondents. Data were collected using well-structured questionnaires.

This study found that travel cost and distance to mangrove forest have a negative and significant relationship (p<.05) with the tourist's number of visit to the area. Meanwhile, income has a positive and significant relationship (p<.05) with the tourist's number of visit. There is an inelastic demand such as that a one percent increase in travel costs resulting in a less than one percent decline in the number of visits to the mangrove forest for the specified model. Elasticity coefficient estimation provides information with regard to the visitor responsiveness to small changes in prices (both, entrance fees or travel cost components) or income. The consumer surplus estimation for individual visitor of the mangrove forest is less than ten million rupiahs. The consumer surplus calculation allows the comparison of the social benefits derived from this type of activity with its costs, which may help to assign public resources in a more rational manner. This study suggests that free educative infrastructures and facilities that can reduce recreational cost need to be put in place.

Earthquakes and Housing Prices in Urban Indonesia:
a Hedonic Price Analysis

Aloysius Gunadi Brata, Yenny Patnasari
UAJY, Indonesia

Empirical studies about the impact of earthquakes on the housing prices in Indonesia are still rare, although in last decades some cities in this country experienced large earthquakes. It is known that the earthquake disasters is one of the dominant natural disasters in Indonesia. Some earthquakes in Indonesia are widely known as deadly and costly natural disasters: the Aceh earthquake and tsunami in 2004, the Yogyakarta earthquake in 2006, Pangandaran earthquake in 2006, and Padang earthquake in 2009. Therefore, cities in this country are also vulnerable to natural disasters, including earthquakes. This issue is becoming more important as cities in Indonesia are among the fastest growing cities in the world. By 2025, according to the World Bank, Indonesia will have 68 per cent of its population living in cities or urban communities. To investigate the influence of the earthquakes on housing prices in urban area in Indonesia we use a hedonic price method on household data from the Indonesian Family Life Surveys (IFLS). This IFLS data represents about 83 per cent of the Indonesian population and contain over 30,000 individuals and more than 10,000 households living in 13 of the 27 provinces in the country. The monthly rent of the house will be used as a proxy of housing price while some indicators of earthquakes will be produced based on the IFLS data. Besides, we also add a set of variables representing interior characteristics of the house and a set of variables related to the external aspects of house.

The Key Sectors in CO_2 Emission in Indonesia Before and After Decentralization Era: an Input-Output Analysis

Viktor Pirmana, Irlan Adiyatma Rum
Center for Economics and Development Studies, Faculty of Economic and Business, Padjadjaran University, Indonesia

This research is intended to identify changes in key sectors in CO_2 emission before and after decentralization era in Indonesia. We use input-output method for mapping the biggest polluting sector/industry in CO_2 emission. By identifying the highest output multiplier, CO_2 emission and change of final demand can be known from each of sectors. The research results show that there is emission reduction in the fifteen key sectors over the analysis period, but there is no significant change in the five key sectors that are still the highest polluters.

Towards More Efficient Domestic Fishery:
a Stochastic Frontier Analysis

Eko Wicaksono, Yuventus Effendi
Ministry of Finance, Indonesia

In line with the new vision of Indonesia under President Joko Widodo administration, to become the maritime axis between Pacific and Eastern Indian Oceans, the Indonesian government is eager to eradicate illegal fishing in its territory. The enormous number of illegal boat apprehended indicates how great the recent effort is. Reducing illegal fishing in Indonesia simply implies a significant reduction of competition among foreign and domestic fishermen. Moreover, fewer boats in Indonesian means higher fish supply which lead to higher catch volume. The wild catch volume is essential not only for the fishermen since it is related to their income, but also for the government in determining the non-tax revenue based on caught volume. This study argues that, with fewer distractions from the foreign fishermen, the domestic fishermen should perform better, in term of catch volume. This study is aimed to investigate the level of efficiency as well as the determinants of inefficiency among fishermen household across Indonesia. The capability of fishermen to catch efficiently is one important factor which determines wild fish production. Without proper identification of inefficiency determinants, the contribution of the fishery sector to Indonesian economy as well as government revenue remains subdued. The methodology of this study is to utilize a production function, which included fishermen efforts and capital as inputs. In order to estimate the production function, this study employs a stochastic frontier analysis which enables further examination on the inefficiency determinants in fish production. This study exploits Indonesia Family Life Survey 2014 which covers more than a hundred of fisherman households. The results indicate that fish production depends significantly on the number of crew and type of boat as expected. In term of inefficiency, this study claims that ownership of a cell phone is a significant determinant to reduce inefficiency, followed by ship ownership and the value of fishing equipment. On the other hand, the age of fisherman is unfavorable for decreasing inefficient. Those findings imply that coordination among fishermen, boat ownership and fishing equipment matter for the efficiency of domestic fishermen.

Poverty Alleviation
PAR M1: Poverty Alleviation

Conquering The Conflict-Induced Child Poverty:
Does Cash Transfer Help?

Hilda Masniaritta Pohan
Center for Economic Studies - Parahyangan Catholic University, Indonesia

The intergenerational aspect of poverty explains the need to address child poverty. Empirically, child poverty is found to be correlated with family structure and living conditions. Children living with single mothers and in unsafe environments are more likely to be poor. The region of Eastern Indonesia has the highest percentage of poor population in the country and relatively prone to conflict. By employing logit and OLS model using IFLS East 2012 data set this research aims to investigate the association between conflict, family structure, and child poverty. It also tries to evaluate the contribution of government's cash transfer in lessening child poverty. Results suggest that household head's education and gender explain child poverty while conflicts have an adverse economic impact on poor families. The study also finds that poverty alleviation program cannot thrive without comprehensive community empowerment.

The Impact of Imposition VAT on
Staple Goods to Poverty in Indonesia

Hadi Setiawan, Sofia Arie Damayanty, Mohamad Nasir, Tri Achya Ngasuko
Fiscal Policy Agency, Ministry of Finance, Republic of Indonesia, Indonesia

VAT is one of the main sources of tax revenue. Over the last few decades, VAT revenue contributed as the second largest tax revenue in Indonesia after income tax. The proportion of VAT revenue also continued to increase in recent years. In nominal, tax revenue significantly increases. In 2004 tax revenue only Rp280 trillion, then in 2016, tax revenue has reached Rp1.386 trillion. However, the Indonesia tax ratio is one of the lowest in the region and the world. Currently, the tax revenue is one of the fiscal risks that must be mitigated by the Government, since it never reached the target in the last ten years except in 2008, when there was the sunset policy and oil prices were at the highest point. One discourse being raised to increase tax revenue is to charge VAT on all goods and services, including staple goods. This study aimed to quantify the impact of the imposition

of VAT on staple goods to poverty. Poverty indicators used in this study is the poverty index as stated by Foster, Greer and Thorbecke (1984) known as the FGT poverty index. FGT poverty index consists of three types: (i) Headcount Index (P0) is the percentage of population below poverty line (PL). P0 does not change if the population is under PL become poorer; (ii) Poverty Gap Index (P1) is a measure of the intensity of poverty. It is defined as the average poverty gap in the population as a proportion of the poverty line; (iii) Squared Poverty Gap Index (P2) is related to poverty gap index. It is calculated by averaging the square of the poverty gap ratio. By squaring each poverty gap data, the measure puts more weight the further a poor person's observed income falls below the poverty line. The squared poverty gap index is one form of a weighted sum of poverty gaps, with the weight proportionate to the poverty gap. The data used in this research is Susenas 2015. The impact measurement is conducted by comparing the FGT Poverty Index before and after the imposition of VAT on staple goods for the whole of Indonesia and for each province. In addition, it will also measure how the impact of the imposition of VAT for urban and rural residents. This research can be used by policy makers to decide whether it is right or not to imposed the VAT on staple goods. In addition, this study can be used as a basis to mitigate the negative impact of the policy and how to treat the impact for each province or for the people in urban and rural areas.

Infrastructure and Poverty Reduction:
Evidence In Indonesia

Wasifah Hanim, Tria Apriliana
Widyatama University, Indonesia

Poverty is multidimensional. A poor person is not only as a result of insufficient income for minimum physical needs, but also due to the lack of accessibility to productive resources. This paper empirically investigated the impact of water and sanitation infrastructure on poverty reduction. Analysis has been done for 8 years during the period 2008-2015. The research analyzed the relationship between dependent variable and independent variable, as the dependent variable was poverty rate and the independent variables were infrastructures consisted of water, sanitation, and electricity. Each of variable is represented by proportion of the household for consuming water, sanitation, and electricity. Other explanatory variables are unemployment rate, percapita GDRP, and female labor force. The relationship between dependent variable and independent variable was analyzed using regression of panel data. Empirical results of the paper showed that the enhancement in consuming water, sanitation and electricity infrastructure have positive impact on reducing poverty rate.

Updating Poverty and Livelihood Map of
Indonesia During Intercensal Year

Mayang Rizky[1], Joseph Marshan[2], Ridho Al Izzati[3], Ahmad Zuhdi Dwi Kusuma[4]
[1]SMERU Research Institute, Indonesia; [2]Australian National University, Australia; [3]SMERU Research Institute, Indonesia; [4]SMERU Research Institute, Indonesia

Small Area Estimation (SAE) provides opportunity to estimate poverty down to village levels that relies on household survey and census data to be available at the same period of observation (Elbers, Lanjouw, and Lanjouw, 2003). The challenging part is when one needs to estimate such estimation between census years to capture the dynamic nature of poverty. We used 2010 and 2015 Indonesia household socio-economic survey (Susenas), 2014 Village Census (Podes) data and 2010 Population Census to develop poverty map by estimating poverty rate and inequality down to village level in 2015. Following updating poverty estimation approach in Albania (Betti, et al., 2013), it allowed us to create counterfactual consumption for 2010 households and used this consumption as the basis for SAE simulation in 2015. The simulation then produced 2015 poverty figures for 6,599 kecamatan and 75,267 villages in Indonesia based on national and international poverty lines.

Regional Planning
PAR P1: Regional Planning

Land Use Planning Strategic Area in Sitaro Islands Regency
Location: District of East Siau

Andy Anton Mangopa Malik
University of Sam Ratulangi, Indonesia

Region located in the District of East Siau is the location that is most efficient and effective for productive activities with respect to the availability of infrastructure, manpower, capital and other things that support the growth of the economy in Sitaro Islands Regency. As for problems that occur in the area of spatial planning is not well planned. The complexity of the issues regarding transport, settlement in disaster-prone areas, the density of the buildings that have been uncontrolled, and there is no direction of development in the 20 years to come need to be tackled immediately. This is to ensure synergy and continuity of regional growth required a clear guidelines on land use. In this study as for the scope of the planning area is located in the district of East Siau consisting of four villages namely Tatahadeng, Tarorane, Akesimbeka and Bahu, this region alone have value as a strategic center of trade and services in the District of Siau Tagulandang Biaro and sea transport hub. In the direction of development in the 20 years to come, some of the approaches used are mapping with GIS, while for spatial analysis and function of the area with the projection model and standardized rules on housing and settlement. The findings in the study of land use in the direction of Strategic Area Sitaro Islands Regency in 20 years to come, namely the population density in the planning area is still relatively very low at 11,70 inhabitants / hectare, additional planning zone for the area of infrastructure and facilities which is distributed in accordance with normative standardization such as free zones prone to disasters and the direction of the local government in four village planning area.

Formulating A Smart Region Concept in The Context of
Tropical Islands Cities System

Ridwan Sutriadi, Maya Safira
Urban Planning and Design Research Group, School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung, Indonesia

Indonesia is an archipelago consisting of a variety of large and small islands with no small amount. Currently, spatial policy along with regional autonomy policy are still focused on the land based regions and cities, while various characteristic of islands and their island based cities in the context of national spatial pattern and structure have not been yet highlighted. Furthermore, to promote regional

development and national competitiveness and security, there is a need to promote a development concept for the region and the cities of the outer islands in Indonesia with the objective to encourage self-sustained island cities, as well as island based regional competitiveness in maintaining the sovereignty of the Republik of Indonesia. As an effort, the central government has been introducing a concept of integrated marine and fisheries center (SKPT) managed by the Ministry of Marine and Fishery with the priority of outer islands in a sustainable manner. Responding to the global context, namely: volatility, uncertainty, complexity, and ambiguity, as well as Jokowi's development from peripheries in national context, the search for innovation approach for tropical island cities competitiveness by considering resources varieties, stakeholders, cultures, and governance system is important to formulate a smart region with the focus to develop tropical island cities based spatial planning system in Indonesia as a focus for this paper. Then, identifying characteristic/criteria for islands cities, identifying planning achievement, compiling islands cities, as well as providing recommendation for tropical islands cities based planning. This paper deploys a mix method approach, in order: 1) to identify the characteristics/criteria of the concept of regional development and the island cities through qualitative analysis based on a literature review (desk study) that have been done; 2) to identify the competitiveness of the region (province) with quantitative analysis based on secondary data; 3) to analyze the achievement progress of criteria on the local conditions through qualitative and quantitative analysis; and 4) to provide recommendations in the eyes of spatial planner. There are potential knowledge contribution especially in spatial planning perspective. These are: statutory planning policy in a regency, provincial, and national level have to be formulated to facilitate integrated marine and fisheries centers. Smart region for tropical island cities can be achieved not only a matter of technology, organization, process, and product, but also by considering specific island cities identities, appropriate communication channels among stakeholders, promoting innovative economic activities, multisector collaboration.

New Approach on Sustainable Spatial Planning for
Megacity Region (Case of Jabodetabekpunjur)

Setyardi Pratika Mulya[1], Ernan Rustiadi[1], Andrea Emma Pravitasari[1], Laode Syamsul Iman[2], Diar Shiddiq[2]
[1]Department of Soil Science and Land Resources, Faculty of Agriculture, IPB, Indonesia; [2]Center for Regional System Analysis, Planning and Development IPB, Indonesia

The National Spatial Plan (RTRWN) set up the Jakarta megacity region or Jabodetabekpunjur (Jakarta, Bogor, Depok, Tangerang, Bekasi, Puncak, and Cianjur) as National Economic Strategic Area (KSN). The central government is in the process of reviewing and revising the spatial plan of Jabodetabekpunjur region by considering environmental carrying capacity of the region. Due to the emergence of various environmental issues in the region, a new approach in spatial planning

that takes into account the environmental carrying capacity to ensure sustainable development is needed. This study aims to: (1) determine the environmental carrying capacity of Jabodetabekpunjur region based on settlement land capability and land suitability, (2) Identify settlement areas facing environmental pressures, and (3) identify typology of spatial control based on a combination of carrying capacity, space allocation and existing land uses. This study employed a set of spatial analysis, satelite imagery interpretation, geographic information system (GIS) analysis, identification of existing land use, forecasting city land use changes by Cellular Automata (CA)-Markov analysis, and land suitability analysis for settlements. The landsat imagery data of the year 1983, 2000, and 2015 were used. The land suitability analysis was conducted based on the actual land suitability or no-technology input assumption. The analyses showed that 54% of current settlements are classified as not appropriate, 28% as conditional appropriate and 16% are appropriate. About 55% of Jabodetabekpunjur area are consider under high environmental pressure status, 13% as medium pressure, 15% as low pressure and 16% are no-pressure areas. Based on the 2030 land use changes projection, some areas in the region (covering 428.862 hectares) should be managed under strong control mechanism. Based on the study, the current spatial planning should be partially revised.

Impact of Implementation Regulation of the Minister of Marine and Fisheries Number 56 and 57 of 2014 to
the Supply Chain Management of the Fishing Industry in Bitung

Ficke Henny Rawung, Stanny Siciliar Rawung
Fakultas Ekonomi Universitas Negeri Manado, Indonesia

The fishing industry is the dominant driver of the economy in Bitung, it brings Bitung City known by the term "Skipjack". With the enactment of the Regulation of the Minister of Marine and Fisheries No 56 of 2014 on Temporary Cessation (Moratorium) Licensing of Fish in Regional Fisheries Management of the Republic of Indonesia and the Regulation of the Minister of Marine and Fisheries No. 57 of 2014 regarding the Second Amendment to the Regulation of the Minister of Marine and Fisheries No. 30 / MEN / 2012 on Business fisheries Regional fisheries Management in the Republic of Indonesia., brings a huge impact for the fisheries industry in Bitung.

With the implementation of the regulation, not only affected the fishing industry, but also throughout the economy have an impact on the city of Bitung in North Sulawesi in particular and the economy in general. This research seeks to analyze further the impact of the adoption of the regulation to the fishing industry in the city of Bitung.

This research will further analyze the impact of the application of Regulation of the Minister of Marine and Fisheries No 56 and 57 2014. This study will examine the Fishing Industry Bitung city before and after implementation of the regulation. The study includes raw material supply chain in this case the fish are most severely affected by the regulation. Another study will be discussed in this study are the multiplier effects caused by the application of the regulation, among others, the total money supply in the city of Bitung and the unemployment rate in the city of Bitung.

Financing Regional Development
PAR B5: Financing Regional Development

Determinant Factor for Household to Access Formal Financial Institution: The Study Case Susenas 2015

Tri Achya Ngasuko
Ministry of Finance, Indonesia

The World Bank (2014) reports only 36% of Indonesia's population has access to formal financial institution. This number shows us the level of financial inclusion in Indonesia. There is still some task to do since Indonesian government has the goals 70% level of financial inclusion in 2019. Survey form BPS, namely Susenas 2015, has the brand new information about the profile of household saving which not available in the previous Susenas survey. This study is to examine determinant factors that deter households from access to formal financial services, particularly saving. The study employs desciptive analysis and performs microeconometric exercise utilizing the 2015 Susenas data. The results of the study provide the household profile and identify determinant factors for households to access formal financial institution to save. The probabilities for household to obtain saving in formal institution is affected by the demographic characteristics (age, sex, education, marrital status, and education) and social-economic factors (employment sector, employment status). The study employs multinomial logit method. The findings of this study is vital in providing policy recommendation to increase the level of financial inclusion in Indonesia.

First Year Impact of State Asset Management Agency (LMAN)

Taufan Pamungkas Kurnianto
Fiscal Policy Agency, Indonesia

This study investigates the effects of State Asset Management Agency (LMAN) to speed up Indonesia infrastructure project in 2016 using qualitative method. Indonesia has ambitious target to spend almost Rp5000T from 2014-2019 on infrastructure projects. This target come fort due to an underdevelopment of infrastructure in Indonesia compare to peer countries. Furthermore, study from World Bank (2013) stated that Indonesia infrastructure is lack behind twenty years from its potentials. One major problem of Indonesia infrastructure project is on financing side, due to the long-term characteristic of this project. Shallow financial sector, long term risk and inability of government budget to finance all infrastructure projects caused projects to be delayed because not enough money for land acquisition. Past solutions have been done, such as highways revolving fund and land capping strategy, but this strategy is ineffective. Therefore, in

early 2016, Indonesia Government through President Regulation No. 102 2016 introduced LMAN as a land funding agency to solve financing problem. This agency has missions to improve financing, utilization, efficiency and flexibility of state asset, primaraly land. We describe and analyze the significance of this agency to support government ambitious program on infrastructure. Early findings found that LMAN can accelerate asset utilization, reduce opportunity loss and expedite payment for land acquisition on several projects on Trans Java, Pejagan-Pemalang, Pemalang-Batang and Batang-Semarang toll road project. Those improvement is much better, some of them, such as Batang-Semarang toll road can hasten more than 200% of land acquisition compare to the same period last year. We also found in line evidence in Sulawesi and Kalimantan toll road projects. This paper also found that LMAN is better, mainly because of its flexibility, compare to old land financing scheme. However, major problem also apparent, mostly on government regulation itself, thus government need to deregulate unfriendly regulations. This study also contributes to the improvement of the government land financing policy design, since studies on this topic is limited, given that LMAN is relatively new revolutionary policy.

Analysis of Determinants of Wage Disparity for
Labor Sector in Central Sulawesi

Mohamad Ahlis Djirimu

Faculty of Economics Tadulako University, Indonesia

The research was purposed to: (1) analyze disparity level of wage labor distribution in the agricultural sector (generally) and non agricultural sector (industry and service sector) in Central Sulawesi; (2) analyze and identify of wage labor distribution in the agricultural sector (generally) and non agricultural sector (industry and service sector) in Central Sulawesi based on the influence of individual characteristics (age, sex, marital status and numbers of family dependent), the work characteristics (work type, work status, location and number of work time) and the human capital characteristics (the level of education and experience); (3) and analyze the roles of each factors from individual characteristics (age, sex, marital status and numbers of family dependent), the work characteristics (work type, work status, location and number of work time) and the human capital characteristics (the level of education and experience). The result showed that: (1) disparity level of wage labor distribution in the agricultural sector and non agricultural sector (industry and service sector) in Central Sulawesi were included in moderat level which marked by 0,39 poin from Gini Index Value; (2) the most of exogenous variable have significant effect on wage through Mincer Wage Function on agricultural sector and non agricultural sector; (3) real wage based on Blinder-Oaxaca Decompositions result between agricultural sector and non agricultural sector was 0,272835, means that the wage of labor on non agricultural sector was 27,28 percent higher than labor on agricultural sector. Following that the total of wage Disparity, 0,237136 or 86,92 percent was from different characteristics

factors (explained/endowment), while the wage disparity from minor factors (unexplained/discriminations) between agricultural sector and non agricultural sector was 0,035699 or 13,08 percent from total of wage disparity.

Growth and Regional Development
PAR C4: Growth and Regional Development

Solow Growth Model as Explanatory of the Phenomenon of Poverty in the Province of Yogyakarta Area

Suyripto RIPTO
FE UAD, Indonesia

Poverty in the Provinsi of Yogyakarta (DIY) is still relatively high (in 2012 on the poverty in the Provinsice of DIY is 25 out of 33 provinces in Indonesia. Invesment in education has an impact on the quality of human resources, and ultimately reduce poverty. It is widely recognized that human capital generated from education, is a key success factor of development. Individuals with a better education will receive higher incomes above the average. This means that education is an efficient way to reduce poverty dead end.

The research was conducted in the Province of DIY using raw data Susenas 2013 with a sample af 3606 hoseholds. The study aims to apply the Solow Growth Model to prove the importance of human capital in overcoming poverty in Yogyakarta Province. The dependent variable is the category of poor households and the independent variable include: physical capital, human capital, household demographics, rural or urban residence, and insurance. The model estimated with logistic regression (logit model).

The main contribution of this research is the development of the Solow Growth Model approach. Pratical contribution will assist poverty reduction policy by referring to the variable physical capital and human capital are derived from the theory of Solow Growth Model.

Developing Regional Sustainbility Index as a New Approach for Evaluating Sustainbility Performance in Indonesia

Andrea Emma Pravitasari[1,2], Ernan Rustiadi[1,2], Setyardi Pratika Mulya[2], Lutfia Nursetya Fuadina[2]
[1]*Center for Regional, Systems, Analysis, Planning and Development (Crestpent/P4W), Bogor Agricultural University, Indonesia;* [2]*Department of Soil Science and Land Resource, Faculty of Agriculture, Bogor Agricultural University*

Sustainable development has been the subject of considerable discussion and it has attracted much attention among economists and policy makers. There are few studies of sustainable development measures in Indonesia, but still focused on partial dimension. This study tried to develop index to promote sustainable development in Indonesia, especially at the regional (regency and municipality) level, called Regional Sustainability Index (RSI) using Factor Analysis (FA) with

considering regional-scale spatial interdependency by employing Local Indicator of Spatial Association (LISA) statistics. There are 416 regencies and 98 municipalities in Indonesia. The data used in this study were secondary data obtained from the Central Statistics Agency (BPS) in 2014. RSI was developed based on 30 regional sustainable development indicators which divided into 3 major dimensions: economy, social, and environment. Some indicators which develop RSI is covering economic welfare, public services, infrastructure, social welfare, community health and education, physical condition, regional environmental sustainability and disaster resilience. Based on LISA results, it was found that sustainability performance of the regional-scale spatial units (regencies/municipalities) was strongly influenced by the sustainability conditions in its surrounding areas. The approach developed in this study was able to show the actual condition of regional sustainability performance in all dimensions without making it into one composite index so that it could show the index value of each dimension. According to the results, we can concluded that RSI is a very effective method to indicate the locations of the hotspot issues of sustainable development. By this index, we have a new approach for evaluating and reporting economic, social, and environmental conditions at the regional level to support the integration of three dimensions of sustainability. Producing a cluster map of regencies and municipalities by combining the RSI value of each dimension is very helpful for the decision maker to determine the appropriate policy for solving the problems in each region.

The Construction of Leading Economic Indicators for
Eastern Indonesian Economy

Rudi Handoko

Ministry of Finance, Indonesia

The main reason for the construction of the leading indicators for Gross Regional Domestic Product (GRDP) of Eastern Indonesia is the need for macro-economic policy decision making to obtain the up-to-date condition of the GRDP of Eastern Indonesia development. Using the methodology which was used by the OECD, the composite of leading index for GRDP of Eastern Indonesia has built with its components consist of the 24 variables of total 59 variables relevant to the economy of Eastern Indonesia. This study will contribute to knowledge in terms of the methods used would be adapted to the conditions in Indonesia in two unique characteristics of Indonesia. First, this method adjusts the local area economic conditions in Indonesia are very different in each region and secondly, we adjust the unique characteristics of seasonal patterns in Indonesia, namely the moving seasonal such as Chinese New Year and Idul Fitri.

Industrial Development
PAR G1: Industrial Development

Free Trade Zone as a Fiscal Incentive to Increase Regional Competitiveness: Evaluation on Sabang Region

Sofia Arie Damayanty, Hadi Setiawan
Fiscal Policy Agency, Ministry of Finance, Indonesia

The government has established Sabang as a free trade zone (FTZ) since year 2000, and provide fiscal incentives such as exemption from import duty, Value Added Tax (VAT) and luxury sales tax, and also excise duty exemptions on goods entering and exit to and from Sabang Region with the aim of accelerating regional development in line with the realization of regional autonomy. The purpose of this study is to evaluate whether the determination of Sabang as a FTZ has met its expected goals. This study uses quantitative and qualitative analysis, including analysis of historical data related to the growth of investment, regional GDP, and the indicator of public welfare, as well as analysis using Importance Performance Analysis (IPA) approach to see the opinion of stakeholders on the performance of Sabang. The results of the analysis show that after 16 years established as FTZ, economic indicators and welfare in Sabang has not shown satisfactory outcomes. There is a need for institutional reform and strengthening coordination among agencies so that the various fiscal incentives provided can accelerate development and community welfare.

Oil Price Shocks and Indonesia Manufacturing Stock Returns

Rudi Kurniawan, Nury Effendi, Achmad Kemal Hidayat, Handri Hasan
Department of Economics, Universitas Padjadjaran, Indonesia

Understanding the behaviour of stock prices and identifying the factors that affect their dynamics is an empirical question that has a decisive impact on portfolio management, asset and firm valuations, investment decisions, and other issues. Although there is a plethora of empirical work on asset pricing, the factors that play a role in stock return structures are still unclear. As oil prices have been highly volatile in recent years, now is surely the moment to examine their impact on stock market prices. One rationale for using oil price fluctuations as a factor affecting stock prices is that that, in theory, the value of stock equals the discounted sum of expected future cash-flows. These cash-flows are affected by macroeconomic variables that may be influenced by oil price changes. This paper examines the long-term linear and nonlinear relationships between oil prices and stock prices of manufacture sector in Indonesia and tests for linear and asymmetric long-term

links on both aggregate and sector levels.This is in contrast to other empirical investigations, which have focused mostly on the aggregate index of the individual markets (national and/or regional indices) rather than on the individual sectors and used classic cointegration tests. Moreover, this paper also investigates winner and loser manufacturing stocks in order to assess the impact of oil price shock on a more specific sub-sector.

Technical Efficiency and Decision to Exit: Evidence from The Dairy Farms in Sukabumi District, Indonesia

Maman Setiawan
Universitas Padjadjaran, Indonesia

This research investigates technical efficiency and its effect on the decision to exit of the dairy farms in Sukabumi district, Jawa Barat. Farm-level data obtained from field survey are used to estimate the technical efficiency using a bootstrapped data envelopment analysis. Furthermore, the model of the relationship between technical efficiency and decision to exit is estimated using logit regression. The results show that dairy farms in Sukabumi are technically inefficient. The technical efficiency also has a negative effect on the decision to exit. This implies that the farms with higher efficiency scores tend to have lower probabilities to exit from the dairy farms.

Infrastructure Development
PAR H2: Infrastructure Development

How Infrasctructure Development Can Create a Better
Human Development Index

Sony Kristiyanto, Rica S. Wuryaningrum
Universitas Wijaya Kusuma Surabaya, Indonesia

Based on data from Ministry of Public Work and Housing in Indonesia, the government has been allocating more than half of the state budget for infrastructure development all over the country. Regarding this matter, this research tries to find out what types of infrastructures that influence the human development index and which are not. This research also try to find out the relationship of those infrastructures development with the human development index. The methodology used in this research is panel data approach with fixed effect model because it can combine time series data and cross section data. The variables used in this research are Human Development Index, electricity, banking credit, gini ratio and economy growth. The data are taken in 2011-2015 in 33 provinces in Indonesia which covers Java, Sumatra, Sulawesi, Kalimantan and Papua islands and some small islands such Bali, Maluku and Nusa Tenggara. This research has come up with some findings; 1) The infrastructures that influence the human development index are physical (electricity) and non-physical infrastructure (banking credit) whereas the economic growth and gini ratio do not have any influence on the human development index. 2) The relationship of those infrastructure with the human development index are expected to have positive and significant relationship to human development index, which mean if there are some raises in electricity development and banking credit, it is expected that there will be also a raise in the human development index.

Woman and Sea : Infrastructure Development Impact on
Woman Decision to Work at Marine Based Tourism

Ida Ayu Nyoman Saskara, Amrita Nugraheni Saraswaty, Ni Nyoman Reni Suasih
Faculty of Economy and Business, Udayana University, Indonesia

Nusa Penida with its various natural potential, is one of the new tourist destination that attracts both local and international visitors to come. Therefore, it should be supported by a variety of basic infrastructure. If the infrastructure development materialized, Nusa Penida as the development of new tourist sites in Bali will be well known widely. It will support the national target of 20 million foreign tourists to visit Indonesia in 2019. Nusa Penida currently holds five national title, i.e. the

National Tourism Strategic Area (KSPN) as the Outer Islands, Water Conservation Area, Bali Cattle Breeding Center, and Area Tourism Development of Renewable Energy.

In fact, in the District of Nusa Penida; there are 3,034 of the poor families. The figures also show that the District of Nusa Penida is a contributor to almost half (48.8%) of poor people in Klungkung Regency. In addressing poverty, the government has made efforts in various ways to minimize it. However, because the aid does not solve the issue of empowerment, such efforts difficult to solve the root problems of poverty.

By pursuing the development of basic infrastructure to support the economy, government expect the economy in Nusa Penida to grow in accordance with the potential of Nusa Penida as coastal regions.

This study is aimed to analyze whether the construction of basic infrastructure can be a key supporting marine-based tourism development and fisheries in Nusa Penida by empowering people, especially women. The focus is whether the availability of adequate infrastructures, women in Nusa Penida is willing to participate to work in the marine based tourism and fisheries sectors. Basic infrastructure is meant here is the availability of supporting infrastructure that has been an obstacle, namely dock Paired, health facilities, roads, water and electricity.

The analysis used in this research is descriptive analysis and econometric analysis with Logit Model test as a tool to see women's decision to enter the workforce in Nusa Penida. The sample used in this study are 30 womens in Nusa Penida whose included in the working age i.e 15-64 years.

From the initial test results, the government's efforts to provide adequate basic infrastructure, women of working age have positive expectations for the development of marine-based tourism and fisheries sectors in Nusa Penida. Most respondents expect Nusa Penida is not just a stopover for travelers that departing from Sanur Beach and Tanjung Benoa. Infrastructure are adequate to make the most of women at working age in Nusa Penida to consider to works in the supporting sectors of marine-based tourism and fisheries, to improve the quality of their lives.

Evaluation on Provincial Distribution of
the Indonesia Infrastructure Government Spending

Praptono Djunedi, Hidayat Amir
Fiscal Policy Agency, Indonesia

The disparity between regions remains as a central issue after four decades of the Indonesia development. Java is categorized as the most developed region in Indonesia and contributes about 58% of its Gross Domestic Product (GDP). Then it followed by Sumatera with about 22% of contribution to GDP. While

the rests are less developed and only contribute about 20% of GDP. One of the sources of the disparity is the different level of infrastructure development. Java and Sumatera (western area of Indonesia) have better infrastructure such as road, railway, seaport, electricity, and water infrastructure. Therefore, the government believe that there is a need to put eastern area as a priority in the infrastructure development. By doing so, the more and the less-developed regions can be connected to reduce the regional disparity. When the government in early of Jokowi era started to reform the government budget by reducing the fuel subsidy spending, the money then reallocates to the infrastructure development as a top priority. This paper's objective is to evaluate the provincial distribution pattern of the government infrastructure spending during the period of 2010 – 2017. This study employs the descriptive approach by comparing the provincial level of development for each type of infrastructure with the government financing allocated to each province for the infrastructure development. Series of the distributional pattern of infrastructure spending would be useful to the government in order to set a new plan on the regional development that possible to reduce the disparity between regions in Indonesia.

Institutions and Governance
PAR I2: Institutions and Governance

Fisherman Activities and Social Conflict Patterns on Regional Development: Political Economy Perspective

Bhimo Rizky Samudro[1], Yogi Pasca Pratama[1], Alief Rakhman Setyanto[2], Anang Prayogi[1]
[1]*Sebelas Maret University, Indonesia; Kesatuan Intelektual Masyarakat Independen (KIMI) Institute; [2]Diponegoro University, Kesatuan Intelektual Masyarakat Independen (KIMI) Institute*

The research aims to propose conceptual approach for investigating fisherman activities. Conceptual approach employs two principles of political economy, namely principle of historico specificity and principle of hegemony (principle of core-periphery). This research focuses on secondary data for fisherman in Sendang Biru coast, South Malang, East Java. Using descriptive method, the research constructs triangle logic of political economy model for maritime circumstance. In the context of analysis, the research generate conceptual model for capturing the intersection between fisherman activities and its social conflict. The analysis is likely to be useful recommendation in eliminating social conflict in fisherman society.

Candidate Religion and Individual Voting Behavior in Indonesia

Rahma Nida, Mohamad Fahmi
Department of Economics, Faculty of Economics and Business, Universitas Padjadjaran, Indonesia

Religion and personal religiosity are reported has different result on voting behavior in Indonesia. We argue that not only candidate's religion attribute that has influence over individual preference in an election, but also the community religiosity. We empirically examine the effect of religion attributes and religiosity on individual voting behavior from community variables, with the differences proportion individual level and community level.

We use four multilevel logistic models from the cross sectional Indonesia Family Life Survey 2014 to investigate the effect of individual and community level in religiosity on individual political preference. Evaluations of individual voting behavior are measured on an individual preference to choose a political candidate, which we treat as a discrete outcome. Our primary level-1 predictors are the religion of the respondent (1 = Muslim; 0 = Others) and subjective individual religiosity (very religious, religious, or somewhat religious equal to 1; not religious = 0). While the religiosity community predictors consist of percentage of Muslim in the area, participation of religious activities, and level of trust in community according to the religion of residents.

The evidence points to positive effect of both religion attribute of a candidate and community religiosity on individual voting behavior. In Model 1, which is an empty model, without adjusted independent variable), we find that community level affected 14.38% individual behavior in election. Adding individual predictors in Model 2, the evidence shows that a Muslim is more likely to vote a Muslim candidate. However, the level of religiosity does not have a significant effect. In addition, age and individual participation in social activities has a significant positive effect. In Model 3 and 4, we find that an individual in a community, which individual relatively has more trust to other individual that has same religion, will vote a candidate that has a same religion.

A Proposal to Quantify Tourism Governance in Eastern Indonesia, Scoping to Papua Barat

Marlon Arthur Huwae
University of Papua, Indonesia

To develop tourism sustainably in an emerging tourism destination, there is a need to manage regional identity and develop governance arrangements that bond tourism development and community together. The government as a key initiator of community empowerment, needs to ensure its governance arrangements are efficient. This paper develops a framework to measure the effectiveness of regional governance for sustainable tourism development based on two main elements: sustainable development plus and tourism governance. Sustainable development plus consists of two core named internal and external layers. Internal layer consists of alliances, engagement, adoption and security, while the external layer comprises of social, economy, environment, empowerment, governance and stewardship. The tourism governance is then measured by data triangulation, and analysis. The result of the analysis is articulated into tourism governance index and management strategy based on Boston Consulting Group Matrix. This framework can be used to map the cultural barriers and capital that community holds in dealing with tourism development. Also, it can provide a self help guideline for local government in improving tourism governance.

Inter-Regional Disparity
PAR J2: Inter-Regional Disparity

The Role of Local Government in Tackling Digital Divide:
Opportunity and Challenges of New USO program

Yudi Adhi Purnama
Waseda University, Japan

The role of ICT in human activity become substantial as life more attached to technology. Furthermore, Indonesia as rest of the world sees ICT as a tool for achieving higher growth placing ICT on national strategic agenda. However, ambitious goal burden by imbalance ICT development between area, creating a digital divide on the urban-rural relationship. The government already launch USO program to tackling digital gap but failed to meet the challenges due to insufficient planning and lack of local engagement. Answering the problem, MICT has redesign USO program using participatory approach, broad target group, and area as well as comprehensive development on ICT ecosystem to achieve ICT inclusiveness. New USO design delivers opportunity and challenges for the central and local government on local ICT development. The paper offers some resolution that will assist local government in USO utilisation and maintaining its sustainability.

Spatial Analysis of Regional Income Convergence :
The Case of Bandar Lampung and Metro

Zulfa Emalia
Lampung University, Indonesia

The question of regional income convergence which is broadly concerned with weather poor economies catch-up to wealthier economies has commanded an extraordinary amount of attention in the recent literature. Although the economic development of a region is likely to be influenced by neighbouring regions, most convergence studies of the 1990s assumed growth rates to be independent across regions. Since the end of the 1990s, various convergence studies have found evidence of serious model misspecifications if spatial interdependencies of regional growth are ignored. The purpose of this study is to determine if and to what extent the city of Bandar Lampung and Metro display regional income convergence and investigates whether there is evidence of spatial dependence of regional income convergence occurring at a county level of analysis in two neighboring municipality. This paper purports to explore the patterns embedded in the beta convergence, sigma convergence, and spatial dependence statistics in an attempt to better understand the dynamic behavior of regional income

convergence. Therefore, the convergence estimation in this paper will take account of spatial autocorrelation by applying and the Spatial Lag Model (SLM) . Data used in this study is secondary data from 2001 until 2013 taken from the Central Bureau of Statistic Lampung Province. This paper will give new empirical measures for space-time dynamic. These measures are intended to shed new insights as to the role of spatial dependence and heterogeneity in dynamos growth process.

Keywords : Bandar Lampung, Beta Converge, Convergence, Metro, Sigma Convergence, Spatial Lag Model, Spatial dependence.

Spatial Patterns of Inequality and Governance in
Decentralizing Indonesia, 2001-2015

Isfandiarni Rosidin[1,2], Peter Mulder[1]
[1]*Vrije Universiteit, The Netherlands;* [2]*LPEM-Fakultas Ekonomi dan Bisnis Universitas Indonesia*

In recent years, economic development in Indonesia is characterized by high economic growth as well as a rapid increase of overall income inequality. It is to be noted, however, that inequality in Indonesia (measured by the Gini ratio) used to be exceptionally low and relatively stable for a long period of time as compared to ASEAN and emerging countries. In short, over the last decade and a half, income dynamics in Indonesia have been characterized by rapid income growth among top earners and a decreasing growth rate among the bottom of the income distribution, together with a relatively stable among middle class. Moreover, the relationship between income per capita and income inequality is ambiguous, i.e. high income per capita is not necessarily followed by high inequality and vice versa.

Since Indonesia began a process of decentralization in 2001, followed by direct election of the president as well as local heads throughout Indonesia in 2004, the role of more than five hundred districts in governance process is increasing. This motivates us to study in this paper how governance quality in Indonesia is affecting inequality dynamics and how inequality dynamics affect the quality of governance. We are inspired by Chong and Gradstein (2007) to search for a systematic relationship between inequality and a set of governance indicators across districts throughout Indonesia. We basically replicate their model for the Indonesian context, including some modifications. We construct Gini coefficients as proxy for income inequality from the Susenas Consumption module. As a robustness check, we also use alternative measure of income inequality, such as income share ratio of the top to the bottom quintile as well as the Theil index.

In this paper, we use the term governance in a broad meaning, covering the quality of institutions as presented in the governance index as well as budget efficiency. We aim to empirically establish the main driving forces of changes in the

relationship between local governance quality and inequality. We use economic conditions, urban population, infrastructure, and education as control variables.

We employ a GMM-system estimator as our empirical strategy and focus on the dynamic relationship between inequality and governance, in order to test the following hypotheses: (i) whether inequality remains constant if institutions are strong, (ii) whether income inequality is low if governance is good. We expect governance variables to have a negative relationship with the inequality. If budget is spent efficiently in terms of disbursement and absorption, due to strong institutions, income inequality is hypothesized to be stable. It is our aim that the paper will contribute to our understanding of the mechanisms that determine how governance affects inequality and vice versa, especially in the Indonesian context.

Migration and Demography
PAR K2: Migration and Demography

A Fruit Never Falls Far From Its Tree: The Effect of Mother's Fertility on Daughter's Fertility Intention

Purnama Cahya Sari Silalahi, Diahhadi Setyonaluri
Universitas Indonesia, Indonesia

Previous studies found that fertility intention and behavior is transmitted across generation. This study attempts to examine the association between mother's childbearing and daughters' reproductive intention. Using data from IFLS, this study investigates ever-married women aged 15-49 years old in 2014 who have a complete information about their birth mother. The sample is divided by parity zero, parity one, and parity two or above. To estimate the effect of covariates on fertility intention, this study uses multinomial regression model. The result shows that daughter's fertility intention is more influenced by their own characteristics than by mother's reproductive behavior.

Migration in Indonesia: Do Household Assets Matter?

Muhammad Hanri[1,2], Jackie Wahba[1], Corrado Giulietti[1]
[1]Department of Economics, University of Southampton, United Kingdom; [2]Institute for Social and Economic Research, Faculty of Economics and Business, University of Indonesia (LPEM-FEBUI), Indonesia

There has been extensive literature discussing the relationship between household income and migration decisions, notwithstanding, ample studies challenge income-related indicators as a tool to predict migration decision. Obstacles that emerge in the data collection to the nature of the income itself dominates the challenges. The potential bias of using income as a predictor escalates in the environment of developing economies where the informalities take place in many economics activities. Unrecorded and cyclical income can also be threats to data accuracy; hence, annually recorded income data may lead to bias estimations. That being the case where finding an alternative measurement is critical, particularly as a determinant of migration decision. Understanding determinants of migration decision is important in policymaking process. Through which the government may introduce measures to control the rural-urban migration as well as labour market equilibrium.

Recent studies have introduced household assets as an indicator of various socio-economic decisions, yet utilisation on migration decision is still limited. From the data collection point of view, assets tangibility allows enumerators to record the

information more precisely. Rather than flow data, household assets is in a form of stock data that is less affected by seasonal biases. Hence, it can be a robust determinant for migration decision. Using Indonesian Family Life Survey (IFLS), this paper investigates the relationship between households' assets to their members' job-related internal-migration decisions.

Several methods will be utilised in this paper. Of multiple household assets ownership, we use Principle Component Analysis (PCA) to construct an asset index as a one-dimension assets measurement. We also introduce instruments to overcome the potential endogeneity problem; accordingly, the benchmark estimations adopt the Instrumental Variable (IV) regression. Various combination of household assets to construct asset index, other measurements, and other regression methods are also taken into account as a robustness checks.

After instrumenting, this paper found that household assets significantly reduce the job-related migration decisions in Indonesia, particularly in rural-urban case. Individuals in the households with greater asset ownership tend to have a lower incentive for job-related migration. Moreover, households with higher fixed-assets ownership send less migrant that those with higher liquid assets. Probability of sending migrants is higher for those who are in the lowest distribution of household assets index, while those in the highest distribution are less probable to send one.

Does Marriage Increase Depression?
Evidence from Indonesia

Achmad Kautsar[1], Citra Kumala[2], Adiatma Siregar[3]
[1]Universitas Pertamina, Indonesia; [2]University of Warwick, UK; [3]Universitas Padjadjaran, Indonesia

Background: Married people are found to be more likely to enjoy better physical health, such as lower mortality and/or morbidity, and better mental health than the unmarried. This study attempts to establish whether marital and health status might affect depression of people in Indonesia. Understanding the potential relation between these factors are important in order to provide information to couples before getting married, more formally through pre-marital counseling.

Methods: Data were derived from Indonesian Family Life Survey (IFLS), an on-going longitudinal survey in Indonesia. The sample is representative of about 83% of the Indonesian population and contains over 30,000 individuals living in 13 of the 27 provinces in the country. The logit regression was used to estimate the potential relationship between people's marriage status, mental health, and health status.

Result: Married individuals have 0.025 lower probability of having depression (CI 95%; 0.036 – 0.013) compared to unmarried individuals. Consuming hypertension and cholesterol medicine leads to higher probability for people to be depressed

(0.031, CI 95%; -0.004 – 0.676; 0.084, CI 95%; 0.037 – 0.129 respectively), while consuming diabetes medicine gives lower probability (0.027, CI 95%; -0.902 – 0.035). Lastly, the probability of depression is higher for smokers (0.025, CI 95%; 0.012 – 0.039).

Conclusion: Our study found mixed results on the potential effect of marriage, health status, smoking behavior on depression. Depression is potentially lower for married people, which may be caused by being able to share their problems with their spouses. Although the causal relationship between marriage, health status, smoking behavior, and depression still need to be established, we have provided the potential relationship between these factors. Further research should study the underlying cause from the results of this study.

Natural Resource Management
PAR L5: Natural Resource Management

An Exotic Mangosteen in Purwakarta Regency, Indonesia: a Conceptual Model for Rural Agribusiness Development

Dini Rochdiani, Sulistyodewi Nur Wiyono, Sara Ratna Qanti, Gema Wibawa Mukti
Department of Agricultural Economics and Social Sciences, Universitas Padjadjaran, Indonesia

Mangosteen in Indonesia has its own comparative advantages in the international market. The emergence of problems in the cultivation and production technology make the quality and quantity of mangosteen vary in each region. Purwakarta is one of mangosteen production area in West Java in which the farmers encountered some obstacles in their crop production, thus received low output prices. The main problem is the delayed harvest season of mangosteen in the last two years due to extreme weather changes in Indonesia. The conceptual model is needed as an effort to map out the problems and treatment through systems thinking method, soft system methodology. The conceptual model is expected to help policy maker to define a roadmap for the future rural resource development based on the leading commodity. This study used primary data that were collected in 2017 from 20 participants through Focus Group Discussion. The conceptual models that are suggested based on this study are as follows: production system, the collaboration from university and government in order to increase the quality and quantity of mangosteen production, reform the function of farmers group, and the establishment of an association.

Impact Analysis of Marine Transportation and Marine Fisheries Through Trade Sectors to The Regional Revenue in Maluku Province

Jacobus Cliff Diky Rijoly[1], Riller Katipana[1], Theovalia Castella Hendrik[1], Estro Dariatno Sihaloho[2]
[1]Pattimura University, Indonesia; [2]Padjadjaran University, Indonesia

Maluku Province is one of province in Indonesia that have a geographical construction consist of a islands and most of the areas are covered with sea, so the economic sector in this province is mostly depend on the maritime sector, but until now the maritime sector on Maluku has been not improved yet by the government, so the aim of this research is to understanding how the marine transportation and marine fisheries through the trade sector can have an impact to the regional revenue in the Maluku Province.

Data of this research is time series data, from 2000 – 2015 and to measure the causality between the variables, this research using two stage least square models to show how the marine transportation and marine fisheries can make impact to the Maluku regional revenue through the trade sector mechanism.

Based on the estimation result, it can be seen that sea transportation, fishery sector, and PAD (Regional Income) significantly influence the trade sector in maluku of 87.35%, partially PAD and transportation sector have significant influence while fishery sector has no significant influence Against the trade sector. And on the other equation trade sector able to positively and significantly affect the local Original Revenue equal to 83.02%.

Farmer's Adaptation to Climate Change Impact on Food Security in Small Islands:
A Case in Maluku Islands, Indonesia

Wardis Girsang, Semuel Laimeheriwa, Adelina Siregar
University of Pattimura, Indonesia

The objectives of this study are to assess the perception and strategies of farmers on climate change impact in the extreme dry season areas in small islands. Research used survey method, applied questionnaire instruments to interview selected households in small islands. Research showed that three climate types in small islands of Maluku are called local, monsoon and equatorial. Monthly air temperature increased around 0.2oC in the last 30 years. On the ground level, farmers perceived that climate change is hotter weather that will probably decline food crops production. Farmer's adaptation strategies are to develop lutur-crops and livestock farming systems and dusun-integration multiple cropping of agriculture and forestry. They also developed adaptive seasonal calender as indigenous knowledge to forecast rain through natural signs observation, cooperation of women farmers to obtain optimum rain in the short time period of planting season, and to cultivate multiple food crops in small scale land to avoid risks.
Keywords: Small islands, climate change pattern, perceived, adaptation strategy, Maluku

Poverty Alleviation
PAR M2: Poverty Alleviation

Effectiveness of Poverty Programs Based on Household:
Lesson Learn From Indonesia

Luh Gede Meydianawathi, Ni Putu Wiwin Setyari
Udayana University, Indonesia

Poverty is a social dimension in a society that can not be solved easily. Various government programs implemented in fact it does not negates the poor, but at least they try to reduce the amount. Indonesia so far has various poverty programs aimed at different groups based on the primary target, ranging from household (single one), a community or group of communities (clusters two), and small and medium enterprises (cluster three).

This study aims to look at the effectiveness of the implementation of the government's poverty programs mainly intended for households. Specific target to be achieved is nothing but a refinement of the targeting mechanisms and beneficiaries of the program. The results are expected to contribute to the policy assessments of poverty alleviation program and their perfecting in the future.

Analyzes used data of Indonesia Family Life Survey (IFLS) in 2007 and 2014. In accordance with its objectives, there are three policies that would be seen its impact on household welfare indicators, namely the health policy (ASKESKIN), consumption policy (BLT) and education policy (BSM). ASKESKIN program is assumed to represent all health policies including JAMKESMAS and other similar programs. Likewise BLT considered to represent the BLT program and BLSM (Bantuan Langsung Sementara Masyarakat which is only in latter IFLS version) and other similar programs, while BSM (Bantuan Siswa Miskin) represents poor students assistance program and other similar programs.

The test results show if the three policies programs targeting households poverty alleviation do not have the same effect on the changes in household income. Direct cash assistance (consumption policy/BLT) was most effective compared to other programs. This could be because the welfare indicator used is the same, namely the change in income that lead to direct cash assistance is immediately visible impact. Health and education programs seem less significant because their indicators do not directly targets the income, but rather on the quality of life that will have an impact on earnings in the long term.

Therefore it can be concluded if these three programs have different effects at different time periods, so it must be applied in accordance with the needs. Direct Cash Assistance will be very effective to help households to secure earnings in the short term so that it is only effective if it is done in response to a temporary economic shock. Meanwhile, health and education assistance program policy are only be seen their impact in long term through changes in the quality of life so as suitable to overcome the problem of poverty in the future.

Social Vulnerability Index for Building Social Resilience for the Poor

Mia Amelia, Irene Muflikh Nadhiroh, Aulia Hadi
Indonesian Institute of Sciences

Poverty remains a great issue for Indonesia. Java records the largest number of people living below the poverty line. While the government of Indonesia uses poverty line to measure the poor, the findings of our social-cultural resilience research from 2015 to 2017 indicate several problems with the measurement that warrant attentions from all stakeholders, particularly the government and the civil society. This paper is a short version of our research report from three years study, which proposes the Social Vulnerability Index (SVI) based on a survey conducted in the Province of Banten and Daerah Istimewa Yogyakarta to examine not only the economic vulnerability, but also the social and cultural vulnerability of the poor. Using data from 1.198 respondents, SVI is compiled through factor analysis into five factors, namely liability, social investment, economic value, remittance and asset. Based on the distribution of SVI score, there are three groups of the poor, specifically (a) quite vulnerable; (b) vulnerable and (c) highly vulnerable with SVI score <40; 40-80 and >80 consecutively. Ultimately, this paper argues that poverty alleviation should be conducted through social resilience building incorporating economic, social and cultural factors.

The Influence of Early Marriage on Multidimession Poverty in Indonesia

Wulansari Dyah Rahayu, Heni Wahyuni
Faculty of Economics and Business, Universitas Gadjah Mada, Indonesia

Recent studies on early marriage show that the prevalence of early marriage in Indonesia reached 13.5 percent (Marshan et al., 2013) and that early marriage is exacerbate poverty which causes an increase of economic burden of the family (Djamilah, 2014), an increase of family harassment, divorce and not continuing individuals to schools (Putranti, 2012), and an increase of chances of poverty by 31 percent in the United States (Dahl, 2010). However, those recent studies do not consider the multidimensional poverty as a complete measurement of poverty (Artha and Dartanto, 2014; Alkire andFoster, 2011).

The aim of this study is, therefore, to analyze the influence of early marriage on multidimensional poverty in Indonesia. The study uses recent data on Indonesian Family Life Survey (IFLS), year 2014; women who are marriages at age less than 18 years old for their first marriage as a proxy for early marriage; and education, health, and the standard of quality of life of Alkire and Foster method (Alkire dan Foster, 2011) as a measurement of multidimensional poverty.

From IFLS 2014 data used in this study, it shows that the prevalence of early marriage in Indonesia is reached 16.36 percent, 46.61 percent of the woman who were marry in their teens (before 18 years old) does not pass the nine-years basic education, and 52.35 percent of the early marriage woman does not have a health insurance card.

After controlling for some socioeconomic and demographic factors, the logit regression model used in this study found that early marriage has a positive significant effect on the multidimensional poverty. The odds ratio to be in the multidimensional poverty is 1.836. It means that if a woman marriage early, the probability of her to be in the multidimensional poverty is increased by 1.836. Using the Average Marginal Effect (AME), on average, if a woman marriage early, the probability of her to be in the multidimensional poverty is about 10.6 percentage point. The results of this study imply that the multidimensional poverty is an important indicator that is related to early marriage along with other measurements of poverty. Therefore, the policies that are related to reduce early marriage should consider the impact of this factor on the multidimensional poverty.

Key words: early marriage, multidimensional poverty, logit, Indonesia, IFLS

Regional Connectivity
PAR O2: Regional Connectivity

Exploring The Influence of Colonial Railways on
Java's Economic Geography

Aloysius Gunadi Brata
UAJY, Indonesia

The purpose of this study is to explore whether transportation infrastructure, specifically railways, build by the Dutch colonial in Java has an influence of the economic geography of Java. The first line of railways in operation was between Semarang and Tanggung (26 km), opened in 1867. In 1928 the total length of rail- and tramway system in Java measured 5.473 km. Therefore, by the 1920s, most towns and cities in Java were connected by rail, and branches and tramways connected sugar plantations to factories. It indicates that the colonial railways in Java were built to gain economic benefits from agricultural activities. In this work we use the construction of this railways system as a natural experiment that allow us to study the persistence of a spatial distribution of economic activities in the Java island. We use two sets of data from various available resources. The first is the historical population data during the colonial era both at residency and city level covering more than 100 years. The second one is data on the development of railways during the colonial era. To investigate whether there is a persistence of the spatial distribution of population in Java we first use a graphical analysis. A correlation analysis will also be conducted to explore the influence of this colonial railways system on the population distribution across the island. We then highlight some lessons from the findings of this historical study for infrastructure development, especially railways system, in Indonesia today.

Impact Analysis of Logistics Flow Improvement in Supporting Food Security in Eastern Indonesia:
A Computable General Equilibrium Model Approach

Irlan Adiyatma Rum[1], Megananda Suryana[2]
[1]*Department of Economics, Universitas Padjadjaran;* [2]*Center for Sustainable Development Studies, Universitas Padjadjaran*

Eastern Indonesia experiences high logistics costs, resulting in uneven supply of goods, especially in food supply. The government initiates logistics flow improvement on shipping services. This study attempts to quantify the impact of improving trade connectivity. To capture the impact, an interregional Computable General Equilibrium (CGE) model is being used in this study with focus on the

economy of Eastern Indonesia. Two scenarios are being developed, i.e. (1) changes in shipping routes through interregional connectivity changes, (2) sea transport development through government support. Improving logistic flow between regions indicates a positive impact on the regional economy in Eastern Indonesia. It also improves the availability and accessibility of food in this region. Using the fact that the improvement persistent in the long run, it indicates food stability in this region. Thus, the result shows that government initiation program can support food security in Eastern Indonesia.

Do Fisherman and Farmers have difference Time Preference and Risk Taking Behavior?
Evidence from Indonesia

Ni Made Sukartini[1], Edy Purwanto[2], Albertus Girik Allo[3]
[1]Universitas Airlangga, Indonesia; [2]SurveyMETER, Indonesia; [3]Universitas Papua, Indonesia

This study investigates and comparing time preference and risk taking behavior between fishermen and farmers in Indonesia. Fishermen are regularly catch fish in a body of water such as river, lake and ocean. Fish is a kind of common resources, and fishermen used to race for catching fish as much as they can. Without any regulation in terms of tool and quantity for fishing, there is high probability of over fishing and in the long run destroy fish sustainability. Farmers on the other hand, have difference working melody. Farmers have to face time lag between planting and harvesting. Unpredictable weather between rainy and dry season put pressure on the probability of success harvesting. This study will apply Indonesia Family Life Survey (IFLS) data to analyze the behavior of these two types of occupation in Indonesia. This study adopt the measurement method of Nguyen and Leung (2009) and Liebenehm and Waibel (2014). Our preliminary result indicates that fishermen significantly more impatient and risk averse compare to farmers. This finding implies that tool and total allowance catchment (Tools and TAC) policy need to implement for fishermen to keep fishing sustainability. On the other hand, Indonesian farmers are patience enough. Policy relevance with this finding is introducing farmers for practicing organic farming.

Agriculture and Rural Development
PAR B6: Agriculture and Rural Development

Strategic Planning at Universitas Negeri Manado (UNIMA)
Towards a World-Class University

Elni Jeini Usoh
Universitas Negeri Manado (UNIMA), Indonesia

In the last ten years, the term world-class university is a very popular slogan which purpose to improve the quality of learning and research in higher education, more specifically to develop capacity in global competition, enhance achievement and advance knowledge (Salmi & Liu, 2011).

Higher Education Strategic Planning is an official document that determines policy direction, decision making and institutional strengthening within the university. Strategic planning with a focus on world-class university status is an option that cannot be avoided by universities today to survive and succeed in competition as a provider of higher education.

This research is conducted to improve the development of strategic planning at Manado State University, Indonesia (UNIMA) in preparation for world-class university. The purpose of this study is to provide advice and references to strategic planning at UNIMA; to identify the various institutional resources that can support the strategic planning process at UNIMA; and to recommend the upgrade strategic planning that can be used as preparation to achieve a world-class university status. The specific objective of this research is to obtain exploratory research results on the strategic plans of universities that are prepared to generate world-class university status. This study is the first study in the context of strategic planning of universities in North Sulawesi regarding achieving world-class university status, which can also be used for other universities especially for higher education in East Indonesia.

This research was conducted by exploratory qualitative research method and data was collected by in-depth interviews method. Interview transcripts were analyzed by using thematic content analysis through NVivo software analysis and manual systems. The main respondents were the lecturers who have structural positions and involved in the process of constructing strategic plans in UNIMA. The number of respondents were 40 people with the duration of interviews for 45 minutes to 1 (one) hour. Other data sources include are strategic planning documents and other related documents.

Keywords: Strategic Planning, Higher Education, World-class university

Composite Leading Indicator of Inflation in Jember Regency, Indonesia

Yulia Indrawati[1], Adhitya Wardhono[1], Ciplis Gema Qori'ah[1], M. Abd. Nasir[1], Gde Agus Dwijaya Kusuma[2], Elizabeth Marito Sagala[2]
[1]University of Jember, Indonesia; [2]Bank Indonesia

Fluctuating inflation gives an overview of regional economic conjuncture both in expansionary and contractionary phase. Predictive movements of regional economic are essential for overall economic policy implementation. Composite Leading Indicator (CLI) is an index which is the development from an aggregate composite index being capable of predicting the business cycle in the peak or contraction phase. CLI is important as early detection and prediction of turning points of business cycles and CLI can be used to adjust the sales and investment strategies in allocating company's resources. The determinant of inflation in Jember are caused by climate anomalies and the impact of tobacco companies closing, thus they cause an increase in unemployment.

The method used in forming a leading indicator of Bry Boschan method is by observing the data period from M1.2010-M12.2015. This method is used to determine the turning points after series of data are stated clear from seasonal elements, irregular, and trends. The algorithm of this method can identify the local minimum and maximum values of individual time series and the movement around these values forms basic identification of turning points.

The results show that Composite Leading Indicator (CLI) with series of inflation benchmark consists of the real sector and the external sector. The real sector consists of variable of small chili production, production of marine fish, and soy production. In the external sector, there are four variables consisting of foreign exports, edamame exports, rubber exports, and okra (lady's finger) exports. Turning point for the Composite Leading Indicator (CLI) with series of inflation reference generates an average turning points of 6,5 months. Limitation on data series is very important to be reconsidered in the use of Composite Leading Indicator (CLI) to better reflect fluctuations or series of turning point movement becoming reference and leading indicators.

Microfinance Based Religious Aspect in North Sulawesi

Novi V. B. Kaligis, Joubert B. Maramis, Joy Elly Tulung
Sam Ratulangi University, Indonesia

Microfinance is one element of Financial Inclusion, Microfinance as one of the key elements of financial inclusion, has very important role in the economy. Microfinance is a major supplier of financial services to millions of people in the developing world. Yet concerns have emerged about its reach, regulation and oversight, application in urban areas, and impact on growth, poverty reduction

and indebtedness. Based on the last survey from OJK in 2016 The percentage of financial inclusion in Indonesia was increase from 59,74 % in 2013 to 67,28% in 2016.

The role of religious institutions in the development of economic aspects in Indonesia is undeniable. Not only non-formal aspects but also banking and financial institution as well as sharia insurance. There are several studies that support this argument: religion is a critical factor that correlates with socio-economic development. Religion promotes sustainable money economy development based on equity, justice and fairness. Religion on the other hand helps to provide social services for the poor and marginalized or to all members of society when formal institutions fail to do so (Ibrahim, 2015). And religion has an effect on the economics of the members (Lehrer, 2004) and the religious value of members can influence or change the economic environment and political pressure (Jong, 2008). One example of cases of institutional impacts on microfinance is the Bank Sulutgo program that creates micro-credit initiatives based on the guarantee of religious institutions in Indonesia. Results indicate that the condition of this program NPL is better than NPL in KUR that was non-guarantee religious institutions.

Growth and Regional Development
PAR C5: Growth and Regional Development

The Development of Ecotourism to increase tourists visit in Geopark Ciletuh, Sukabumi, West Java

Ade Kadarisman[1], Agus Rahmat[2]
[1]Faculty of Communication, Universitas Padjadjaran; [2]Faculty of Communication, Universitas Padjadjaran

In supporting the vision and mission of the West Java in the tourism sector, the local government of municipality of Sukabumi develops ecotourism in increasing local and international tourists visit Geopark Ciletuh region as a UNESCO Geopark Heritage. Unlike the conventional tourism, ecotourism is tourism activities which paid great attention to the sustainability of tourism resources. With the potential tourist destinations owned by Sukabumi government, the development of eco-tourism is the best option to increase tourists visit while maintaining the sustainability of natural resources.

This study uses qualitative research methods with data collection technique using literature, observation, interviews, and documentation and descriptive data analysis techniques. This study examines the development of ecotourism to increasing tourists visit in Geopark Ciletuh, Sukabumi

This study used 20 informants consisting of local and international tourists, travel agents, travel guide, government officers and tourism communications expert.

The results conclude local governments have crucial roles to succeeding ecotourism program in increasing local and international tourists visit Geopark Ciletuh, Sukabumi.

Community Forestry Program and Rural Economic Development: A Case Study of Sesaot Community Forest in Lombok Indonesia

Diswandi Diswandi
University of Mataram, Indonesia

Forests cover about 124 million hectares in Indonesia and deliver a significant contribution to the global environment and climate change mitigation. However, as a result of forest concessions that were granted by the government to private companies, deforestation is a serious problem in this country. The forest destruction was also caused by the encroachment by villagers during the political chaos and lack of law enforcement following the collapse of the New Order regime in 1998. In Lombok, villagers entered forests around their village, logged the trees and occupied the forests to plant fruit trees and other crops. As a response to this encroachment, the Indonesian government started to encourage local participation by involving communities in forest management which eventually

developed into a community forestry management schemes. In addition to its goal to address deforestation, rural economic development thus poverty alleviation is also the focus of the Community Forestry program.

This study investigates the impact of community forestry programs on socio-economic improvement. A mixed quantitative and qualitative research method was used in this study called "participatory econometrics". The research included in-depth interviews, field visits, surveys and focus group discussion. Both qualitative and statistical analysis was employed to assess the impact of community forestry on socio-economic improvement.

This study found that community forestry had a positive impact on the economy and welfare of the villages around the community forest site. It had provided a new source of income, job opportunities, and leads to improvement of socio-economic conditions. The most significant economic benefit from this program is the opening of access to land for poor people who do not have private farming land. The community forestry program has also provided indirect economic benefits to people who are not forest farmers.

Community Based Marine Tourism for
Fisherman Villages Development

Siti Nurisjah[1,2], Ray March Syahadat[2,3], Priambudi Trie Putra[2,3]

[1]Center for Regional Systems Analysis, Planning and Development (CRESTPENT) IPB; [2]Indonesian Society of Landscape Architects (IALI); [3]Department of Landscape Architecture, National Institute of Science and Technology (ISTN) Jakarta

Tourism is one of main Indonesia economic development sector, and marine tourism is one type of this which promising one. This type of marine tourism activity could increase economic activities of government, local fisherman families, support environment and cultural conservation program as well as village revitalization. Community based tourism is one type of tourism plan and management by local community. Paper objectives are describing fisherman social economic condition, living environment condition, potential marine tourism objects and attraction, and formulating type of community based marine tourism and positive impact to village environment. The data were carried out and analysed descriptively. Community based marine tourism could potentially increase fisherman family income, improve quality of village environment, and conserve traditional cultural heritage. Developing village landscape plan is one of research output to show implementation of village revitalization program to support community based marine tourism plan. The concept also connected the tourism object outside the village and created integrated tourism system.

Households and Communities
PAR E1: Households and Communities

Women's Control over Economic Resources and Access to
Financial Resources Effect to Family Welfare

Ni Putu Wiwin Setyari, A.A Bagus Putu Widanta, Ida Bagus Putu Purbadharmaja
Udayana University, Indonesia

Within the framework of neo-classical analysis, each individual is assumed homogeneous, including the preferences of all individuals are considered the same. One of the underlying is rotten kid theorem which asserts that if all family members receive gifts or income of other household members, so even if there are family members who are selfish, they still will maximize total family income. Homogeneous assumptions used become incompatible when talking about human behavior, in which every individual has different preferences in allocating its resources to maximize utility. Latest literature concluded that men and women allocate the resources that they can control in different ways systematically especially in the allocation of resources within the household.

This study was intended to see whether there is an increase in the household's welfare if the head of household is a women and given access to credit to financial institutions. Women's access to all financial services, including savings, insurance, remittance transfers and credit, is essential to allow them to benefit fully from economic opportunities. Legal, institutional and sociocultural barriers often, however, limit women's access to these services.

The data used came from the Indonesian Family Life Survey (IFLS) two last waves (IFLS 2007 and 2014). Respondents who included as sample are households that make women as head of household. In other words, as the head of the household, women (in this sample) is assumed to have access, as a decision makers and take responsibility for the management of funds borrowed from financial institutions. According to the IFLS explanation, respondents stated that loan can be enjoyed by all members of the household. Loan definition is limited not derived from relatives / family, but that comes from financial institutions (such as banks and cooperatives). Household welfare used here are either household income from farming and non-profit farm, the result of rent and wages of working.

Analyses were performed using fixed effect models to overcome the unobserved heterogeneity, especially in terms of the individual character, so that the results shown are not biased. The result indicates that the credit received by the female head of household can significantly increase household income. These results support the policy of increasing the women empowerment in order to improve family welfare. Analysis of the effects of location differences also done and shows the female household heads who have access to financial institutions in rural areas can encourage family incomes higher than those living in urban areas.

Empowering (Indigenous) People – A Gift of
Decentralization An Overview of Three (Economic) Territories in Indonesia

Matondang Elsa Siburian

Graduate School of Economics Waseda University, Direktorat Jenderal Pajak Kementerian Keuangan Republik Indonesia, LPDP Scholarship Awardee, Japan Economic Policy Association (JEPA)

Fifteen years of decentralization has granted Indonesian local governments the same political and economic authority to serve their constituents. Although the same level of authority has been granted, the results in economic performance seems to vary across the regions. For the purpose of economic development studies, Indonesia is often categorized into three different regions (western, central and eastern Indonesia), which has its own distinguished characteristics (economic performance, geographical conditions, human resources quality, and ethnic diversity). Most if not all Indonesian local governments have introduced local economic program (Local Economic Development - LED) to improve the welfare level of local people. Some local government's programs are able to reach its objectives while others still struggling. This paper is a case study that tries to describe each region's LED programs; to explicate how LED program affects the society; and to address the issues that may flourish (hamper) LED program to accomplish its objective that may help to explain the different results.

Preceding research indicates that regional development depends on factors such as traditional factors (infrastructure, human resources, capital, location) and intangible factors (institutional capacity, business culture, community identity). Other study argues that local culture and social institution contribute to regional development.

This paper conducts field work research (observations to LED project sites, interview with localshareholders) in three different regions in Indonesia which covers different sectors (agriculture in western Indonesia, tourism in central Indonesia, and livestock in eastern Indonesia). Literature review is also conducted to describe previous studies and relevant regulations. Based on aforementioned research method, this paper attempts to answer the following questions: what kind of LED program applied in each observed region; how does it works (legal framework, standard and procedures applied); how does the program affect local people's life (the results); and what is the determinant factor that may enable (hinder) the program to accomplish its objectives.

The outcomes point of this paper is to assist local government in designing locally-adjusted LED program by providing policy recommendations based on the analysis results not only for improving the local people's welfare, but also may applicable to country with similar conditions with Indonesia.

Long-term Effects of Childhood Malnutrition on Education and Health: Evidence from Indonesia

Moh Agung Widodo[1,2], Budy P Resosudarmo[1]
[1]*Australian National University, Australia;* [2]*Bappenas*

Child malnutrition is a serious problem in many developing countries. It is often associated with suboptimal outcomes later in life. Using Indonesia's 1960s hunger episode as a source of exogenous variation, we find that children who were born in affected regions went on to complete fewer years of schooling. They also tend to have lower cognitive ability when they are adults. There is, however, no strong direct evidence of long-term effects of childhood malnutrition on chronic diseases. Height differential between the affected and the control groups is also barely observed. Only after comparing the offspring of malnutrition survivors with that of the control group, the symptoms of stunting can be identified.

Financing Regional Development
PAR H3: Financing Regional Development

Does The Infrastructure Development Contribute to Regional Growth Convergence? A Case Study of Banten Province

Hidayat Amir[1], Panjar Pamungkas[2]
[1]Fiscal Policy Agency, Indonesia; [2]PKN STAN, Indonesia

The regional disparity becomes a central issue in regional development. For example, it has been a long discussion in the Indonesia regional development planning on how the regions outside of Java island can grow faster than the regions in Java. So, then the disparity between Java and Non-Java can be reduced. The disparity between regions also an issue in the smaller region such as Banten. In Banten, regions in north area is more developed than in south area. This study evaluates the impact of infrastructure development on growth between regions in the Banten province and assesses whether it brings to growth convergence or not. To test the regional convergence, the study employs sigma and beta convergence. Sigma convergence is estimated using the four time-series indicators: unweighted coefficient of variation (UCV), weighted coefficient of variation (WCV), Theil Index, and Gini Index. Beta convergence is estimated using panel data. Furthermore, the study uses conditional beta convergence to evaluate further of the determinants of regional growth, particularly the impact of infrastructure development. The study concludes that there is no sigma convergence in the Banten province. But the absolute beta convergence exists even in very small number. It indicates that needs a very long period to have a convergence in economy. The infrastructure development i.e. road, electricity and water development, have positive and significant contribution to regional growth that necessary to regional growth convergence.

Formulate Dividend Policy of State Owned Enterprises for Accelerating Infrastructures Development

Mohamad Nasir
Badan Kebijakan Fiskal, Indonesia

In the recent years, Indonesia had deficit budget, where revenues could be not enough to cover the expenditures. To fund the expenditures Indonesia had to issue the debt. Therefore, maximizing the revenues is the key solution for the deficit problem. Dividend from state owned enterprises (SOEs) is one of some kinds of budget's revenue. Increasing the dividend means the deficit budget to decreases and so does the debt. However, Indonesia also needs SOEs to reach

another interest, improving infrastructures to reach the economic growth around 7% a year for 2014-2019. For that, SOEs are expected be able to provide fund Rp1,026.2 trillion . Therefore SOEs' capital should be strengthened by using dividend and new equity. Regarding the dividend policy, Indonesia faces a tradeoff between improving deficit budget and the debt balance with the strengthening of SOEs' capital.

The main goal of the research is to analyze the profitability and the leveraging of SOEs, and to compare the profitability with yield of Indonesia's debt. SOEs which have high leveraging capabilities and have higher profitability than yield of debt are not expected to distribute dividend. On the contrary, dividend has to withdraw from SOEs that have low leveraging and low profitability to increase revenue of budget. Some analysis methods are considered for used such as descriptive and panel data analysis. The analysis will use some financial data from SOEs which consistently distribute dividend and related with infrastructure. The research' output is expected to contribute for Indonesia in the decision making whether withdraw the dividend or not for certain SOE. Deficit budget can be controlled or minimized, including for pushing the debt balance. In the other side, SOEs' capital will be strong and the leveraging increases.

Furthermore, the research will give additional perspective for the development of corporate finance theories. Dividend policy for SOEs is a unique, and it lies in role of Indonesia both as government and shareholders, which Indonesia has right to get income tax and net income (dividend) from corporate (SOEs). Some corporate finance theories, such as tax preference theory, Modigliani and Miller's Tradeoff Theory of Leverage, and others, are not applicable for

Keywords: dividend, leveraging, profitability, yield of debt, capital, tax income, net income.

JEL Classification: G30, G38 , H60

Alternative Infrastructure Financing Instrument, Vehicle, and Routes for Indonesia

Irlan Adiyatma Rum, Teguh Santoso
Department of Economics, Universitas Padjadjaran

Based on national demand, the gap between infrastructure investment needs and available funds is annually increasing. Financing infrastructure using public spending cannot answer the challenge. This study examines alternative infrastructure financing instrument, vehicle, and routes that fit for Indonesia. Using Strategic Assumption Surfacing and Testing (SAST) method, the study identifies 5 from 9 infrastructure financing route that can be developed as alternative funding, i.e. (1) Government Infrastructure Bond, (2) Project Bond, (3) Loan to Infrastructure Companies, (4) Infrastructure Project/SPE and (5) Infrastructure Stock. However, the issue of how to develop alternative infrastructure financing to encourage private sector investment is not the only obstacles. In Indonesia, the problem with infrastructure projects is often from a lack of credible projects. Thus there is a high necessity to create infrastructure project plan that use government guarantee at the initial project phase.

Inter-Regional Disparity
PAR J3: Inter-Regional Disparity

Can the Agriculture Development Program Control Rural-Urban Migration?

I Wayan Sukadana, I G. W. Murjana Yasa, Luh Gede Meydianawathi
Udayana University, Indonesia

Indonesia is a very fertile agricultural country. Agriculture businesses almost provide 40 percent jobs for the population. Ironically, this agricultural business is often identified as poor business and relate to poverty. Agriculture businesses often contain large number of discouraged workers who put the agriculture as the last option (or even not in the option). On the other hand, Indonesian increasing number of population needs food that that supposed to be a very large potential market for the agricultural industry. But in fact the production and supply in the country are often not enough, thus force the government to import. The government is very intense to develop infrastructures to support the development of the agricultural business field, ranging from construction of supporting infrastructure such as irrigation until a variety of training programs and financial support program. Therefore, this study will analyze the impact of various rural development programs by the Indonesian government on agricultural businesses in Indonesia. The question that try to address in this research is, can the program reduce rural-urban migration. This study used two types of variable control for controlling the impact of the development program Infrastructure. The first type is derived from the characteristics of such farmers, various demographic characteristics and risk behaviors. The second is a control variable derived from natural circumstances such as the characteristics of geography and weather. The analysis uses panel data regression analysis on the IFLS data. Although not statistically significant, we can conclude that the risk behavior has a role in migrant decision. We also found that the infrastructure program not have a significant effect in reducing the urban rural migration from agriculture sector. In the discussion section of this paper we try to use this statistic result to discuss some of agriculture program design that we suggest as another solution rather than an original "Dana Desa" program.

Financial Inclusion and Poverty Reduction
in Eastern Indonesia

Paulus Kindangen, Tri Oldy Rotinsulu
Faculty of Economics and Business Sam Ratulangi University, Indonesia

Poverty indicates inability to fulfill basic needs such as food, housing, education, as well as health. Every national or regional government endeavor to increase

economic well being by reducing poverty. Indonesia has been able to reduce poverty, but the rate of poverty is still higher than expected based on the medium-term development plan. In March 2016, poverty rate in Indonesia is 10.9 percent while the moderate target of the medium-term development plan (RPJMN 2015-2019) is 10.0 percent. Eastern Indonesia is in general considered as Indonesia's region with higher poverty rate compared to Western Indonesia. There are various reasons can be stated as explanation of this poverty existence in Eastern Indonesia such as infrastructure weakness and low access to bank funding.

Indonesian government has determined an economic policy of financial inclusion as a program to empower people in various fields of job, especially those who are lack of access to bank funding such as farmers, fishermen, as well as micro and small business. Financial inclusion is intended to combat poverty by opening up blocked opportunities and, hence, can be one of a good strategies to enlarge employment and reduce poverty.

This paper is intended to discuss the positive impact of financial inclusion on poverty reduction in Eastern Indonesia. Better access to bank loan is expected to empower more people especially those who are poor or economically weak such as farmers, fishermen, and micro and small business.

Using regression analysis of double-log model, this paper shows the influence of bank loan on poverty reduction. Poverty reduction as the dependent variable is the annual decrease in poor people in each province of Eastern Indonesia. Bank loan on agriculture sector and bank loan for micro and small business in each provinces are the proxies of financial inclusion as the independents variables in this model. As expected theoretically, the proxies of financial inclusion have positive influence on poverty reduction in the region.

Can 'Thousand Rivers' Reduce its Poverty Using Its Rivers?

Jorghi Vadra, Estro Dariatno Sihaloho
Universitas Padjadjaran, Indonesia

West Kalimantan is one of the Provinces in Kalimantan island known as 'Thousand Rivers' province because it has many rivers, either small or big rivers, including Kapuas river, the longest river in Indonesia. According to Statistical Bureau (BPS), West Kalimantan has the poorest people among other provinces in Kalimantan with 405,510 people living in poverty and becomes the poorest province in Kalimantan with Rp337, 228 per capita per month. This paper uses panel data to analyze regression model of regencies and cities in West Kalimantan from 2011 until 2015. Authors find effects from geographical aspect to regional poverty, especially gross regional product depending on river, such as transportation and logistics, plantation, and forestry this model also sees the effects of unemployment on regional poverty. Authors use number of poor people, in this case we call Poverty as dependent variable, and Gross Regional Product in River, Gross Regional Product in Plantation, Gross Regional Product in Forestry, and Unemployment Rate in each regencies and cities as output. The result shows gross regional product in river has significant effects into poverty. It also shows negative relationship between gross regional products in river into poverty.

Increases 1 million rupiahs of Gross Regional Product in River, Poverty will decrease 0.15%. However, increases 1 million rupiahs of Gross Regional Product in Plantation, Poverty will increase 0.02% , increases 1 million rupiahs of Gross Regional Product in Forestry, Poverty will increase 0.03% , increases 1 million rupiahs of Gross Regional Product in Mining and Quarrying, Poverty will increase 0.04%. Unemployment rate also has positive relationship with poverty, as long as decreases 1% of total unemployment, poverty will decrease about 0.28%.

Migration and Demography
PAR K3: Migration and Demography

The Impact of Rural-Urban Migration on the Welfare of Migrants: Evidence from Long Term Longitudinal Surveys in Indonesia

Niken Kusumawardhani, Ahmad Zuhdi, Asep Suryahadi
The SMERU Research Institute, Indonesia

Background

Urbanization in Indonesia occurs rapidly following the country's massive development in the 1970s. One of the major source of urban population growth in Indonesia is migration from rural areas to larger cities (Meng and Manning, 2010). Rural to urban migration can be triggered by many reasons but economic factors are pivotal in explaining migration. Seminal works on theoretical concepts of migration (Sjaastad, 1962; Harris and Todaro, 1970; Mincer, 1978) conclude that migration occurs when net benefit of migrating is larger than staying in origin area. Consequently, migrants move to place where expected benefit of migration is higher than the associated costs.

This paper aims to investigate the impact of rural-urban migration on migrants' welfare. Measurement of the causal relationship is not straightforward as migration is a highly selective process. Not only that migrants differ in terms of observable characteristics, but unobservable characteristics such as ambition or willingness to migrate also influence participation into migration as well as migration's outcomes. While a number of studies already try to link rural-urban migration and the welfare of migrants, the challenge remains largely unanswered as commonly selection is only corrected partially.

Data and Methodology

The main dataset used in this study is the Indonesia Family Life Survey (IFLS), which consists of IFLS 1-5 and covers the period of 1993-2014. The longitudinal dataset allows us to identify people who once were rural residents and eventually migrated to urban areas during the 21 year period of surveys. Our sample is restricted to individuals who resided in rural areas during IFLS 1 and moved to urban areas in the subsequent waves of IFLS.

The identification strategy is to compare the welfare indicators (income, consumption, and poverty status) of rural-urban migrants with 'future rural-urban migrants', namely individuals who are rural residents in IFLS 1 and recorded as urban residents in the subsequent waves of IFLS. This restriction allows us to rule out the major source of selection bias, namely the willingness to migrate, which we assume is embedded in migrants even before their departure to urban areas. The impact of rural-urban migration on migrants' welfare is estimated using a combination of difference-in-difference and propensity score matching to control for selection from observable and other unobservable characteristics.

Potential Contribution to Knowledge

In the absence of natural experiment, previous studies on the impact of rural-urban migration commonly use one of these two alternatives as comparison group of migrants: 1) people who remain in rural origin; or 2) resident of urban areas. Our study provides a novel contribution to migration studies through construction of counterfactual using IFLS data in a way that has never been explored by previous studies. We believe that unbiased estimation of rural-urban migration's impact on migrants' welfare is an important addition to the discourse on rural-urban migration.
Keywords: rural-urban migration, welfare, longitudinal surveys, Indonesia

Are Migrant Workers in DKI Jakarta More Welfare than Non Migrants?: A Data Analysis of National Social and Economics Survey (Susenas) 2013

Chotib Hasan[1], Beti Nurbaiti[2]
[1]Lembaga Demografi FEB UI, Indonesia; [2]Universitas Bhayangkara, Indonesia

Inequality in development facilities among regions is indicated by population migration flows, as a reflection of inter-regional economic growth and public facilities disparities. DKI Jakarta has experience in population increase absolutely, in spite of having net migration rate. This increase is caused by absolute number of in-migration into DKI Jakarta from outside of DKI Jakarta.

The general objective of this research is assessing welfare status of Worker in DKI Jakarta and its relationships with other determinant variables (migration status and other socio-demographic variables). More specifically, the objective of this research are: 1) to analyze welfare status of worker in DKI Jakarta; 2) to analyze the effect of migration status on worker's welfare status; 3) to analyze the effect of other socio-demographic variables on worker's welfare status; and 4) to analyze the effect of interaction between migration status and other variables on worker's welfare status in DKI Jakarta Province.

By using Susenas (National Socio-Economics Survey) 2013 raw data as a source of data, this research conducts analyze with two stages: 1) The first step is constructing the worker's welfare status by using PCA (Principle Component Analysis) or SEM (Structural Equation Modelling); 2) the second stage is cross tabulating and ordered logit regression analysis to show the effect of migration status and other variables on worker's welfare status in DKI Jakarta.

The result of analysis exhibits that migration status of workers in DKI Jakarta, and also their other variables, have various contribution on welfare status pattern. However, the determinants variables have significant enough in their contribution to welfare status.

Alternative Population Projections for Indonesia

Turro S. Wongkaren[1], Diana Stojanovic[1], Salahudin Muhidin[2]
[1]Lembaga Demografi FEB UI, Indonesia; [2]Macquarie University, Australia

Good planning of the national and regional policies requires good population projection by province. So far, the most recent population projection for Indonesia comes from the United Nation's World Population Prospects 2015 Revision, which runs into 2100. However, that projection is only for the national level, not regional level.

The only population projection by province for Indonesia is provided by the National Planning Agency (Bappenas), Statistik-Indonesia (BPS) and UNFPA. Unfortunately, the projection method used is the conventional monoregional method, where each province was projected separately. Such method requires adjustment between the results for national level and the summation of the provincial levels. In addition, the projection only runs until year 2035.

This paper presents early results for two alternative population projections using multiregional demography method that estimates different regions as well as the national number at the same time. The first projection model takes into account factors affecting the demographic processes (fertility, mortality, and migration). The second projection model takes into account fertility differences across different educational attainment levels. Both projections run untill year 2100.

Effects of different projections on several areas, such as demographic bonus and regional development, will be discussed.

Natural Resource Management
PAR L6: Natural Resource Management

Supporting National Commitment in reducing GHG Emissions: A Painful Journey for Indonesian Local Government?

Sulistiadi Dono Iskandar, Andhika Putra Pratama
LPEM-FEBUI, Indonesia

In 2009, Indonesian ex-President, Susilo Bambang Yudhoyono declared Indonesia's commitment to reduce its Green House Gas (GHG) emission. The commitment later being legalized in Government Regulation No. 61 2011 (PP 61 Tahun 2011) along with the legal establishment of RAN-GRK (National Action Plan for GHG Emission Reduction) and RAD-GRK (Local Action Plan for GHG Emission Reduction) Program. However following five years after the implementation of both program, the effectiveness itself is still in question especially in the case of local government level. Even until this study was conducted there are still no general standard of the RAD-GRK document, resulting a high variances in the quality of each province's document. In this paper we aim to evaluate the effectiveness of GHG emission mitigation activities in provincial level from the budget perspective. On top of that this paper also attempts to investigate the determinant factors of local government's effort to reduce GHG emission proxied by the total mitigation expenditure in the particular province. The major data used in this study was unavailable to public and was obtained directly from RAN-GRK Secretary. Using Panel data analysis for each province with timespan of 2010-2015, our result suggest that mitigation activities conducted by the local government are still far from effective to reduce GHG emissions. Our result also shows that local government's fiscal capacity do not determine the level of budget dedicated for reducing GHG emission. On the other hand, the quality of human resource seems to have significant impact in GHG emissions reduction, suggesting that enhancing the awareness regarding environmental issues should be prioritized over increasing budget transfer from national to local government.

The Effectivity of Mangrove Economic Valuation in
Supporting Mangrove Conservation Policy in Sebuku Island, Kotabaru, South Kalimantan Province

Mia Ermyanyla[1], Omo Rusdiana[2], Cecep Kusmana[3]
[1]Center for Regional Systems Planning and Development (CrestPent), Bogor Agricultural University; [2]Center for Regional Systems Planning and Development (CrestPent), Bogor Agricultural University; Department of Silviculture, Faculty of Forestry, Bogor Agricultural University; [3]Department of Silviculture, Faculty of Forestry, Bogor Agricultural University

Mangrove has important roles in keeping the sustainability of coastal and small islands ecosystems. However, the mangrove existence is increasingly threatened because of degradation and conversion to other uses, especially agriculture, fishery, and mining sectors. In the context of resource economics, the ecological economic value of mangrove can be quantified in monetary value. This research was conducted in Sebuku Island, Kotabaru District, South Kalimantan Province with the objective to: identify the types and functions of mangrove ecosystems; calculate Total Economic Value (TEV) of mangrove ecosystems; calculate the economic value of the conversion of mangrove ecosystems; and evaluate the effectivity of mangrove economic valuation in supporting mangrove conservation policy. The economic value of mangrove ecosystems was calculated by using TEV method, while the economic value of mangrove conversion was calculated by using land economic value based on sectoral Gross Domestic Product (GDP). The results showed that mangrove in Sebuku Island has ecological function such as abrasion barrier, seawater intrusion barrier, feeding ground, spawning ground, nursery ground, the habitat of endemic species i.e. Nasalis larvatus (bekantan) and Camptostemon philippinense (porong-porong), etc. It also has economical function such as producing wood, fish, shrimp, crab, etc. TEV of mangrove ecosystems was 39.627.858 IDR/ha. On the other hand, the conversion of mangrove to agriculture, fishery (sea ponds), and mining gave the economic value of 2.421.321 IDR/ha, 74.998.279 IDR/ha, and 115.295.812 IDR/ha respectively. Therefore, the economic valuation of mangrove ecosystems is less effective to conserve mangrove from the policy option to develop fishery (sea ponds) and mining. Some policy recommendations have been formulated in this paper.
Keywords: effectivity, economic valuation, GDP, conversion, Sebuku Island

Why They Still Want to Use It?: Plastic Bag Policy Application on Modern Retailers and Consumers

Amrita Nugraheni Saraswaty
Faculty of Economy and Business, Udayana University, Indonesia

This research conducted with the background of the fact that Indonesia is the second largest country in the world in terms of the use of plastic by 3.22 million metric tons per year of waste plastics from land to sea. There are about 32 thousand stores Indonesian Retailers Association members (APRINDO) which have the potential to distribute plastic bags as much as 9.6 million or 11.68

million shares per day, especially in urban cities. Ministry of Environment and Forestry responded that fact by issued a circular letter that charge the plastic bag to modern retail stores in 23 cities throughout Indonesia.

This study aims to determine the economic impact on the modern retail businesses and to consumers after the application of plastic bag policy by the government. To achieve these objectives, this research is done with quantitative approach with respondents from modern retail stores and modern retail consumers in the urban city of Denpasar and Badung.

Economic impact on modern retail stores are review in terms of the losses or gains after the implementation of plastic bag policy, the economic impact on consumers was analyzed by Ordered Logit Model to calculate how much consumers willing to pay for a plastic bag.

This study get the result that, in terms of modern retailing, there is a tendency to not impose tariffs on consumer plastic bags because they do not want to lose customers. About 92,45% respondent claimed that they do not apply the plastic bag policy. They still give it for free to the customers.

On modern retail consumers side, the tendency to pay for plastic bags are mainly at IDR 200,- but on average there is a higher price occurs at IDR 504,-.

It can be concluded that both consumers and modern retail stores do not feel any significant change of the economic policy of plastic bags. Consumers are still willing to pay the price set by the government, and most of the modern retail stores choose not to implement a policy of paid plastic. Going forward, the plastic bag policy can be equipped with alternative materials usage for a shopping bag. So that the amount of plastic bags that are used can be reduced and replaced with environmentally friendly materials

Poverty Alleviation
PAR M3: Poverty Alleviation

Women Participation in Labor Force:
An Attempt to Alleviate Poverty

Wandira Senja Larasati[1], Anissa Rahmawati[2]
[1]Center for Sustainable Development Goals Universitas Padjadjaran, Indonesia; [2]University of Wisconsin-Madison

Background: Indonesia is one of the countries that signed up for 2030 agenda of Sustainable Development Goals of which one of the agenda is to eradicate poverty. Its National Secretariat for Sustainable Development Goals commits to halve the proportion of people, men, women, and children living in poverty measured by national poverty line. Although the poverty rate has declined over the past decade, the poverty rate of around 10% in 2016 still left about 28 million people in poverty. This paper examines one route through which the goal to eradicate poverty to be achieved, which is the enhancement of women participation in labor force. Since it is quite evident that the more women working could increase growth, it is also interesting to analyze how the women employment could reduce poverty.

Method: Using data of The National Socioeconomic Survey (SUSENAS) of Indonesia from 2005 to 2015, this paper attempts to investigate the contribution of working women to their household's income and poverty. The study will be using regression of panel data analysis to investigate the effect of working women to poverty along with other socioeconomic and demographic variables. We emphasized our method to control the household-size effects and women's education, so we can isolate the women's employment effect on household poverty status. The study will also include the effect of the gender wage-gap to the income and poverty using logistic regression model.

Potential results: Although studies have shown the negative correlation between women participation in the workforce and poverty, this study still needs conducting in Indonesia, especially in household level. We also predict that controlling for household size, the effect of women participation in workforce is statistically larger to reduce poverty than without controlling the household size. We presume such results will also be applicable in Indonesia, thus providing an adequate ground for the development policy of women empowerment.

Resistance to e-Money in Poor Remittance Recipient Families: The Case of Lombok Island, Indonesia

Catur Sugiyanto[1], Tiar Mutiara[2], Zuhrohtun Zuhrohtun[3]
[1]UGM Indonesia; [2]Graduate Student, Pascasarjana UGM; [3]UPN Yogyakarta Indonesia

This research explores the social client perspective in mobile money systems, specifically potential resistance to e-money. We focus on 200 poor remittance-receiver families in Central and Eastern Lombok Island in Indonesia. Following Ram and Sheth (1989) we will measure resistance to e-money innovation along five axes: usage, value, risks, tradition, and image barriers.

Each year, approximately 50,000 workers from the Nusa Tenggara Barat (NTB) (West Nusa Tenggara) Province in Indonesia go abroad to work. Their main destinations are Malaysia and Saudi Arabia. In addition, many workers seek work in Taiwan, Hong Kong, and South Korea. These workers usually have little education. Remittances have been key for the livelihoods of the families that workers leave behind. There are different ways to send money home: In the past, sending money to friends or acquaintances through surrogates who are returning home accounted for a large portion of remittances, although the exact proportion is unknown due to a lack of official statistics. Delivery through bank transfers and other modern electronic methods (Western Union, Money Gram, etc.) is already widely known to workers. In addition, asking for friends' help is still common. It is not known with certainty, however, how much money is sent through friends and Tekong (unregistered sender/agency workers).

The technology used to transfer money from abroad includes a number of modern transaction technologies. How the process of the adoption of new technologies as well as their adaptation is unclear. Other research shows that the process of adoption of new technologies is not a simple one. For the case of the adoption of new technologies in agriculture, various studies have shown how the extension system was successful in Asia (Otsuka and Kalirajan, 2006; Otsuka, 2006), and also in Indonesia (Resosudarmo and Yamazaki, 2011). Adoption of new technologies moves the adopter from a transactions space where he/she is very comfortable, familiar, full of confidence, into a new domain that exposes him to new conditions that are not necessarily comfortable, though perhaps still familiar, and that involve new risks.

We found that receiving remittances through banks is preferred because although users cannot conduct their own transactions, there are private services (usually motorcycle drivers) who are "knowledgeable about transactions with banks". Families receiving remittances pay a fee to the motorcycle taxis of around 50-200 thousand per transaction (including the return transport) to facilitate the transfer. Receiving money through Western Union (WU) is also favored by families of migrant workers, because the process is easier: there is no need to open a bank account, no need to carry a passbook, and it is sufficient to show an identity card (ID) and enter a pin code (which is usually a PIN sent via SMS) to receive the money. WU also has more strategic locations and is affordable for families of migrant workers. Adoption of new technology requires information and behavioral change that may not easy to remittance receivers. Intermediary person is necessary for them to adapt to this new world.

Investigation on Inclusive Economic Growth and Strategies of Poverty Reduction in ASEAN 6: Structural Cointegrating Vector Autoregression Approach

Adhitya Wardhono, M. Abd. Nasir, Ciplis Gema Qori'ah, Yulia Indrawati
University of Jember, Indonesia

The main purpose of economic development of a country is to obtain sustainable and inclusive economic growth, which has a wide base, is located in different regions and is able to reduce income inequality. To develop a vast growth, there are surely some crucial things that need to be conducted which is to reduce poverty and inequality in society. Indicators characterizing inclusive growth continue to be developed, including how the method of measuring the inclusive growth in ASEAN 6 (Indonesia, Malaysia, Thailand, Singapore, the Philippines, and Vietnam).

The purpose of this study is to analyze the inclusiveness of economic growth in ASEAN 6 and to analyze the determinants of inclusive growth in ASEAN 6. The data used are the quarterly time series data from Q1.2000 - Q3.2016. To determine the measure of inclusive growth it uses measurement defined by Klasen (2010), in which the concept formula of inclusive growth is adopted from Poverty-Equivalent Growth Rate (PEGR). Meanwhile, to analyze the influencing factors of inclusive growth it applies Structural Cointegrating Vector Autoregression (SCVAR) method. The results show that economic growth in ASEAN 6 in the year of 2000 to 2016 is inclusive because the economic growth neither reduce poverty, nor inequality, and increase employment. The study also shows that inclusive growth is not a consistent phenomenon in ASEAN 6. The per capita income, government investment, and enrollment have a positive and significant impact on the growth inclusiveness in reducing poverty. As for inflation, population, and inequality have a negative and significant impact on the growth inclusiveness in reducing poverty in the ASEAN 6.

Regional Connectivity
PAR O3: Regional Connectivity

Estimating the Size and Impact of Online-Based
Transportation in Indonesia

Anda Nugroho, Eko Wicaksono
Fiscal Policy Agency, MInistry of Finance, Indonesia

Online-based transportation is a very fast growing business in Indonesia. The country has the largest online-based transportation market in South East Asia. In 2015 it has USD 0.8 billion of online-based transportation market. With the estimated annual market growth rate of 22 %, in 2025 the market is estimated to grow to USD 15.4 Billion. The main objective of this study is to estimate the size, the structure, and the impact of online-based transportation in Indonesia.
We undertake the analysis in two steps; the first step is estimating the size and the structure of online-based transportation by developing a custom I-O table of Indonesia, and the second step is analyzing its impact using the dynamic CGE model. Based on the generated I-O data, the total output of online-based transportation service in 2016 is estimated IDR 28.1 Trillion. This sector is compromise 0.11 % of national GDP.
The study also found that the growth of online based transportation help to reduce poverty, particularly in the urban area. The income of lowest 20% household in the urban area increased by 0.88% in 2025. Thus will lower poverty rate in the urban area by 0.12%. With a low barrier to entry, this business can help relieve poverty, particularly in urban area by giving low-income household the opportunity to enter the labor market.

The Economic Impact of Air Transport and the
Infrastructure on Indonesian Regional Economic
Development

Hizkia Hendrick David Tasik[1], Daniel Dewantoro Rumani[2]
[1]Sam Ratulangi University, Indonesia; [2]Ministry of Transportation, Republic of Indonesia

Indonesian air transport has grown in many aspects including number of passengers, number of airport, and other aspects. From 2009 to 2016, number of passengers averagely grew around 18 percent. From 2014 to 2017, number of airport increased from 237 to 298 airports. Since 2005, Indonesian government had shown serious supports which contributed to air transport growth. Some of the supports were regarding to infrastructure provision through public-private partnership (PPP) as stated in Presidential Regulation No.67/2005, master plan of acceleration and expansion of economic development as stated in Presidential Regulation No.32/2011 and the establishment of Committee for Acceleration of Priority Infrastructure Delivery to accelerate infrastructure projects. These

supports were partly provided to anticipate the estimated annual growth of air transport demand of 4.8 percent from 2015 to 2025 which required Indonesian investment of USD 25 billion. This investment may be made possible through PPP or any kind of investment. However, there are some questions worth discussion. Has air transport infrastructure given significant economic benefit to the Indonesian economy and how big is the benefit? Among all observable air transport factors which ones are the most influential? Among regions in Indonesia, which region has the biggest impact of air transport and what factor explains the impact? How do international and domestic activities affect the regional economic development consecutively? This study will use the available data of 227 airports across Indonesia from 2006 to 2015 from Indonesian Ministry of Transportation and macroeconomic data of the associated provinces. The air transport data will account both in- and out-bound activities and both domestic and international activities. This study will rely on two-stage least squares (2SLS) regression to address a potential endogeneity issue coming from the demand of air transport that may be affected by individual's wealth. This study may shed light on what factors of air transport and what regions of Indonesia government should focus on. That said, government may be more anticipative in addressing air transport issues especially with regard to infrastructure as well as more selective on choosing regions to have infrastructure investment. Additionally, this study may contribute to the literatures an empirical model of regional air transport in Indonesia that has not much been discussed in the past.

The Dynamics of Multimodal Transportation Infrastructure Investment and Regional Economic Development in Indonesia: Structural Equation Modeling Approach

M. Abd. Nasir, Adhitya Wardhono, Ciplis Gema Qori'ah, Yulia Indrawati
University of Jember, Indonesia

Socio-economic impact of the presence of substantially public infrastructure investments has long-term positive effects for regionally economic growth. As a core component of the infrastructure, development of public transportation needs to be put in reality as an influential role in the economic cycle of community. However, on the other hand, there are some debates over problems in the allocation of transport investment in regionally economic policy perspective. Some research hypothesis state that transportation infrastructure investments have a positive impact on economic growth, and economic growth will give a high burden on the budget allocation for sustainable transportation infrastructure. The purpose of this research is making structural equation model that comprehensively consider bi-directional relationship between multimodal transportation investment and economic development in Indonesia.
To estimate interaction between multimodal transportation investment and economic growth, spatial aspect of regional economic inter-province is used as an endogenous variable in building modeling system. Modeling system used is Structural Equation Model (SEM) which is formulated with a variable reflecting the supply of transport in each adjacent province (proxied by distance)

to investigate the spatial spillover effects. The empirical analysis is based on panel data years of 2005-2015 in 23 provinces in Indonesia which show that investment in transportation in the region (western part of Indonesia, Central and East) has an impact on economic growth, but it differs at national and provincial level. This difference can be attributed to the stages of economic development, investment policies of transportation, transportation infrastructure service level, the impact of other areas, as well as policy reforms undertaken by the central government. Regional policy and regional multimodal transportation infrastructure investment differ significantly in various provinces in Indonesia