The 18th Malaysia Indonesia International Conference on Economics, Management and Accounting (MIICEMA)

"Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives"

Bogor, October 4th–5th, 2017
WELCOMING SPEECH

the 18th Malaysia Indonesia International Conference on Economics, Management and Accounting (MIICEMA)

“Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives”

4-5 October 2017

Honorable Guests,

Vice Rector for Research and Collaboration, Bogor Agricultural University

Dean of the university members of MIICEMA

Dean of Members of Cooperation Board of Public University in West Region (BKS PTN Wilayah Barat)

Esteemed resource persons, Academician, researcher, policy maker, Distinguished Guests, Dear colleagues, friends, ladies and gentlemen

Assalaamu’alaikum Wr. Wb.,

Peace be on us, all praise is due to Allah, Lord of the worlds, praise that befits Your Majesty and Sovereignty.

It is a great honour for me to welcome all of you to IPB Convention Centre - Bogor. On behalf of the organizer, Faculty of Economics and Management IPB, of the 18th Malaysia Indonesia International Conference on Economics, Management and Accounting (MIICEMA) on “Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives”. I would like to express my most sincere gratitude for your presence in this Conference as the gateway to the initiation to our discussions (and to particularly extend a warm welcome to the distinguished participants from Malaysia).

Honorable, distinguished guests, fellow participants,

Before I turn to the specific topics we will be discussing today, let me quote an interesting statement from the great British statesman Winston Churchill (1874-1965). He used to say: “I am always ready to learn although I do not always like being taught”. I invite you to teach us what you know as the fruit of your research and the many hours spent in your
laboratories or in front of your computer, in trying to elucidate the mysteries of the global economy and the causes of unsustainable Economic development, particularly in the case of Indonesia and Malaysia.

Some of you maybe familiar with several TV programs such as a year million, the known earth, evacuate earth, end day and several other related programs. All of those programs are presenting the prediction of the future of our beloved earth. Indeed, these are all not 100 percent valid but we still can take a lesson from the stories, hence “we need to anticipate, we need to make our economic activities sustainable, so it can minimize the burden of our beloved earth”.

Sustainability is not the only issue that will be discussed in this conference, here we also raise the issue of stability. About two months ago, the central bank of Indonesia held an international conference and the topic was about the VUCA world. VUCA is the acronym of volatility, uncertainty, complexity and ambiguity. This shows that stability is also importance and relevant to be addressed in this conference.

Dear distinguished speakers and beloved participants,

In this conference, we will have 2 plenary session with 10 distinguished speakers and 4 paralel sessions. In total, there will be 96 papers that will be presented in the paralel session. Among 96 papers, we will select 15 best papers and these paper will be published in the scopus indexed journal.

In the next two days we will have not only a conference, but also two formal meetings namely, BKS PTN Barat meeting and MIICEMA meeting. Moreover, we will also have a Workshop on Scopus indexed Journal Management. This workshop is free for all conference participants and will be held tomorrow afternoon in this ballroom.

Once again I would like to thank all of you, dear colleagues and fellow-researchers, because our success is the merit of having all of you here to show the results of your excellent daily work which is essential to the economic development of Indonesia and Malaysia. You are the real stars of this conference, and we, the organizers, are but the instruments to bring together the best minds involved in the research of these economic, management, and accounting. Therefore, thank you so much for being here.

Last but not least, I would like to say: “Have a nice and fruitful international conference and I wish all days are interesting and beneficial workshop. Have a pleasant stay in Bogor!”

Thank you for your attention.
### FINAL AGENDA

**Day 1: Wednesday, October 4th, 2017**

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<td>09.15 – 12.00</td>
<td>1st Plenary session: “Sustainable Economy for Future Directions/Development”</td>
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<td>1. Christopher Bennett Adjunct Professor – University of British Columbia, Canada</td>
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<td>2. R. Edi Prio Pambudi – Indonesian Coordinating Ministry for Economic Affairs</td>
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<td>3. Asep Suryahadi – Executive Director of SMERU Research Institute</td>
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<tr>
<td>08.45-09.00</td>
<td>Opening Speech&lt;br&gt;Dean of Faculty of Economics and Management IPB– Prof. Dr. Yusman Syaukat, M.Ec</td>
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<tr>
<td>09.00-12.00</td>
<td>2nd Plenary session&lt;br&gt;“Food Security within the Framework of Economics and Technology”&lt;br&gt;1. Head of Indonesian National Agency of Drug and Food Control- Dr. Ir. Penny Kusumastuti Lukito MCP&lt;br&gt;2. Chairman of PERHEPI - Prof. Dr. Ir. Hermanto Siregar&lt;br&gt;3. Chairman of ISEI - Prof. Bustanul Arifin&lt;br&gt;4. IT Expert - Prof. Kudang B. Seminar&lt;br&gt;5. Food Security Expert - Bambang Riyanto, M.Si&lt;br&gt;6. CEO Agrisocio – Alfi Irfan, SE</td>
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<tr>
<td>12.00-13.00</td>
<td>Lunch Break</td>
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<tr>
<td>13.00-15.15</td>
<td>Parallel Session 3&lt;br&gt;Workshop “Journal Management”</td>
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<td>15.15-15.30</td>
<td>Coffee break</td>
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<td>15.30-17.45</td>
<td>Parallel Session 4&lt;br&gt;Workshop “Journal Management”</td>
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<td>17.45-18.00</td>
<td>Closing Ceremony</td>
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THE FINANCIAL PERFORMANCE OF LOCAL GOVERNMENT IN THE BENGKULU PROVINCE

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ABSTRACT

This study aims at investigating the influence of capital expenditure, balance fund, and local own-source revenue on the financial performance. Nine regencies and one city in Bengkulu province were selected to test the statements of budget realization for the year of 2009 to 2015. Financial performance was measured using the aspects of independence and the growth of local own-source revenue. Each of the aspect was assessed by utilizing the ratio measurement. The obtained data was analysed by employing multiple regression analysis. The results show that capital expenditure, balance fund, and local own-source revenue simultaneously have shown positive and significant effects on the financial performance for the aspects of independence. However, insignificant influence is found between the contribution of independent variables on the financial performance on the aspect of local own-source revenue growth. The regression analysis output for the aspect of independence reveals that the local own-source revenue establishes positive and significant effects in explaining the financial performance. However, the balance fund has performed a negative effect on the financial performance. The capital expenditure has no significant effect on the dependent variable. In the aspects of growth, and the local own-source revenues, all three predictors are insignificant in explaining the variance of financial performance.

Keywords: Capital expenditure; balance fund; local own-source revenue; financial performance.
INTRODUCTION

Regional autonomy is considerably right, particularly on the concept of authority and duty of regional to organize and arrange their government affairs and interest of society (Laws of the Republic of Indonesia number 32 of 2004). With regional autonomy principle, regional have authority to organize and arrange all government activities outside the central government affairs. Local government has authority to service, increased participation and community empowerment that aims to improve people's welfare.

One of the pillars of the success implementation of regional autonomy, is how the central government and local governments can use and utilize the resources they possess effectively and efficiently through public resources in financing development activities (Waluyo, 2007). Regional financial authority is one of the most important things in the implementation of regional autonomy. In the context of the implementation of regional autonomy and fiscal decentralization, local governments are given the flexibility to manage and utilize local revenue sources in accordance with the aspirations of local communities (Mardiasmo, 2004).

Regional finances are managed in an order, law-abiding, efficient, economical, effective, transparent and accountable manner with regard to fairness, justice, and community benefits. The relationship between government and society in democratic governance is an accountability relationship, in which the government as an agent must be accountable for its activities and performance to the community (Mahmudi, 2015). Local governments are also required to be able to make financial reports and transmit the financial information in a transparent manner to the public (Mardiasmo, 2004).

The opinion of State Audit Agency of Republic Indonesia on financial statements of local government at The Province of Bengkulu have variation. Data which collected from State Audit Agency shows there is some local government get the qualified opinion, two local governments get disclaimer opinion, and one local government get the adverse opinion. The opinion of State Audit Agency shows how management system and responsibility regional financial in particular accounting and reporting financial of local government. The improvement management system and responsibility financial report of local government very important to increase so local government can increase service to community (Rinaldy, 2013)

The analysis of financial reports is considered as an important managerial tool for the evaluation of corporate strengths and weak-nesses (Robbins et al., 2016). Financial performance is a measure to see readiness local government in face regional autonomy (Nugroho and Rohman, 2012). To analyze the local government performance in financial management activity, they use specific ratio to analyze the regional government budget which was established and implemented (Halim, 2007). While Prentice (2015) said that nonprofit financial performance is evaluated through of multiple factors, such as liquidity, solvency, margin, and profitability. These constructs illustrate how much cash a nonprofit has on hand, how much debt the nonprofit has accrued, how efficient the nonprofit is in the use of its resources, and how stable the nonprofit is over time.
One of strategic function budget is an evaluation tool of performance. Where the executive performance will be evaluated by achievement budget target and efficiency implementation regional government budget. The regional government budget is an activator of regional economic activities which directed to give outcome for exceed community need (Anggarini and Puranto, 2010). Thus, the development as undertaken by local government is expected to improve community welfare in regencies.

The objectives of this study are to analyze the influence of capital expenditure, intergovernmental transfer and local own-source revenue on the financial performance of local government from aspect independence and aspect of the growth of local own-source revenue.

HYPOTHESIS DEVELOPMENT

The Influence of Capital Expenditure, Balance Fund and Local Own-Source Revenue on Financial Performance from The Aspect of Independence

Financial performance of local government is increasing and can be reached from the activity at regional performance such as budget and realization local own-source revenue with use indicator financial which set policy or regulation in the budget period (Prihastuti et al., 2015). Capital expenditure is allocated for acquisition fixed assets which can be used as regional tool development. With the rapidly development is expected increase regional independence to fund the activities especially regional financial (Nugroho, 2012).

The balance between central government and local government should be directed at effort to improve the regional financial independence of local governments to finance their duties and authorities (Aswadi, 2004). Independence of regional financial show ability local government to finance government activities, development and service to the community who pay tax and retribution (Halim, 2007). The independence ratio also shows community participation in regional development. According to the above explanation, the proposed hypotheses are developed as follows:

\[ H_1 \]: Capital expenditure, balance fund, and local own-source revenue simultaneously affect on financial performance from the aspect of independence

\[ H_{1.1} \]: Capital expenditure affects financial performance from the aspect of independence

\[ H_{1.2} \]: Balance Fund affect on financial performance from the aspect of independence

\[ H_{1.3} \]: Local own-source revenue affect on financial performance from the aspect of independence

The Influence of Capital Expenditure, Balance fund and Local Own-Source Revenue on Financial Performance from The Aspect Growth of Local Own-Source Revenue

Local own-source revenue is the regional revenue from the potential source and other fund which passed by-laws and used by local government to advance and community welfare autonomy region (Jaya Sisdyani, 2014). Local own-source revenue has a role to finance the implementation of regional autonomy in order to achieve the main purpose of regional autonomy that is to improve public services and regional economy (Mardiasmo, 2009).
Allocation capital expenditure of local government should be adjusted to regional need by considering local own-source revenue received. If the local government want to improve public services and community welfare so local government must to dig more local own-source revenue (Febriana&Praptoyo, 2015). Growth ratio measures how local government ability to preserve and improve successes that have been achieved period to period. Mahmudi (2016) defined the growth of local own-source revenue analysis is useful to know whether the local government in the budget year or during any budget period, its budget performance has a positive or negative revenue growth. According to the explanation above, the hypotheses are developed as follows:

H2 : Capital expenditure, balance fund and local own-source revenue simultaneously affect on financial performance from the aspect growth of local own-source revenue

H2.1 : Capital expenditure affect on financial performance from the aspect growth of local own-source revenue

H2.2 : Balance fund affect on financial performance from the aspect growth of local own-source revenue

H2.3 : Local own-source revenue simultaneously affects on financial performance from the aspect growth of local own-source revenue

FRAMEWORK

The objectives of this study to investigate the influence of capital expenditure, balance fund, and local own-source revenue on the financial performance of local government. Financial performance measured by two aspects such as independence and growth of local own-source revenue. The framework as summarize as below;
RESEARCH METHODS

The object of this study is the capital expenditure, balance fund, local own-source revenue and financial performance which measure by aspect independence, efficiency, the effectiveness of local own-source revenue and growth of local own-source revenue regencies and city at Province of Bengkulu. Data sourced is obtained from the Directorate General Fiscal Balance of Ministry of Finance Republic of Indonesia (www.djpk.kemenkeu.go.id). Data utilized in this study is statements of budget realization from 2008 to 2015.

The population of this study is regencies and city at Province of Bengkulu. Sampling method used in this study is census, that is collected by taking each element population or characteristic in the population. The sample in this study consisting of nine regencies and one city in seven periods (from 2009 to 2015). Further, the analysis method used was multiple linear regression analysis. Multiple linear regression analysis was used to detect influence capital expenditure, balance fund and local own-source revenue on financial performance were measured ratio independence, efficiency, the effectiveness of local own-source revenue and growth of local own-source revenue. Analysis phase is classic assumption test, determinant coefficient, model fit test (F test) and hypothesis test (t-test).

Formula multiple regression analysis (Andirfa et al., 2016):

\[ \text{FP} = \alpha + \beta_1 \ln \text{CP} + \beta_2 \ln \text{BF} + \beta_3 \ln \text{OR} + e \]

Description:
- \( \text{FP} \) = Financial performance was measured by ratio independence, and growth of local own-source revenue.
- \( \text{CP} \) = Capital Expenditure
- \( \text{BF} \) = Balance Fund
- \( \text{OR} \) = Local own-source revenue
- \( \alpha \) = Constant
- \( \beta_1, \beta_2, \beta_3 \) = regression coefficient
- \( e \) = error term

RESEARCH FINDINGS AND DISCUSSION

Table 1 shows the result of multiple linear regression analysis for aspects of independence and growth of local own-source revenue.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Aspect of Independence</th>
<th>Aspect of Growth of Local Own-Source Revenue Ratio</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Prob</td>
</tr>
<tr>
<td>Constant</td>
<td>15,042</td>
<td>0,000</td>
</tr>
<tr>
<td>LN_Capital Expenditure</td>
<td>-0,858</td>
<td>0,141</td>
</tr>
<tr>
<td>LN_Balance Fund</td>
<td>-25,069</td>
<td>0,000</td>
</tr>
<tr>
<td>LN_Local Own-Source Revenue</td>
<td>22,603</td>
<td>0,000</td>
</tr>
<tr>
<td>F-statistic</td>
<td>1,838,539</td>
<td>1,142</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0,000</td>
<td>0,006</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>98,76</td>
<td></td>
</tr>
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</table>
The Influence of Capital Expenditure, Balance fund and Local Own-Source Revenue on Financial Performance from the Aspect of Independence

Data analysis shows simultaneously capital expenditure, balance fund and local own-source revenue affect on financial performance local government at Province Bengkulu from aspect independence. Tuasikal (2008) said that regional government budget is a priority media local government in making optimal allocation and can do to evaluate achievement of regional development financing. So government expenditure should do to public important and government expenditure that locate for the public is capital expenditure. Local government use resources from own revenue or intergovernmental transfer from central government to allocate expenditures which is directly related to community. Improve capital expenditure expected can improve independence local government to financing their spending. With increase development in regional, so independence local government increase too (Nugroho, 2012).

One of the factors of finance condition local government is service solvability, where the important task of local government are service and development of infrastructure. In providing services and building the public infrastructure required a mature planning. Development of infrastructure that directly relates to the community such as road construction, is expected to increase access to economic activities of the community. Increasing the economy of the community is expected to increase community participation in development so as to increase local revenue. If increased regional revenues can increase local financial independence so that local governments can finance government activities in the implementation of regional autonomy.

Balance funds are the largest source of funding to finance government activities and show a high dependence of local governments on central government financing. The amount of balance funds received indicates that the level of independence of district and municipal governments in Bengkulu Province is very low. Therefore, the balance of funds, especially the general allocation funds received can be utilized as well as possible for regional development and to increase regional independence. This reinforces Aswandi's (2004) assertion that the balance between the central and regional governments should be aimed at enhancing regional financial independence and is expected to create the independence of local governments in finance to finance the implementation of their duties and authorities.

Local own-source revenue is an effort by local governments to finance government activities. In the implementation of regional autonomy, local governments are given the flexibility to explore and empower the capacity they have to increase the local revenue. Darise (2009) defines own-source revenues as a source of local revenue that needs to be increased to bear some of the expenditure required for the implementation of government and development activities that increase annually so that the independence of broad, real and responsible regional autonomy can be implemented.
The Influence of Capital Expenditure, Balance fund and Local Own-Source Revenue On Financial Performance From The Aspect Growth Of Local own-source revenue

The result of hypothesis testing shows that simultaneous capital expenditure, balance fund and local own-source revenue do not affect the financial performance of regencies and city in Province of Bengkulu from the aspect of local own-source revenue growth. One of the strategic functions of the public-sector budget is the budget as a government fiscal policy tool used to encourage, facilitate and stabilize the economy and promote economic growth (Mardiasmo, 2009). So that the government allocates capital expenditure on development expenditure which is expected to improve the welfare and improve the economy of society. Mahmudi, (2016) states one of the factors that affect revenue growth is regional financial management. Regional financial management shows how the government can manage the revenues and potentials owned by the region so as to finance government activities.

Capital expenditures do not affect the financial performance of the aspect of the growth of local revenue. This shows that capital expenditures issued by regional governments have not been able to significantly increase local revenue which can be seen from the realization of local revenue which tend to experience a fluctuating pattern every year. In addition, infrastructure development financed from capital expenditure can not be utilized well by the community. This can be seen from some buildings that were set up by the local government but not well used instead of being abandoned buildings.

Before allocating capital expenditures, regencies and city in Province of Bengkulu need to go directly to the economic location of the community so that they know what is needed by the community. So that capital expenditure issued by local government can optimize its use. This reinforces the objectives of the implementation of regional autonomy and fiscal decentralization, among others, increasing government responsiveness to public needs and increasing public participation in regional development (Mahmudi, 2010).

Balance funds do not affect the financial performance of the aspect of the growth of local revenue. This is because the balance funds received by the local government, its use for expenditure related to development is still very little. And there is no priority of government spending. This is reinforced by Bappenas’ statement in collaboration with UNDP (2008) which states that the region needs a significant role of local government to boost its economy. Not only through the development of physical infrastructure but also local financial policies and management that can encourage the growth of growth centers. The inadequate role of local finance causes a less developed economy.

Increasing local own-source revenue can be done by digging and exploring the potentials other than that local governments also need to explore the potential income of society and provide motivation to the community for entrepreneurship. An evaluation study conducted by Bappenas in collaboration with UNDP (2008) states that the optimization of local revenues should refer to increasing the role of government in supporting and creating economic activity thereby promoting greater growth in the existing economic sectors. Economic growth by itself will encourage greater increases in local own-source revenue.
CONCLUSIONS

Based on findings and the discussion in the previous section, this study concludes that capital expenditure, balance fund and local own-source revenue simultaneously have significant effects on the financial performance for the aspect of independence and not significant for the aspect of growth of local own-source revenue. Results partially show balance fund have negative effects, and local own-source revenue have positive effects on financial performance for the aspect of independence. Capital expenditure, balance fund and local own-source revenue no one significant for aspect growth of local own-source revenue. Implications of this study for local government are:

1. Increasing the capital expenditure budget and reducing operational expenditure and personnel expenditure, saving on expenditure items, increasing public investment, especially in the field of infrastructure and service areas and increasing the rate of spending performance.

2. Local governments need to make efforts to minimize the amount of balance fund received from the central government by: using well-balanced equity funds and directed to regional economic development, balancing funds can be used to analyze local revenue potential as well as increase human resources and increase Native revenues regions, so that the original revenues of the region can finance government activities

Local governments need to increase local own-source revenue by: exploring potential resources as well as increasing existing potentials, monitoring local taxes and retribution, encouraging communities to engage in entrepreneurial activities.

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PENGARUH KETERBUKAAN EKONOMI TERHADAP KETIMPANGAN PENDAPATAN DI INDONESIA

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ABSTRACT


Keywords: ketimpangan pendapatan, keterbukaan perdagangan, rasio gini, FDI
IDENTIFICATION OF MONETARY POLICY TRANSMISSION MECHANISM CREDIT CHANNEL IN INDONESIA: PERIOD 2000Q1-2014Q3

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ABSTRACT

The objective of the research is to identify the mechanism of transmission of monetary policy through bank credit channel consisting of banking credit channel for investment and banking credit channel for consumption. The study was conducted in Indonesia during the period 2000Q1-2014Q3. The data used are sourced from the Indonesian Central Bureau of Statistics and Economic and Financial Statistics. The object of research is the transmission of monetary policy conducted by Bank Indonesia. Methods of data analysis using vector error correction model (VECM). Before data is processed stationary data test, root test unit, optimum lag, Johansen cointegration test. The results show that the monetary policy transmission mechanism on the banking credit channel for investment and the credit line of banking for consumption has not been effectively in Indonesia during the period 2000Q1-2014Q3.

Keywords: monetary policy transmission mechanism, credit channel, VECM
INTRODUCTION

The monetary policy transmission mechanism illustrates how the monetary policy adopted by the central bank influences various economic and financial activities so that it can ultimately achieve its intended end (Warjiyo, 2004). The monetary policy transmission mechanism is a process through which monetary policy begins with the determination of monetary indicators towards the final goal. The ultimate goal of monetary policy can be an increase in revenues and prices reflected in inflation control. Therefore, understanding the mechanism of transmission of the monetarist is the key to direct monetary policy in order to affect the real economy and the price level (Agung et al, 2002).

The monetary policy transmission mechanism takes place in various channels of monetary policy transmission. The monetary policy transmission channel is the steps through which monetary policy instruments pass to the final destination. There are various monetary policy transmission channels including direct channel, interest rate channel, banking credit channel, asset price channel and price expectations channel (DeBont, 2000).

Transmission of monetary policy through banking credit channels was first proposed by Bernanke and Blinder in 1988 (Bernanke and Blinder, 1988). Credit channel is a critique of the interest rate channel which considers that the interest rate component as a variable of capital price in the classical (cost of capital) view is very difficult to identify. Based on the classical analysis, monetary policy should have a significant effect on long-term interest rates, but in reality empirical monetary policy is closely related to short-term interest rates and does not affect long-term interest rates. This credit approach assumes that the increase in the money supply as a result of monetary expansion will increase the deposits which further increase the loanable fund resulting in an increase in bank credit. This increase in credit will boost the spending component in the economy which will further increase GDP.

Another study of monetary policy transmission mechanisms on credit lines was conducted by Montiel (1991), Mishkin (2001), Disyatat and Vongsinsirikul (2003), Muelgini (2004) and Ibrahim (2005). These studies demonstrate the importance of bank lending channels in transmitting monetary policy to the real sector.

Based on this reason, the monetary transmission mechanism through the credit channel is very important role to improve the effectiveness of monetary policy transmission mechanism. The effectiveness of the monetary policy transmission mechanism is measured by two indicators (Mishkin, 2001). The first indicator is measured by how much speed or deadline (time lag) and the second is how the strength of variables in response to monetary policy instrument shocks. The objective of this research is to identify monetary policy transmission mechanism of Monetarist approach on quantity credit lines of credit banking and consumer credit consumption channel in Indonesia period 2000: 1-2014: 3.
LITERATURE REVIEW

The approach of monetary policy transmission mechanism through credit channel is based on the assumption that not all public savings in the form of money (M1, M2) are channeled by banks in the form of credit. The intermediary function of the banking system is not always perfect, in the sense that the proportional increase of public savings is not always followed by the increased credit disbursed. Therefore, the effect on the real economy is the banking credit and not the public savings reflected in the money supply Warjiyo (2004). The monetary policy transmission mechanism through the credit line is presented in Figure 1.

Figure 1. Monetary Mechanism Transmission Credit Channel

Monetary transmission mechanism of credit channel can be explained in the following stages (Pohan, 2008): in the first stage, the interaction between central banks and banks occurs in the rupiah currency market. Central bank as the implementer of monetary operation with operational target in the form of base money (M0) conduct transaction with banking in money market. Transactions with banks are conducted to control the amount of money in circulation by selling and selling short-term financial instruments in the money market. The interaction in the money market for the central bank will affect the interest rates of short-term financial instruments it offers. And for banks (banking) interaction in the financial market will affect the amount of funds that will be allocated in the form of liquidity instruments and lending disbursement.

The next stage is the process of velocity of money in the economy, the credit line further emphasizes the importance of credit in monetary policy transmission mechanism. The process of velocity of money in credit lines that is not always in equilibrium or banking difficulties to channel all public deposits in the form of credit.

The condition of credit imbalance is caused by internal and external factors of banking. The external factor affecting the banking credit is the banking trust toward the prospective borrower, so not all the debtor's loan demand is fulfilled by the banking system. This is due to the financial condition of the debtor that the bank is not feasible due to the high debt ratio compared to capital (laverage), the risk of bad debts and moral hazard.

Internal factors affecting bank credit are derived from the condition of the banking fund itself such as capital aspect or Capital Adequacy Ratio (CAR), the amount of Non Performing Loans (NPL) and Loan Deposit Ratio (LDR) Other causes are information that is not symmetrical (asymectric information) between debtors and banks. All of the above factors cause the credit market is not always in equilibrium, causing imperfections of the financial market to the real sector of the economy.
The next stage is the transmission of monetary policy from the banking sector to the real sector that is affected by the conditions in the credit market. The development of the banking credit market will further affect the inflation and output through the development of investment and consumption. Through the development of investment, the volume of investment credit banking will affect the interest rate of investment credit which is the cost of capital to the investment demand. Through the development of consumption, the influence of consumer credit volume will affect household consumption due to substitution effect (substitution effect) and income effect (income effect). This influence through investment and consumption will have an impact on the size of aggregate demand and will ultimately determine the rate of inflation and real output in the economy.

**RESEARCH METHODS**

This research is an exploration of quantitative approach by identifying the implementation of monetary policy transmission mechanism (MTKM) which has been implemented by Bank Indonesia during the period 2000: Q1-2014: Q3. The mechanism of transmission of monetary policy identified is MTKM through investment credit channel and consumption credit channel.

The data used is quantitative data in the form of secondary time series data (time series) quarterly period of 2000: Q1 until 2014: Q3. Data sources are obtained through official government institutions such as BPS, Indonesian Economic and Financial Statistics (SEKI) issued by Bank Indonesia, and Bank Indonesia Annual Report. The operational variables used in the study are summarized in Table 1.

<table>
<thead>
<tr>
<th>NO</th>
<th>Variables</th>
<th>The definition of a variable</th>
<th>measuring instrument</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LPDBR</td>
<td>Represents the Log of real gross domestic product as measured at constant 2000 prices</td>
<td>Billion Rupiah</td>
<td>BPS</td>
</tr>
<tr>
<td>2</td>
<td>INF</td>
<td>Core inflation (INF) is a type of inflation that is fully controlled by monetary policy measured in percent.</td>
<td>Percentage</td>
<td>SEKI Bank Indonesia</td>
</tr>
<tr>
<td>3</td>
<td>LIRSS</td>
<td>LIRSS is a Real Investment in the private sector is the amount of investment that is intended for the private sector measured based on constant 2000 prices (data in log)</td>
<td>Billion Rupiah</td>
<td>BPS</td>
</tr>
<tr>
<td>4</td>
<td>LKKBK</td>
<td>LKKBK is the amount of consumer credit disbursed by commercial banks to the debtor (data in Log)</td>
<td>Billion Rupiah</td>
<td>SEKI BI</td>
</tr>
<tr>
<td>5</td>
<td>LKIBK</td>
<td>LKIBK is the amount of investment credit disbursed by commercial banks to the debtor (data in Log)</td>
<td>Billion Rupiah</td>
<td>SEKI Bank Indonesia</td>
</tr>
<tr>
<td>6</td>
<td>LM2</td>
<td>M2 represents money in a broad sense consisting of M1 plus bank deposits in the form of savings deposits and time deposits, data in the form of logs</td>
<td>Billion Rupiah</td>
<td>SEKI BI</td>
</tr>
</tbody>
</table>
Data Analysis Method

Data analysis technique used for data processing in this research is Vector Autoregresive (VAR) model or VECM model. Before VAR or VECM estimation, testing of research data is done. The test is the test of data stationerity and cointegration test then continued with optimal lag determination, impulse response function (IRF), variance decomposition (Varian Decomposition). Data analysis using VAR or VECM method performed steps such as Figure 2.

The first step is testing the data stationeritas. Testing of stationarity of data is very important in determining the appropriate analysis tool whether VAR or VECM. Data that has stationer at the level can be used VAR analysis at the level level. Data is not stationary at the level but in the first degree used VAR analysis tools on the first level (1’st) on condition there is no data cointegration. If there is cointegration of data then it is estimated Vector Error Correction Model (VECM).


Figure 2. Step of VAR
Investment Credit Channel Model

The VAR model of the banking credit line for investment and consumption credit is adopted by the VAR model of C.A. Sim (Sim, 1980). The investment credit channel model consists of 5 (five) variables: LM2, commercial bank investment credit (LKIBK), private sector real investment log (LIRSS), LPDBR, and inflation rate (INF). The VAR model of bank credit for investment is:

$$\Delta X_t = a_0 + A_1 \Delta X_{t-k} + a_2 \text{ect} + \varepsilon_t$$

Where: $X_t = 5 \times 1$ of each variable are LM2, LKIBK, LIRSS,LPDBR and INF, $a_0 = 5 \times 1$ of intercept (constants), $A_1 = \text{Maktriks 5 \times 1 of the coefficient, a2 = vector 5 x1 from error correction model, t = vector 4 x1 of error term}$

$k = \text{optimum slackness based on AIC and SC}$

Consumer Credit Channel Model

The consumption credit channel model consists of 5 (five) variables namely LM2, commercial bank consumption credit log (LKKBK), Private real-sector consumption log (LKRSS), LPDBR, and inflation rate (INF). VAR Model Credit Line quantity 2 is:

$$\Delta X_t = a_0 + A_1 \Delta X_{t-k} + a_2 \text{ect} + \varepsilon_t$$

The VECM equation of monetary policy transmission on the quantity path of money is formulated as follows:

\[
\Delta X_t = a_0 + A_1 \Delta X_{t-k} + a_2 \text{ect} + \varepsilon_t
\]
Where: $X_t = \text{Vector} \ 5 \times 1 \ \text{of each variable are} \ LM2, \ LKKBK, \ LKRSS, \ LPDBR \ \text{and} \ INF, \ a_0 = \text{Vector} \ 5 \times 1 \ \text{of intercept} \ \text{(constants)}, \ A1 = \text{Maktriks} \ 5 \times 1 \ \text{of the coefficient}, \ a2 = \text{vector} \ 5 \times 1 \ \text{of error terms}; \ 
\Delta = \text{data in the form of first derivative} \ \text{(first difference)}, \ T = \text{time (quarter)}; \ 
k = \text{optimum slackness based on AIC and SC}

**RESEARCH RESULT**

**Test Results Stationeritas Data (Unit Root Test)**

The first step to be done in the estimation of economic models with time series data is to test the stationarity of the data. The stationary data means that the data has a constant variance value so that it has a tendency to approach its average value. (Rosadi, 2012). When the time series data is not stationary, the regression result will be spurious where the model has a high R2 value but the DW stat value is low, the data is non-stationary then the result is doubtful its validity (Dickey and Fuller, 1979). In this research, root unit testing with Augmented Dickey-Fuller (ADF) test was performed. The stationerity test with ADF test was performed with $\alpha = 5\%$, formulated as follows:

$H_0$: Data not stationer P-value $> \alpha$

$H_1$: Data stationer, P-value $< \alpha$

Criteria test: if p-value ADF $> \alpha = 5\%$, then H0 is not rejected or data not stationer.

if p-value ADF $< \alpha = 5\%$, then H0 is rejected or stationary data.

Table 2. Test Results of Unit Root ADF test

<table>
<thead>
<tr>
<th>NO</th>
<th>Variable</th>
<th>Variable stationarity test by ADF test method</th>
<th>Level integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$t'$stat</td>
<td>p-value</td>
</tr>
<tr>
<td>1</td>
<td>INF</td>
<td>-7.418</td>
<td>0.000*</td>
</tr>
<tr>
<td>2</td>
<td>LPDBR</td>
<td>1.3184</td>
<td>0.998</td>
</tr>
<tr>
<td>3</td>
<td>LKIBK</td>
<td>0.2003</td>
<td>0.9704</td>
</tr>
<tr>
<td>4</td>
<td>LKKBK</td>
<td>3.0439</td>
<td>0.037*</td>
</tr>
<tr>
<td>5</td>
<td>LKRSS</td>
<td>1.3675</td>
<td>0.998</td>
</tr>
<tr>
<td>6</td>
<td>LIRSS</td>
<td>0.1539</td>
<td>0.966</td>
</tr>
<tr>
<td>7</td>
<td>LM0</td>
<td>1.5069</td>
<td>0.999</td>
</tr>
<tr>
<td>8</td>
<td>LM1</td>
<td>2.4854</td>
<td>0.124</td>
</tr>
<tr>
<td>9</td>
<td>LM2</td>
<td>0.0915</td>
<td>0.9448</td>
</tr>
</tbody>
</table>

Note: *Significant at $\alpha = 5\%$
The ADF test results show that the data is not stationary at the same level or level. Most of the first or first difference (1’st) data station are commercial investment bank credit (LKIBK), private real sector consumption log (LKRSS), private real estate investment log (LIRSS), LPDBR and money supply LM2). ADF-test produces stationary data output at level (0) ie inflation data (INF) and LKKBK. Other data such as money circulating LM0 and LM1 stationer on second difference (2’nd). Based on unit test of root data LM2 is used as indicator of monetary policy in the form of money supply (M2) because LM0 data and LM1 data are not stationer at level and first difference (1’st).

**Determination of Optimum Lag**

Lag length selection by comparing LR (Likelihood Ratio) criteria, AIC (Akaike Information Criterion), SC (Schwarz Information Criterion), FPE (Final Prediction Error), and HQ (Hannan-Quinn Information Criterion).

<table>
<thead>
<tr>
<th>NO</th>
<th>Channel of Transmission</th>
<th>signifikan*</th>
<th>Lag optimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investment credit channel</td>
<td>LR, FPE, AIC, SC, HQ</td>
<td>Lag 1 or first quarter</td>
</tr>
<tr>
<td>2</td>
<td>Consumption credit channel</td>
<td>LR, FPE, AIC, SC, HQ</td>
<td>Lag 1 or first quarter</td>
</tr>
</tbody>
</table>

Investment Credit Channels and consumption credit channels are significant in lag 1 based on 5 statistical criteria: LR statistic test (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information criterion (SC) and Hannan-Quinn Information Criterion (HQ). The Consumption Credit Quantity Channel is optimized in 1 significant lag based on 5 statistical criteria: LR test statistic (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC) Schwarz Information criterion (SC and Hannan-Quinn Information Criterion (HQ).

**Johansen Cointegration Test Results**

<table>
<thead>
<tr>
<th>Channel of Transmission</th>
<th>None</th>
<th>At most 1</th>
<th>At most 2</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trace Stat</td>
<td>Prob</td>
<td>Trace Stat</td>
<td>Prob</td>
</tr>
<tr>
<td>Investment credit channel</td>
<td>69.919</td>
<td>0.0491</td>
<td>41.412</td>
<td>0.175</td>
</tr>
<tr>
<td>Consumption credit channel</td>
<td>98.03041</td>
<td>0.0001</td>
<td>63.57094</td>
<td>0.0009</td>
</tr>
</tbody>
</table>

To find a set of observed variables that are cointegrated or have long-term equilibrium relationships, a cointegration test is necessary. This cointegration test is very important because regression using time series data that is not stationary is likely to result in lancid regression (Granger and Newbold, 1974). In spurious regression there is a high coefficient of determination but the relationship between dependent and independent variables is not significant, this is because the relationship between the two is time series data shows only trend. In this research, cointegration test is done by Johansen cointegration test. The Johansen cointegration test results (Table 4) based on the Trace Statistic number indicates all variables of monetary transmission of investment credit channel has (one) cointegration and consumption credit channel has 3 cointegration.
Impulse Response Function Investment Credit Channel

Mechanism of transmission of monetary policy of Investment credit channel through variable of money supply (LM2), commercial bank investment credit (LKIBK), private real sector investment (LIRSS), Gross Domestic Product (LPDBR), and inflation (INF), therefore Impulse Response Function (IRF) can be analyzed through four stages (Figure 4). The first stage is the IRF of the LM2 variable to LKIBK. The second stage, IRF of the LKIBK variable to the LIRSS, the 3rd stage is the IRF of the LIRSS variable against LPDBR and the fourth phase of the IRF of the LPDBR variable to INF (Figure 3).

Impulse LM2 responded by fluctuating by LKIBK. In the first quarter there was a decrease in LKIBK shocks until the 2nd quarter, further up to the third quarter, further decreasing and steady after the 3rd. The IRSS response to the KIBK variable impulse is highly fluctuating. The initial period of IRSS shocks fell sharply from the first quarter to the 3rd quarter. In the 3rd quarter until the 5th quarter LKIBK shocks are stable against LIRSS fluctuations. The LPDBR response to the LIRSS impulse is highly fluctuating. Impulse LIRSS responded with a decrease in LPDBR shocks in the first quarter through the second quarter. After the second quarter LPDBR shocks rose until the 4th quarter, then dropped until the 6th quarter. After the 6th quarter the LPDBR shocks towards a stable value. INF shocks rose in the first
quarter to the 2nd quarter then dropped until the 3rd quarter. In the 3rd quarter until the 4th quarter of

INF shocks go up. The next period of INF shocks decreases its fluctuation and stays stable at 6th period.

**Impulse Response Function Consumption Credit Channel**

Impulse Response Function (IRF) Consumption Credit Channel in the analysis with four stages of monetary transmission are: first stage IRF variable LM2 to LKKBK, second stage IRF LKKBK variable to LKRSS, third stage IRF variable LKRSS to LPDBR and fourth stage IRF variable LPDBR to INF (Figure 4)

The LKRSS impulse is responded by decreasing LM2 shocks from the first period to the 10th period without going to equilibrium. The same condition occurs in the LKKBK variable against the LKRSS variable. LPDBR impulse responded by decreasing LPDBR shocks from first quarter to third quarter, then LPDBR shocks rose until the 4th quarter. After the 4th quarter LPDBR shocks dropped to the balance point in the 5th quarter. LPDBR variable response impulse response (IRF) responded to INF increase in the first quarter up to the second quarter. After the 2nd quarter the INF shocks fell until the 3rd quarter. Then
climb back up to the 4th quarter. After the 4th quarter, INF shocks move up more steadily toward balance.

**Variant Decomposition of Investment Credit Channel**

Table 5 shows the decomposition variant of inflation on investment credit channel. The contribution of LPDBR shocks to INF variation in period 1 was 7.778% with own shocks 79.205%, while LM2 shocks 0.095%, LPS shocks 1.82% and LIRSS shocks 7.82%. In the 4th quarter the contribution of LM2 shock was 0.94%, LKIBK 1.21% shocks, LIRSS shock 34.757%, LPDBR shock 11.61% with own shocks 51.47%. Furthermore the 8th quarter contributed LM2 shocks 1.24%, LKIBK shocks 1.155%, 52.95% LIRSS shocks, LPDBR shocks 8.62% with own shocks 36.02%. The 10th quarter contributed LM2 shocks 1.33%, LKIBK shock 1.298%, shocks LIRSS 58.25%, shocks LPDBR 7.772% with own shocks 31.503%. These findings suggest that INF variability is dominated by LIRSS shocks, own shocks, and LPDBR shocks with LKIBK shocks still relatively small at 1.129 or below 5%. The magnitude of the effect of LIRSS shocks and LPDBR shocks shows the importance of both variables on inflation variability in investment credit channel.

**Table 5. Variance Decomposition Credit Investment Channel of Inflation**

<table>
<thead>
<tr>
<th>Period</th>
<th>S.E.</th>
<th>LM2</th>
<th>LKIBK</th>
<th>LIRSS</th>
<th>LPDBR</th>
<th>INF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.57891</td>
<td>0.09527</td>
<td>1.8203</td>
<td>7.7827</td>
<td>11.095</td>
<td>79.205</td>
</tr>
<tr>
<td>4</td>
<td>0.724384</td>
<td>0.09527</td>
<td>1.8203</td>
<td>7.7827</td>
<td>11.095</td>
<td>79.205</td>
</tr>
<tr>
<td>8</td>
<td>0.886587</td>
<td>1.24566</td>
<td>1.1558</td>
<td>52.9503</td>
<td>8.6240</td>
<td>36.024</td>
</tr>
<tr>
<td>10</td>
<td>0.956380</td>
<td>1.33570</td>
<td>1.1298</td>
<td>58.2583</td>
<td>7.7725</td>
<td>31.5034</td>
</tr>
</tbody>
</table>

**Variance Decomposition of Consumption Credit Channel**

Table 6 shows the decomposition variant of inflation in the consumption credit channel. The contribution of LPDBR shocks to INF variation in period 1 was 2.119% with own shocks 94.577%, while LM2 0.0107% shocks, LCKBK shocks 1.434% and LKRSS shocks 1.857%. In the 4th quarter the contribution of LM2 shocks was 3.915%, LKKBK shock was 7.390%, LKRSS shock was 9.347%, LPDBR shock was 6.196% with own shocks 73.149%. Furthermore, the 8th quarter of the contribution of LM2 7.738% shocks, LKKB 7.0723% shocks, LKRSS shocks 10.834%, LPDBR shocks 5.944% with own shocks 68.409%. In the 10th quarter the contribution of LM2 shocks was 9.257%, LKKBK shocks were 6.88%, LKRSS shocks 11.597%, LPDBR shocks 5.838% with own shocks 66.420%. These findings indicate that INF variability is dominated by own shocks, LKRSS shocks, LM2 shocks, and own shocks. The magnitude of the effect of LKRSS shocks and LM2 shocks indicates the importance of the two variables to the inflation variability in the investment credit channel. The contribution of LM2 shocks indicates that the money supply instrument (LM2) is still quite effective in influencing inflation variability, but on the other hand the contribution of consumer credit shocks (LKKB) of small value.

**Table 6. Variance Decomposition Credit Consumption Channel of Inflation**

<table>
<thead>
<tr>
<th>Period</th>
<th>S.E.</th>
<th>LM2</th>
<th>LKKBK</th>
<th>LKRSS</th>
<th>LPDBR</th>
<th>INF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.57891</td>
<td>0.09527</td>
<td>1.8203</td>
<td>7.7827</td>
<td>11.095</td>
<td>79.205</td>
</tr>
<tr>
<td>4</td>
<td>0.724384</td>
<td>0.09527</td>
<td>1.8203</td>
<td>7.7827</td>
<td>11.095</td>
<td>79.205</td>
</tr>
<tr>
<td>8</td>
<td>0.886587</td>
<td>1.24566</td>
<td>1.1558</td>
<td>52.9503</td>
<td>8.6240</td>
<td>36.024</td>
</tr>
<tr>
<td>10</td>
<td>0.956380</td>
<td>1.33570</td>
<td>1.1298</td>
<td>58.2583</td>
<td>7.7725</td>
<td>31.5034</td>
</tr>
</tbody>
</table>
CONCLUSION

Based on the findings obtained by analyzing the mechanism of transmission of monetary policy of investment credit channel and consumption credit channel, it is concluded that:

• The time required for the operation of monetary policy with the money supply instrument (LM2) until the response of investment credit line variables and consumption credit line is at time lag 1 or period of 1 quarter (3 months) Based on time lag concluded Investment and channel credit channel consumption credit runs effectively because the working of MTKM takes a short time.

• The decomposition variant of inflation of investment credit channel denominated investment (LIRSS) and real national income shocks (LPDBR) indicates the importance of both variables on inflation variability in investment credit channels, but a small contribution to investment credit shocks (LKIBK). Based on these findings it is concluded that the transmission of monetary policy of investment credit channel with M2 as a monetary instrument has not been effective during the period 2000Q1-2014Q3.

• The decomposition variant of inflation of consumption credit channel are dominated by the influence of INF variability dominated by own shocks, LKRSS shocks, LM2 shocks, the magnitude of LKRSS shocks and LM2 shocks indicates the importance of both variables on inflation variability in investment credit channel. The contribution of LM2 shocks indicates that the money supply instrument (LM2) is still quite effective in influencing inflation variability, but on the other hand the contribution of consumer credit shocks (LKKBK) of small value. This indicates that the mechanism of transmission of monetary policy through the consumption credit channel has not been effectively during the period 2000Q1-2014Q3.

Empirical Contributions and Policy Contributions

Based on the result of the research, the empirical finding of monetary policy transmission mechanism on investment credit channel and consumption credit channel has not been effective in controlling inflation in Indonesia during the period of 2000Q1-2014Q3. The empirical evidence from this study can be an important input for Bank Indonesia in order to improve the effectiveness of the monetary policy transmission mechanism in Indonesia during the period 2000Q1-2014Q3.

Research Recommendations Next

This study uses the VECM method in analyzing the transmission of monetary policy on various transmission lines, although it has yielded findings on monetary transmission in the period 2000Q1-2014Q3 but still has limitations, the suggestions for further research are: This study needs to be followed up by identifying mechanisms transmission of monetary policy of different transmission channels, such as exchange rate transmission channel, asset price channel, inflation expectation channel or other transmission line. This study needs to be followed up with the same tooth but uses different analytical tools such as the VAR structural approach.
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THE COMPETITIVENESS OF INDONESIAN FISHERY PRODUCTS IN ASEAN AND CANADIAN MARKETS

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ABSTRACT

Indonesia's export market opportunities to ASEAN and Canada are more open with the establishment of the ASEAN-Canada Free Trade Agreement (FTA). During 2011-2015, the export volume of Indonesian fishery products to ASEAN grew by 12% and 1% per year to Canada. This study aimed to analyze the competitiveness of Indonesian fishery products in the ASEAN and Canadian markets. This study used Export Similarity Index (ESI), Revealed Comparative Advantage (RCA), Export Product Dynamic (EPD), and X-Model product export potential. The results indicate that during 2010-2015 there are 6 commodities in the 4-digit HS of fisheries had the RCA index larger than one, showing their strong competitiveness in the destination market, except Philippines and Canada. Analysis of EPD showed Indonesian fishery products in Philippines, Thailand Canadian markets have rising star and lost opportunity position, while falling star and retreat position occurs in Singapore, Malaysia and Vietnam market. X-Model analysis of potential export products indicate that Thailand, Philippines and Canada are optimistic markets for Indonesian fishery products. Thailand proved to provide optimistic market development potential for live fish, fresh fish, frozen fish, fillet fish and dried/salted/smoked fish. Philippines is an optimistic market for live fish and crustacean products, while Canada is an optimistic market for fillet and crustacean fish products. Analysis of ESI showed Vietnam and Canada have the highest degree of similarity to Indonesian export structure in ASEAN market so Indonesia will more competitive with that countries in the future.

Keywords: Fish, Competitiveness, Export Similarity Index, Revealed Comparative Advantage
IDENTIFICATION OF PREMATURE DEINDUSTRIALIZATION AND ITS ACCELERATION IN INDONESIA (PERIOD 1986-2015)

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Tony Irawan  
Department of Economics, Faculty of Economics and Management Bogor Agricultural University

ABSTRACT

The increase of the manufacturing's share in GDP has reached its peak in the early 2000s while the growth rate of the manufacturing employment is relatively low. Both facts demonstrate that the process of industrialization has slowed down and an indication of deindustrialization in Indonesia. Deindustrialization that occurs in the countries with low GDP per capita is called premature deindustrialization. This study measures the rate of deindustrialization and identification of premature deindustrialization on period 1986-2015. The result shows that the speed of deindustrialization varies between indicators and between islands. Descriptive analysis showed indication of premature deindustrialization in Indonesia.

Keywords: deindustrialization, premature deindustrialization, manufacturing, Indonesia

JEL codes: L16, L50, L52, L60, O14, O25
INTRODUCTION

Economic development is often measured by the level of progress of production structures and the rate of employment. One of the efforts to accelerate development as reflected by the rapid economic growth rate is through industrialization. Gillis et al. (1992) states that the manufacturing is a leading sector. In addition, the emergence of regional growth theory proposed by Kaldor (1966) mentions that the manufacturing sector is an engine of growth in the economic system for a country or region (Dasgupta and Singh 2006). With the industrialization, there will be a transformation of economic structure that the contribution of the agricultural sector will decline and be replaced by the increasing of the manufacturing and services contribution.

The role of the manufacturing as the engine of economic growth in Indonesia during the industrialization has been proven by the research of Dewi (2010) using Kaldorian approach. The results of research mentioned that the growth of manufacturing proved to trigger the growth of the sector beside the manufacturing so in the end the overall economic growth will grow rapidly.

Around the 1970s, the scenario of the economic structure transformation based on agriculture toward industry began to be seen. It can be seen the structure of production and employment. The employment share of agricultural sector continued to decline while at the same time the share of the manufacturing and services sectors increased. However, the increasing contribution of the manufacturing has reached its peak in early 2000s. Since then, manufacturing’s share in the Indonesian economy continue to decreased. When viewed from employment side, the shifting of employment is not fully transferred to the manufacturing sector but more to the other sector.

These two facts show that the process of industrialization has slowed down and indicated the occurrence of deindustrialization in Indonesia. The decline in the share of the agricultural sector does not coincide with an increase in the share of the manufacturing sector either in GDP or employment. It means that there is an indication that the excess employment of agriculture has overflowed into the service sector, especially informal services (Priyarsono 2011).

Deindustrialization is a problem for a country. In addition to threatening Indonesia's competitiveness, deindustrialization also threatens economic growth. Since 2005, the growth of manufacturing sector is under the overall economic growth. Since then, Indonesia's economic growth has not been able to reach 7 percent, only about 5-6 percent. The slower growth of manufacturing sector compared to economic growth caused the share of manufacturing to decline.

The threat of middle income trap is a warning to the government about other dangers of deindustrialization. A country experiences a middle income trap if it is in the middle income group based on the size of income per capita, but can not penetrate into the high income group\(^1\). Based on the MGI (2012) study, the middle income trap is the position of a country trapped with per capita GDP below $ 7000 and manufacturing can not penetrate 30%.\(^2\)

\(^1\) https://faisalbasri.com, Indonesia Terjerat Middle Income Trap, August 10, 2013
\(^2\) http://www.kompasiana.com, Deindustrialisasi Ancam Indonesia Jadi Negara Gagal, November 21, 2016
Rodrik (2015) mentions that deindustrialization has been happening in developed countries, where it is associated with the loss of good jobs, rising inequality, and decline in innovation capacity. For all these and many other reasons, it should be a much bigger problem for developing countries. These developing countries have been experiencing premature deindustrialization. These countries are transformed into service-based economies without experiencing an established industrialization process.

The term premature deindustrialization was first used in Dasgupta and Singh (2006). It is called “premature deindustrialization” because deindustrialization occurs when level of income per capita of the developing countries is much lower than income per capita of the developed countries when the developed countries were in the peak period of industrialization. These situation happened in Indonesia, in the early stages, the proportion of the agricultural sector declining and replaced by the manufacturing sector in the national output. But in a short time, before the national industry grows strong and entrenched, the national economy has shifted to the services sector.

Indication of premature deindustrialization is a serious consequence to the economy and politics. On the economic side, it reduces the potential for economic growth and the possibility of convergence with income levels from developed countries. The political consequences of premature deindustrialization can make democratization more vulnerable.

Tragenna (2015) describes the impact of premature deindustrialization for a country. First, premature deindustrialization shows that the benefits of the processing industry as a driver of a country's growth are reduced so that it will hinder the prospects for economic growth. The second impact, premature deindustrialization has the potential to threaten the potential of the service sector as an alternative to engine growth. In a mature deindustrialization, a growing service sector may have growth-driven properties owned by the manufacturing sector (such as increasing return to scale, increased cumulative productivity coverage, strong relationships with other sectors, technological advances, etc.). However, when premature deindustrialization occurs, service sector activities that may replace the manufacturing industry are more low skill, non-tradeable, retail, or have no large return-to-scale properties. Third, premature deindustrialization may occur suddenly, compared to deindustrialization in developed countries resulting from changes in government policies such as liberalization. The sudden impact of liberalization in triggering the acceleration of deindustrialization is more pronounced.

Thus, premature deindustrialization is not good news for developing countries. The impact is already evident in developing countries. In Latin America, when the manufacturing has grown slowly, causing economic productivity to suffer. In Africa, urban migrants work in the service sector with low productivity rather than manufacturing. In China, although the growth of Chinese investment is increasing, there are no signs of awakening in the industry. Growth occurs driven by capital inflows, transfers, or commodity booms, raises questions about its sustainability (Rodrik 2015). In addition, learning from the experiences of three countries that have been deindustrialized, it takes a long time to recover. Japan takes 10 years to recover, the United States takes 20 years, and England takes 15 years.  

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3 http://m.kontan.co.id, LIPI Indonesia Berjalan ke Arah Deindustrialisasi, December 22, 2010
The symptoms of premature deindustrialization in Indonesia have occurred since the beginning of 2000 and are indicated to still occur today. Thus, the problem of premature deindustrialization should not be ignored. Especially the experience of developed countries that take a long time to revive the industrialization (reindustrialization). Because of that, Indonesia as an archipelagic country with different natural resources and social conditions and also the uneven distribution of industries across archipelagic regions, the government's strategy to address deindustrialization must also be targeted, which areas should be pushed towards reindustrialization.

Based on the above description, then the issues discussed in this research are: (1) How is the rate of deindustrialization in Indonesia between time periods (decades), whether decreased or increased?, (2) What is the ratio of deindustrialization speed in Indonesia across the islands, which island region is the fastest deindustrialisation rate?, (3) Does premature deindustrialization occur in Indonesia and how is it measured?

The scope of the study area is Indonesia using 30 years data analysis from 1986 to 2015. That period was chosen with consideration of Indonesian economy condition in the 3 decades. The data used are provincial annual data.

The limitation of this research is to analyze only the speed of indication of deindustrialization at national and island region levels and not to analyze at the provincial or industrial level. In addition, indications of premature deindustrialization are only proven by descriptive analysis. The analytical method used refers to Rodrik (2015) research.

LITERATURE REVIEW

Manufacturing Concept

Manufacturing is an economic activity/field of business in the field of chemical or physical changes of materials, elements or components into new products. Processing raw materials come from agricultural, forestry, fishery, mining or quarry products such as products from other processing industries. Basic changes, renewals or reconstructions of goods are generally treated as processing industries. The manufacturing industry unit is described as a factory, machine or equipment specifically driven by machinery and hands. Including the category of manufacturing herein is a unit that converts the material into a new product by hand, a makloon activity or a sales activity of a manufactured product in the same place where the product is sold and a unit performing the processing of materials from another party on a contractual basis (BPS, 2009).

Deindustrialization Concept

Deindustrialization can be interpreted as a decrease in the contribution of output/GDP of the manufacturing sector in the national income or GDP or the decline in the contribution of workers in the manufacturing sector to total workers. Some previous researchers define it partially, i.e. only a decrease in the contribution of the manufacturing sector workers to the total worker or only the decrease in the contribution of output / GDP of the manufacturing sector in national income or GDP.
Rowthorn and Wells (1987) in Dewi (2010), distinguish deindustrialization into two kinds, which are positive and negative deindustrialization. Positive deindustrialization is the impact that occurs because the economy has experienced maturity in economic development. With economic development increasing per capita income, the role of agricultural sector workers has declined and the role of the manufacturing sector workers has increased to the highest levels of development achieved. However, on the other hand, there is an increase in per capita income from the increased role of the services sector. While negative deindustrialization is a pathological phenomenon where a structural imbalance in the economy prevents a nation to achieve full employment growth. This situation occurs because of the deteriorating performance of manufacturing industry sector and the slowing growth of output and productivity of manufacturing industry sector which resulted in decreased competitiveness so that the economy is getting worse. Unemployment from the manufacturing industry sector resulting from the negative deindustrialization can not be absorbed in the service sector due to the slowing economic situation.

Bazen and Thirlwall (1989) define deindustrialization as a decrease in the number of workers in the manufacturing sector either in absolute or relative terms to total workers. The focus on the workers in the manufacturing sector is done because it is very useful to see an increase in income at a certain level of worker productivity and the relationship between industrialization and job creation. Based on the definition of deindustrialization it can be concluded that positive deindustrialization does not cause the increase in the number of unemployed while negative deindustrialization can cause the increase in the number of unemployed (Jalilian and Weiss, 2000).

Rowthorn and Ramaswany (1999) define deindustrialization as a process of reducing the contribution of industrial workers to total workers. Tragenna (2009) stated that in addition to the decline in the contribution of the manufacturing to total workers, deindustrialization is driven by a decrease in the value-added contribution of the manufacturing to GDP.

**Concept of U-Reversed Curve (Inverted U-Shape)**

Engel's Law states that the proportion of total expenditure devoted to food decreases with income (Nicholson 1995). Clark (1957) extends this view and points out that a country's welfare level affects the relative demand for agricultural products, processing industries and services. Based on cross-national data analysis, it is concluded that along with the increase in real incomes per capita, the relative demand of agricultural products decreases over time and the relative demand of manufacturing goods initially increases and then decreases with demand for services (Kollmeyer 2009).

In recent years, many researchers have supported Clark's argument (1957) with empirical data. In these studies the inverted U-shape is obtained, where for countries with low and medium income per capita in line with increasing per capita income, it will increase the relative share of the manufacturing workers, but further on the prosperity limit a certain increase in income per capita decreases the share of manufacturing workers. As for developed countries, increased welfare encourages consumers to spend a larger portion of services that in turn will lead to deindustrialization (Rowthorn and Ramaswany 1997, 1999; Rodrik 2015; Tragenna 2015; Castilllo and Neto 2016).
The Concept of Premature Deindustrialization

The term premature deindustrialization was first used in Dasgupta and Singh (2006). Premature deindustrialization occurs when the level of income per capita of the country (developing country) is much lower than per capita income of developed countries when developed countries are in the industrialization period. Rodrik (2015) mentions that premature deindustrialization occurs in developing countries because the country is transformed into a service-based country without experiencing an established industrialization process.

Tragenna (2015) defines as deindustrialization that begins when the level of GDP per capita is lower and / or when the contribution level of the manufacturing industry to employment and GDP is lower than in general international cases. Castillo and Neto (2016) stated that premature deindustrialization occurs when the contribution of the manufacturing industry to total workforce is lower than expected for certain per capita income levels.

Previous Studies

Research on deindustrialization and premature deindustrialization in both developed and developing countries has been done by many researchers. In Indonesia, research on deindustrialization is largely concerned with the factors affecting deindustrialization with different perspectives.

Suwarman (2006) in his research on the deindustrialization process in Indonesia concluded that the process of deindustrialization in Indonesia in recent years is not a natural impact of the success of Indonesia's economic development, but rather caused by various shocks to the economic system.

Dewi (2010) in his research, aims to examine the role of the manufacturing industry sector in the Indonesian economy during the industrialization phase based on analysis with the Kaldorian approach. The result of research shows that the manufacturing sector is the engine of growth in Indonesia during the industrialization stage. The growth of manufacturing industry sector triggered growth in the sector other than the manufacturing so that eventually GDP growth will grow more rapidly. The process of de-industrialization that occurred in Indonesia since 2002 tends toward a negative direction. This negative deindustrialization is characterized by the low balance of trade (trade balance) or the openness of the economy (openness). This indicates that in general the process of deindustrialization in Indonesia is not a natural impact of a highly developed development process but rather caused by shocks to the Indonesian economy.

Metinara (2011) in the study of factors affecting Deindustrialization in Indonesia Year 2000-2009, show that domestic factors (per capita income and productivity growth) and economic globalization (economic openness and foreign investment) have an effect on deindustrialization in Indonesia either directly or indirectly. In addition, human capital (the number of skilled workers) also affect the deindustrialization although it does not show a significant relationship. Based on the results of research, deindustrialization that happened in Indonesia since last few years is a negative deindustrialization. The deindustrialization is not a natural impact of the development process but rather a number of shocks in the economic system.
Rasbin (2011) has analyzed the current national economy began to move toward deindustrialization. Deindustrialization symptoms in Indonesia can be seen from several indicators such as the decreased of absorption rate of employment in the industrial sector compared to the absorption of employment in other sectors such as primary sector and services, the decreased of the manufacturing’s share to the national economic growth, the decline in the number of companies engaged in the industrial sector, the tendency of declining competitiveness of domestic goods production in the international market and Indonesia getting eliminated from the regional and global manufacturing industry production network. Deindustrialization will have an impact on the declining value of national industry and the erosion of economic activity, such as: Indonesia potentially becomes more consumptive, the increasing dependency on the exporting countries of manufactured goods, the difficulty of reindustrialization and the decreasing of employment rate, termination of employment and will eventually increase the number of unemployment in Indonesia.

Other studies related to deindustrialization and premature deindustrialization include:

1. Rowthorn and Ramaswamy (1997), conducted research with data from 21 OECD Countries from 23 OECD Countries (excluding Luxemberg and Iceland) during 1963, 1970, 1975, 1980, 1985, 1990 and 1994. The results of this study conclude that there is a non linear relationship between per capita income and the share of manufacturing workers so that while the economic growth continues to increase, the proportion of workers in the manufacturing sector is decreased. Deindustrialization process will affect the total productivity where it will grow based on the growth of the service sector. This situation causes the further improvements in living standards to be affected by the growth of the service sector’s productivity.

2. Dasgupta and Singh (2006) conducted "Manufacturing, Services, and Premature Deindustrialization in Developing Countries: A Kaldorian Analysis" study with data from 14 developing countries, 1986-2000. The results of his research states that developing countries with per capita income at low and middle levels maintain a high income elasticity of demand for manufactured goods. A country experiencing pathological deindustrialization should evaluate its industry policy for more focused and targeted economic growth. Conversely, the countries with positive deindustrialization, the existing industrial policy does not need to be revised again. In this study, the term premature deindustrialization was first used, measured by the rate of attainment of GDP per capita of developing countries at the time of deindustrialization compared to the GDP per capita of developed countries when they reach the peak of industrialization.

3. Castillo and Neto (2016) conducted a study of premature deindustrialization of 4 countries in Latin America including Argentina, Brazil, Chile, and Mexico. The premature deindustrialization is measured by comparing the GDP per capita of 8 developed countries when they reach the peak of industrialization with the GDP per capita of 4 countries in Latin America, which referred to as turning point. While to estimate deindustrialization, they used a simple equation of Rowthorn-Type Regression from Rowthorn (1994) which calculates the manufacturing employment shares to the total of workforce with GDP per capita and perquised GDP per-capita (all variables in natural logarithms).
4. Rodrik (2015) conducts premature deindustrialization research for developing countries by three measurements, namely manufacturing employment share, nommva (manemp), manufacturing value added share at current prices (nommva), and manufacturing value added share at constant prices (realmva). The relationship between the three measurements of industrialization and income per capita is shown by an inverted U shaped curve or also called hump shape. The curve is made base on quadratic estimates (population logs and GDP per capita) using fixed effects and dummy models. His research aims to examine whether the deindustrialization occurring in developing countries is becoming faster for the present. Using dummy for time period of 1960, 1970, 1980, 1990, and post-2000. The research also see deindustrialization within different country groups of developed countries. The results of his research, showed deindustrialization more clearly indicated from employment conditions. This led him to analyze more deeply about deindustrialization of employment based on skill groups. Premature deindustrialization obtained by comparing the achievement of peak levels of industrialization among country with late industrializers and early industrializers, as measured by manemp and realmva. The result is late industrializers country peaked at the industrialization level shown by lower income levels than early industrialized country. Each country's peak level was determined visually, which is when the manemp starts to decline.

5. Tragenna (2015) states that there are two key aspects linking deindustrialization, these are the level of per capita income of a country and how high the contribution of manufacturing to employment and GDP at the time of deindustrialization. Conceptually both aspects are inverted U. The first aspect shows how far to right (referring to how high income per capita) when in the turning point, the second aspect of how high the turning point (the contribution of manufacturing to employment and GDP). Based on these concepts, a basic calculation for premature deindustrialization with simple approach of the Rowthorn-Type Regression (Rowthorn, 1994) is established. Dependent variable is used the contribution of Manufacturing employment to the total employment, and explanatory variables are GDP per capita and GDP per capita squared (all in natural logarithmic).
Framework

The process of industrialization in Indonesia began in the late 1980s (Dasril, 1993). The development of economic conditions up to 2008 based on the criteria of industrialized countries and the criteria of United Nations Industrial Development Organization (UNIDO) shows that the industrialization process in Indonesia has not been completed yet. This is shown by the absence of Indonesia in the category of industrialized countries (Ruky in Dewi 2010).

Along with the process of industrialization in Indonesia in accelerating economic growth, there is a shift in the role of the agricultural sector towards the secondary sector and even tertiary sector. This is indicated by the declining role of the agricultural sector in the formation of GDP in recent years. In contrast, there is an increasing role of the manufacturing and service sectors in contributing to GDP. However, along with the change of economic structure in Indonesia, there is also a phenomenon in which the role of manufacturing industry sector has decreased in recent years.
Contrary to that fact, the symptoms that occur in the Indonesian economy today show the existence of deindustrialization symptoms that lead to negative deindustrialization. This is shown by the proportion of workers in the manufacturing sector to total workers experiencing negative growth since 2002. In addition, the growth of manufacturing industry sector output and manufacturing sector composition in GDP has been declining since 2002.

**Figure 1** Research Framework

**RESEARCH METHODS**

**Data Source**

This research uses secondary data from Badan Pusat Statistik (BPS)/Statistics Indonesia. These are are Gross Regional Domestic Product (GRDP) by sector and provinces, number of employment by sectors, and population.

The scope of the research is all of Indonesia’s region. The newly formed provinces is returned to their parent province so the number of provinces used in the study were 26 provinces. For the purposes of inter-regional research in Indonesia, the grouping of islands is divided into 4 regions, these are Sumatra; Java, Bali, Nusa Tenggara (Jabalnusra); Kalimantan; Sulawesi, Maluku, Papua (Sulampua).
The research period is the data of each province for 30 years ie 1986-2015. The reason is Indonesia started the industrialization process since the late 1980s (Dasril 1993) and because of the availability of employment data (Sakernas) that is available since 1986. For the purposes of the research analysis, the time period is divided into three decades ie 1986-1995 (decade 1), 1996-2005 (2nd decade), and 2006-2015 (decade 3). The 3 decade grouping is based on the condition of the Indonesian economy, where in the first decade (1986-1995) was Indonesia's condition of industrialization and before the 1997 economic crisis; the second decade (1996-2005) was the condition of Indonesia experiencing crisis and recovery post economic crisis; and the third decade (2006-2015) was the period of recovery and development of the economic condition of Indonesia.

Table 1 Variable names and units used in the research

<table>
<thead>
<tr>
<th>Variabel names</th>
<th>Explanatory</th>
<th>Source</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>manemp</td>
<td>Manufacturing employment</td>
<td>BPS</td>
<td>Percent</td>
</tr>
<tr>
<td>totemp</td>
<td>Total employment</td>
<td>BPS</td>
<td>Orang</td>
</tr>
<tr>
<td>realmva</td>
<td>Real manufacturing value added</td>
<td>BPS</td>
<td>Percent</td>
</tr>
<tr>
<td>nommva</td>
<td>Nominal manufacturing value added</td>
<td>BPS</td>
<td>Percent</td>
</tr>
<tr>
<td>nomcap</td>
<td>Nominal per capita</td>
<td>BPS</td>
<td>Rupiah</td>
</tr>
</tbody>
</table>

The operational definitions of each of the variables used are as follows:

1. Manufacturing employment (manemp) is the proportion of workers in the manufacturing sector to total workers.
2. Total employment (totemp) is the sum of all employment
3. Nominal manufacturing value added (nommva) is the proportion of GRDP of manufacturing sector to total GRDP (at current prices)
4. Real manufacturing value added (realmva) is the proportion of GRDP of manufacturing sector to total GRDP (at constant prices)
5. Nominal per capita (nomcap) is the income per capita, as measured from the gross regional domestic income divided by the mid-year population.

Method of Analysis and Data Processing

The method of analysis was used in this study consists of descriptive analysis and panel data analysis. Descriptive analysis is used to provide a general overview of the characteristics of related variables in the study and to explain indications of premature deindustrialization.

Panel data analysis is performed to measure the speed of deindustrialization. The collected secondary data is processed by the computer program package that is Microsoft Excel 2010. The data panel regression processing is done by using Eviews 9 program.
Formulation of Research Model

Referring to Rodrik’s (2015) research, the regression model that will be used in this study are as follows:

\[
\text{Ln(manemp)}_{it} = \alpha_i + \beta_1 \text{Ln(totemp)}_{it} + \beta_2 \text{Ln(totemp)}^2_{it} + \beta_3 \text{Ln(nomcap)}_{it} + \beta_4 \text{Ln(nomcap)}^2_{it} + D_2 + D_3 + \epsilon_{it} \tag{11}
\]

\[
\text{Ln(nommva)}_{it} = \alpha_i + \beta_1 \text{Ln(totemp)}_{it} + \beta_2 \text{Ln(totemp)}^2_{it} + \beta_3 \text{Ln(nomcap)}_{it} + \beta_4 \text{Ln(nomcap)}^2_{it} + D_2 + D_3 + \epsilon_{it} \tag{12}
\]

\[
\text{Ln(realmva)}_{it} = \alpha_i + \beta_1 \text{Ln(totemp)}_{it} + \beta_2 \text{Ln(totemp)}^2_{it} + \beta_3 \text{Ln(nomcap)}_{it} + \beta_4 \text{Ln(nomcap)}^2_{it} + D_2 + D_3 + \epsilon_{it} \tag{13}
\]

Where: \(\text{Ln (manemp)}_{it}\): the natural logarithm of the proportion of the manufacturing employment to the total; \(\text{Ln (nommva)}_{it}\): natural logarithm of the proportion of the manufacturing GDRP to total GRDP (nominal GRDP); \(\text{Ln (realmva)}_{it}\): natural logarithm of the proportion of the manufacturing GDRP to total GRDP (real GRDP / constant); \(\text{Ln (totemp)}_{it}\): natural logarithm of the amount of employment; \(\text{Ln (nomcap)}_{it}\): natural logarithm of GDP per capita; \(D_2\): dummy variable for 1996-2005 (2nd decade); \(D_3\): dummy variable for year 2006-2015 (3rd decade); \(\alpha_i\): intercept; \(\beta_1, \beta_2 \ldots \beta_4\): regression coefficients of each independent variable; \(\epsilon_{it}\): error term; \(i\): the i province; \(t\): time period (1986,1987, ..., 2015)

The three regression models [equations (11), (12), and (13)] will be used in 5 different data sets. In detail, the data sets are presented in the following table.

<table>
<thead>
<tr>
<th>Group of research data</th>
<th>Number of Provinces (i)</th>
<th>Series data (t)</th>
<th>Number of Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasional</td>
<td>26 Provinces</td>
<td>1986-2015 (30 years)</td>
<td>780</td>
</tr>
<tr>
<td>Sumatera</td>
<td>8 Provinces</td>
<td>1986-2015 (30 years)</td>
<td>240</td>
</tr>
<tr>
<td>Jabalnusra</td>
<td>8 Provinces</td>
<td>1986-2015 (30 years)</td>
<td>240</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>4 Provinces</td>
<td>1986-2015 (30 years)</td>
<td>120</td>
</tr>
<tr>
<td>Sulampua</td>
<td>6 Provinces</td>
<td>1986-2015 (30 years)</td>
<td>180</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

Transformation of GDP Structure and Indonesian Workers

During the period of 1986-2015, the economic structural transformation’s scenario from agricultural based economy to manufacturing based economy began. The agricultural sector’s contribution continued to decline and simultaneously the contribution of the manufacturing and services sectors increased.

Viewed from GDP, the manufacturing’s contribution has reached its peak in the early of 2000, which amounted to 29.05 percent in 2001. After that, it continued to decline and reached 21.50 percent in 2015. It means, the role of manufacturing’s contribution has decreased in the Indonesian economy since 15 years ago. The opposite occurred in the
service sector, from 1986 the contribution of the services sector tended to decline and fluctuate. It began to increase after 2010 and then continue to increase until now which reached 44.70 percent.

When viewed from the share of employment, the change of percentage in the contribution of manufacturing sector in the last 30 years showed no significant change, only about 5 percent. While the percentage of employment in agriculture sector has decreased considerably during the last 30 years about 21.48 percent. In contrast, a substantial increase occurred in the service sector which up by 15.56 percent in the last 30 years. While other sectors did not experience significant percentage change.

It can be interpreted that there has been a shift in the number of workers (transformation of employment structures) between sectors, where the transformation of the largest employment structure occurs in the agricultural sector. However, the shift in employment is not entirely transferred or absorbed into the manufacturing sector but more to the service sector so that the growth rate of manpower in the manufacturing sector is relatively low with a relatively stable contribution’s average about 12 percent from year to year.

Source : Badan Pusat Statistik/Statistics Indonesia, processed

**Figure 2** Share of agriculture, manufacturing, service & other sectors to GDP and employment in Indonesia in 1986-2015 (percent)

**Profile of Manufacturing’s Employment in Indonesia**

Based on Sakernas data of February 2015, manufacturing’s employment is dominated by lower education junior high school which reach 58.36 percent, while those with high school education equal to 36.38 percent and educated academy/diploma/bachelor degree only 5.25 percent. The same composition also occurs in overall employment conditions.

ILO’s analysis (2015) mentions that in Indonesia there has been a shortage of skilled workers and surplus employment and skill incompatibility. Skill incompatibilities are translated as workers who have a level of education that is too high or too low than that required by a particular job. The demand for highly qualified workers extends beyond existing employment supply. In addition, there is an excess supply of employment for those with a background of junior and senior high school education. This has led to a situation where there are many job vacancies in Indonesia filled with unqualified workers.
Regional Share in GDP

Each province has a leading sector that contributes the most in the creation of value added. Agricultural is the leading sector of most provinces (16 provinces) in Indonesia. Only 8 provinces have the leading sector of manufacturing. But these eight provinces are not the highest national GDP contributors. The highest eight national GDP contributors are Jawa Barat (23.78 Percent), Jawa Timur (17.93 Percent), Jawa Tengah (12.95 Percent), DKI Jakarta (9.95 Percent), Banten (5.80 Percent), Riau (5.64 Percent), Sumatera Utara (4.19 Percent) and Kalimantan Timur (3.77 Percent). The eight largest contributing provinces of GDP accounted for 84 percent where the 70.40 percent is contributed by the provinces in Java’s island.

In 2015, most of the value added of manufacturing contributed from the Jabalnusra region which amounted of 71.48 percent, the remaining 18.79 percent was contributed by the region of Sumatra; 6.08 percent was contributed by Kalimantan and 3.65 percent was donated by Sulampua region.

Selection of Panel Regression Model and Classic Assumption Test

Based on the estimation model determination test and statistical test F (Chow Test), fixed effect model is selected as the most appropriate estimation model. This is in line with research conducted by Rodrik (2015).

The classical assumption test conducted on the research data group are normality test with histogram method: normality test, heteroscedasticity test with Breusch-Pagan LM method and autocorrelation test with Durbin-Watson stat method. The results of the classic assumption test found the existence of autocorrelation and heteroscedasticity on the five data groups and most of the distribution is not normal. To overcome the existence of autocorrelation heteroscedasticity the panel regression equation estimation using EGLS method with cross-section SUR is used. From the results of parameter estimation, not all of them show significant result at α = 5%.

Inverted U-Shape's Analysis

The Inverted U-Shape curve shows the relationship between income per capita (GDP per capita) and contribution of manufacturing by according to employment and GDP. The inverted U curve contains two aspects: the first shows how far to the right, which is how high per-capita income when the turning point happened. The second aspect shows how high the turning point, which is the contribution of the manufacturing to the employment and the GDP. Dependent variable used is the contribution of manufacturing to total employment and GDP and the explanatory variables are GDP per capita and GDP per capita squared (all in natural logs condition) (Rowthorn in Tragenna 2011).
Figure 3 shows that the sequence of turning points manemp is slightly faster than nommva and realmva whereas the realmva turning point is faster than nommva. The contribution of the manufacturing has reached its maximum point and then declines as GDP increases per capita. The inverted U-shape curve indicates a deindustrialization. The manemp turning point referred to 1996 with GDP per capita of Rp 3 million, realmva referring to 1998 with GDP per capita of Rp 4.9 million, and nommva referring to 1999 with GDP per capita of Rp 5.7 million. Those years are around the year when Indonesia is experiencing an economic crisis.

Indonesia’s economic crisis in 1997 had a big impact on economic performance because the crisis occurred not only due to the economic crisis, but also a political and social crisis. In the crisis period and after the crisis, according to real GDP, Indonesia’s economic growth had experienced negative growth in 1998 then the following year showed improvement shown by the positive growth. The same condition also occurred in the manufacturing sector, but since 2005, the growth of manufacturing is smaller than the total economic growth. This is causing the contribution of the manufacturing has always declined until now although the GDP per capita has increased.

The contribution of manufacturing employment stagnate in the range of 12 percent while the contribution of agriculture decreased sharply. It shows that the manufacturing does not absorb many employment transformation, thus the growth of manufacturing’s employment is slower than the service sector which has a high contribution increase.

The deindustrialization based on the inverted U-Shape curve occurred earlier than the deindustrialization based on manufacturing’s share in GDP (nominal). Manufacturing’s share in GDP (nominal) shows highest proportion occurred in 2001, then shows contribution’s decrease (deindustrialization) since 2002. While based on inverted U-Shape curve, deindustrialization has occurred since 1997 (share of manufacturing’s employment), 1999 (real manufacturing’s share in GDP), or 2000 (nominal manufacturing’s share in GDP).

The research that showed non linear correlation between income per capita and the proportion of manufacturing employment on an inverted U-shape curve also shown by Metinara (2011). Her study concluded, that in line with increased income per capita, provinces with low and medium income per capita would increase the proportion of workers in the manufacturing. But at certain welfare limits, the increase in income per capita will
reduce the proportion of workers in the manufacturing. This situation indicates in overall the economy in Indonesia is experiencing a slowdown due to shocks in the economic system.

The Effect of Total Employment and GDP per Capita to Manufacturing’s Employments Share and Manufacturing’s share in GDP

Data processing on national data groups using Eviews 9, yields a smaller F-statistic probability value of $\alpha = 0.05$. From these results, it can be concluded that simultaneously independent variables significantly affect the independent variable. The results of the treatment also obtained a high adjusted R-squared value which means that the independent variable is able to explain the dependent variable.

**Table 3 Results of panel data regression in national data group**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Ln(manemp)</th>
<th>Ln(nommva)</th>
<th>Ln(realmva)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>11.763</td>
<td>3.319</td>
<td>-0.931</td>
</tr>
<tr>
<td></td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.035**</td>
</tr>
<tr>
<td>Ln Total Employment</td>
<td>-3.453</td>
<td>-2.760</td>
<td>-2.224</td>
</tr>
<tr>
<td></td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>Ln Total Employment squared</td>
<td>0.145</td>
<td>0.133</td>
<td>0.117</td>
</tr>
<tr>
<td></td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>Ln GDP per capita</td>
<td>1.300</td>
<td>1.481</td>
<td>1.449</td>
</tr>
<tr>
<td></td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>Ln GDP per capita squared</td>
<td>-0.044</td>
<td>-0.048</td>
<td>-0.047</td>
</tr>
<tr>
<td></td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>Decade 2 (1996-2005)</td>
<td>-0.009</td>
<td>-0.205</td>
<td>-0.216</td>
</tr>
<tr>
<td></td>
<td>0.211</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>Decade 3 (2006-2015)</td>
<td>-0.108</td>
<td>-0.423</td>
<td>-0.429</td>
</tr>
<tr>
<td></td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.986</td>
<td>0.999</td>
<td>1.000</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.985</td>
<td>0.999</td>
<td>1.000</td>
</tr>
<tr>
<td>F-statistic</td>
<td>1,644.510</td>
<td>17,006.490</td>
<td>60,314.040</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000***</td>
</tr>
<tr>
<td>Number of Province</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Number of Observation</td>
<td>780</td>
<td>780</td>
<td>780</td>
</tr>
</tbody>
</table>

Source : Eviews Output (processed), (***)) significant in $\alpha = 1 \%$ **) significant in $\alpha = 5 \%$ *) significant in $\alpha = 10 \%$

Table 3 shows the relationship between total employment and GDP per capita to the manufacturing’s employments share and the manufacturing’s share in GDP. The coefficient of total employment for three indicators (manemp, nommva, realmva) shows a negative value. This indicates a negative relationship between total employment with the three indicators where each increase of 1 unit of total employment will cause a decrease in the manufacturing’s employments share, the manufacturing’s share in GDP both in nominal and real of each coefficient value. The explanation can be understood by the phenomenon that every year there is an increase in the number of employment, except in 2010, but the addition of the number of employment is more into other sectors than manufacturing sector.
Mathematically, when the total value of the worker (denominator) increases but the number of manufacturing’s employment (numerator) is relatively not increased then the proportion will shrink. The table also shows a positive relationship between GDP per capita and three indicators, that an increase of 1 unit of GDP per capita will increase the manufacturing’s employments share, the manufacturing’s share in GDP, both in nominal and real GDP of each coefficient value.

**The Speed of Deindustrialization in Indonesia**

Research about deindustrialization in Indonesia has been done by previous researchers such as Suwarman (2006); Dewi (2010); Metinara (2011); Rasbin (2011). Based on their research, it can be concluded, that deindustrialization happened in Indonesia is negative deindustrialization and not the natural impact of highly development process but due to shock caused by domestic factors and globalization.

To see the rate of deindustrialization in Indonesia dummy coefficient period of time is used in table 3. Coefficient value of Dummy variable indicates the following: (1) The magnitude of “industrialization level decline” or called deindustrialization based on the decade 1986-1995, (2) The negative value of the dummy variable coefficients that increase over time period (decade 1996-2005 and decade 2006-2015) indicates that deindustrialization was happening faster.

Rapidly deindustrialization occurred in nammva and realmva in the last two decades (1996-2005 and 2006-2015) compared to the first decade (1986-1995). The manemp indicator also shows deindustrialization in the last two decades but the dummy variable is not significant at $\alpha = 5\%$ even $\alpha = 10\%$ in decade 1996-2005, while decade 2006-2015 is significant at $\alpha = 1\%$. Compared to the decade 1986-1995, the manemp has a level of 0.108 points or 10.8 percent lower in the decade 2006-2015. This indicates the deindustrialization of the manufacturing’s employments share in Indonesia.

This is the case with the nammva and realmva indicators. Compared to the decade 1986-1995, both indicators indicate a decline in the level of industrialization. Nommva indicator decreased the level of 0205 or 20.5 percent in the decade 1996-2005 then accelerated to 0423 points or 42.3 percent in the decade 2006-2015. Real-time indicators declined by 0.216 points or 21.6 percent in the decade 1996-2005 then fell back to 0.429 points or 42.9 percent. Decrease in decade levels on both indicators indicates that the deindustrialization process is accelerating or more severe in Indonesia. Comparing the percentage velocity of these three indicators, realmva shows a slightly faster pace than nammva whereas manemp is slower than the other two indicators.

**The Speed of Deindustrialization by Islands Region**

The results of parameter estimation by islands region show different results in each islands region. In general, the realmva indicator shows that deindustrialization in all regions is significant at $\alpha$ of 1 percent, except in Jabalnusra in the 1996-2005 decade which is not significant. The nommva indicator shows deindustrialization in Sumatra and Sulampua at $\alpha$ of 1 percent and 5 percent, Kalimantan represents deindustrialization at $\alpha$ of 1 percent in the decade 2006-2015 whereas in the decade 1996-2005 was not significant. Based on nommva, Jabalnusra did not show significant deindustrialization. The manemp indicator shows Jabalnusra and Sulampua deindustrialized, although in Jabalnusra, in the decade 1996-2005, it was not significant.
For the region of Sumatera, the deindustrialization phenomenon is shown by the nommva and realmva indicators whereas the manemp indicator does not indicate deindustrialization. Deindustrialization’s acceleration occurred in the decade of 1996-2006 and decade 2006-2015 compared to the decade of 1986-1995. Acceleration of nommva indicator from 0.061 points or 6.1 percent to 0142 points or 14.2 percent, indicates an acceleration of 0.081 points (0.142-0.061) or 8.1 percent. Realmva indicators experienced a greater acceleration of 0.078 points or 7.8 percent to 0.182 points or 18.2 percent, which means that the decade of 2006-2015 changed as much as 0.104 points or 10.4 percent over the previous decade.

For Jabalnusra region, deindustrialization was only shown in decade 2006-2015 from manemp and realmva indicator whereas in decade 1996-2005 was not significant at 95% confidence interval. In the decade 2006-2015, the indicator experienced a decline in the level of 0.091 points or 9.1 percent while the realmva indicator experienced a deeper decline in the level of 0.571 points or 57.1 percent against the decade 1986-1995.

For the Kalimantan region, the manemp indicator does not show significant deindustrialisation while the nommva and realmva indicators show faster deindustrialization. The nommva indicator showed a decline in industrialization rate of 0.180 points or 18 percent in the decade 2006-2015 against the decade 1986-1995. Realmva indicator showed a decline in industrialization level of 0.115 points or 11.5 percent in the decade 1996-2005 and higher in the next period of 0.274 points or 27.4 percent.

<table>
<thead>
<tr>
<th>Islands Region</th>
<th>Indicator</th>
<th>Decade 1996-2005</th>
<th>Decade 2006-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumatera</td>
<td>Ln(manemp)</td>
<td>0.015</td>
<td>0.087</td>
</tr>
<tr>
<td></td>
<td>Ln(nommva)</td>
<td>-0.061</td>
<td>-0.142</td>
</tr>
<tr>
<td></td>
<td>Ln(realmva)</td>
<td>-0.078</td>
<td>-0.182</td>
</tr>
<tr>
<td>Jabalnusra</td>
<td>Ln(manemp)</td>
<td>-0.009</td>
<td>-0.091</td>
</tr>
<tr>
<td></td>
<td>Ln(nommva)</td>
<td>0.016</td>
<td>-0.016</td>
</tr>
<tr>
<td></td>
<td>Ln(realmva)</td>
<td>-0.228</td>
<td>-0.571</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>Ln(manemp)</td>
<td>0.208</td>
<td>-0.157</td>
</tr>
<tr>
<td></td>
<td>Ln(nommva)</td>
<td>-0.058</td>
<td>-0.180</td>
</tr>
<tr>
<td></td>
<td>Ln(realmva)</td>
<td>-0.115</td>
<td>-0.274</td>
</tr>
<tr>
<td>Sulampua</td>
<td>Ln(manemp)</td>
<td>-0.166</td>
<td>-0.250</td>
</tr>
<tr>
<td></td>
<td>Ln(nommva)</td>
<td>-0.239</td>
<td>-0.559</td>
</tr>
<tr>
<td></td>
<td>Ln(realmva)</td>
<td>-0.228</td>
<td>-0.571</td>
</tr>
</tbody>
</table>

Source: Output Eviews, ***) significance at α = 1 % **) significance at α = 5 % *) significance at α = 10 %
Finally, the Sulampua region indicates an increasingly rapid deindustrialization on all indicators with a 90 percent confidence interval in the manemp and 99 percent in nommva and realmva. Compared to the decade of 1986-1995, the manemp indicator experienced a decline in the level of 0.166 points or 16.6 percent in the decade 1996-2005 and increased by 0.084 points or 8.4 percent in the decade 2006-2015 to 0.250 points or 25 percent in the decade 2006-2015. The same is true with the nommva and realmva indicators, the difference being at the rate of deindustrialization in which the nommva and realmva deindustrialize deeper. In the decade 2006-2015, nommva decreased 0.559 points or 55.9 percent and realmva decreased the level of 0.571 points or 57.1 percent over the period 1986-1995.

Based on the above analysis, it can be concluded that the realmva indicator shows more of the deindustrialization’s existensce in the archipelago of Indonesia and also shows the rate of deindustrialization speed is greater than the other two indicators.

The inter-island comparison analysis can be seen by comparing the indicator coefficient values between islands. Based on the manemp indicator, the speed rate of deindustrialization in Sulampua is faster than Jabalnusra. Likewise with the indicator nommva, Sulampua deindustrialization faster than Kalimantan and Sumatera while based on realmva indicator, Sulampua and Jabalnusra have the same speed. It shows that the area of Sulampua is the hardest region that is deindustrialized as indicated by the high coefficient value in the three indicators.

**Identification of Premature deindustrialization**

Premature deindustrialization brings serious consequences both to the economy and to politics. On the economic side, it reduces the potential for economic growth and the possibility of convergence with income levels from developed countries. The political consequences of premature deindustrialization can make democratization more likely to be fragile (Rodrik 2015).

Some premature deindustrialization definitions put forward by previous researchers can draw the conclusion that premature deindustrialization is a deindustrialization that occurs when the level of GDP per capita of a country is well below the GDP of developed countries when developed countries are in the process of industrialization and the country is transformed into a service-based country without undergoing a mature industrialization process. Thus, to analyze whether premature deindustrialization occurred in Indonesia required three data. The first is the GDP per capita of Indonesia at the peak of the highest industrialization which will be seen from the manufacturing’s share in GDP at current prices. Secondly, the GDP per capita of some developed countries when it reaches the peak of industrialization. Third, the magnitude of the manufacturing’s share in GDP based on current prices at the peak of industrialization.
Castillo and Neto (2016) show GDP per capita and the manufacturing’s employments share to total workers in the seven selected developed countries. The seven developed countries reached the peak of industrialization with turning points on GDP per capita of about US $10,000-US $15,000. In Rowthorn (1994) calculated from 70 countries, turning points are approximately US $12,000 per capita (1991 PPP), which most OECD countries reached that point in the 1970s. Rowthorn and Coutts (2004) estimated turning points of approximately US $9,500 per capita (1995 PPP).

**Figure 4** Deindustrialization at 7 developed country

Indonesia achieved the highest manufacturing’s share in GDP in 2001 at 29.05 percent based on GDP at current prices. At that time, Indonesia's GDP per capita only reached US $4,812.06 (PPP). Compared to Castillo and Neto data (2016), Indonesia's per capita GDP is well below the GDP per capita of developed countries as developed countries reach the peak of industrialization. This indicates an indication of premature deindustrialization in Indonesia. Especially in fifteen years, Indonesia is still classified as a country with per capita national income that is classified as middle income (middle income) or closer to middle income lower (lower middle income). The condition of GDP per capita that has not shifted or out of middle income is indicated as a danger of deindustrialization called middle income trap.
In addition to comparing Indonesia's GDP per capita level against developed countries, indications of premature deindustrialization can be seen from the maturity of industrialization. The maturity level of industrialization can be seen from the results of MGI (2012) study in Figure 5 below, where a country will experience a mature industrialization if its manufacturing's GDP contribution has reached 30 to 40 percent and its GDP per capita is above $7000 - $10,000.

Based on research conducted by MGI (2012) it also concluded that the service sector can not contribute significantly to GDP before GDP per capita is above $7000 - $10,000. The above graph is the evolution cycle of a healthy country's economic growth, the evolution of its economic growth will follow an inverted U curve, that is, when the industry’s share of GDP exceeds 30 percent to 40 percent and GDP per capita is above $7000 - $10,000 then the economy begins to shift to direction of the services sector.

Considering the above condition, Indonesia's GDP per capita is at middle income level and the contribution of manufacturing industry sector which is still below 30 percent indicates that Indonesia is experiencing early indication of deindustrialization. It is also reinforced from the results of previous research that the deindustrialization that occurred in Indonesia is a negative deindustrialization which occured due to shock that comes from either domestic or global.

![Graph showing the evolution cycle of a healthy country's economic growth](image_url)

**Figure 5** The manufacturing’s share in GDP uses the research according to the level of GDP per capita (1990 Geary-Khamis dollars) following the inverted U-shape curve.
CONCLUSION AND RECOMENDATIONS

Conclusion

Based on the analysis and previous discussion it can be drawn some conclusions as follows:

1. Inverted U-shape shows that deindustrialization has occurred in Indonesia in the period around the 1997 economic crisis, in line with the literature which mentions deindustrialization was caused by shock or negative deindustrialization.

2. Panel data regression results, shows a negative relationship between total employments with all three indicators. The explanation can be understood by the phenomenon that every year there is an increase in the number of employments, except in 2010, but the addition of the number of employments is more into other sectors other than the manufacturing.

3. Rapid deindustrialization in Indonesia has occurred as indicated by the contribution of both nominal and real manufacturing’s share in GDP (nommva and realmva).

4. Rapid deindustrialization also occurs in all islands. From the results of comparison analysis between islands by comparing the magnitude of coefficients inter-island indicators, it can be concluded that the area of Sulampua is the worst affected areas of deindustrialization which shown by the high coefficient on the three indicators.

5. Indications of premature deindustrialization occur in Indonesia where GDP per capita and the manufacturing’ share sector are still relatively low.

Recommendations

Related to the importance of the manufacturing sector as a motor of development or engine of growth, then:

1. Considering that deindustrialization has occurred more than 15 years ago, the government needs to establish a prompt and appropriate step to rebuild industrialization (reindustrialization) in Indonesia so that deindustrialization can be immediately overcome. With reindustrialization, it is expected that the role of the manufacturing as a growth engine will again encourages other sectors to grow higher so as to increase economic growth and GDP per capita of Indonesia and ultimately improve the welfare of Indonesian people into developed countries.

2. The development of manufacturing needs to be done equally throughout the archipelago in Indonesia considering all the islands are deindustrialized. The priority of development of manufacturing is done outside Jabalnusra especially Sulampua to downplay the imbalance of development in Indonesia, where industrialization is identical with development.

3. To increase the income per capita of the community through the manufacturing sector, the development of manufacturing should be directed to employment intensive manufacturing considering the composition of employment in Indonesia dominated by secondary education.

4. Increasing human resources needs to be done through education and skills so that future human resources have higher quality (highly skill-intensive). With high quality of resources, then human resources by itself will be ready to enter the service sector that has high productivity and tradeable such as information and communication technology.
(ICT) and financial sector and other service sectors that can replace the role of the manufacturing as a growth engine.

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FACTORS AFFECTING HUMAN DEVELOPMENT INDEX IN KALIMANTAN TENGAH PROVINCE

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Departement Of Economics, Bogor Agricultural University

ABSTRACT

This study aims to describe performance HDI and the factors that affect HDI in regency/municipality in Kalimantan Tengah, using panel data regression 2010-2015. The model results showed that GRDP per capita, budgetary allocation for the health, unemployment rate and dummy municipality regency have positive effect, while poverty and dependency ratio have negative effect on HDI. GRDP can be increased by developing the palm oil industry cluster, because until recently palm oil in Kalimantan Tengah mostly processed as CPO which is still included in raw material. The HDI value of Palangka Raya Municipality was highest because of doctors and universities in Kalimantan Tengah is uneven.

Keywords: Human Development Index, Kalimantan Tengah, Panel Data

JEL code: 015. E24
INTRODUCTION

Prior to the 1970s development was considered an ordinary economic phenomenon. Development is only measured by the growth of gross domestic product (GDP). A country with high GDP growth will be prosperous. This is because the assumption that with high GDP growth will drip by itself to other problems such as job creation, poverty and inequality. In addition to economic development, human development is also increasingly in the spotlight.

People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to enjoy longevity, health and creative life. Human is the wealth of the real country (UNDP in BPS, 2015). Human development is a development paradigm in which humans are placed as subjects of economic activity. Focus and development goals are the achievement of control over human resources in order to earn income to achieve a decent life in order to affect economic growth. Human development is the ultimate goal of all kinds of development.

One of the indicators used to measure human development is the Human Development Index (HDI). HDI is a composite index measured through education, healthy and income. HDI was introduced by United Nations Development Program (UNDP) in 1990 through the publication of Human Development Report 1990. In the calculation of HDI, three dimensions are used, life expectancy, literacy and income for decent living standard. From these three dimensions, it is revealed that the four indicators are life expectancy at birth, expected years of schooling, mean years of schooling and gross national product (GNP) per capita.

The methodology of calculating HDI has improved in 2010. There are two main reasons for the change in the methodology of HDI (BPS, 2015). First, there are already irrelevant indicators in. These indicators are literacy rates and GDP per capita. Literacy rate is considered no longer relevant in measuring education as a whole because it does not reflect the quality of education. GDP per capita is basically a proxy for public income, but GDP is created from all factors of production and foreign investment is taken into account. Therefore per capita GDP is considered less precise to describe the income of the community. Second, the use of arithmetic formulas representing low achievements in a dimension can be masked by high achievements from other dimensions. Arithmetic average allows for the transfer of achievement from the dimension with high achievement to dimension with low achievement so that the concept of equity which carried by human development can slip.

The direct impact of changing the method of calculating HDI has two impacts. First, there is a change in HDI level lower than the old method. Changes of literacy rate to expected years of schooling (EYS) make HDI lower because in general literacy rate is above 90 percent while EYS is not optimal. Arithmetic changes to geometrics also contribute to the decline in the HDI level of new methods. Second, there was a change of HDI rank. With the change in the value of HDI make changes in HDI rankings both at the state, provincial and regency/municipal levels.
The value of HDI in Indonesia by 2015 is 69.55. If viewed from the trend data from 2010 to 2015, the value of HDI Indonesia is always increasing. Starting from 66.53 in 2010 to 69.55 in 2015. Kalimantan Tengah HDI trend is always increasing like Indonesia HDI, but ratings are decreasing. In 2010 the value of HDI Kalimantan Tengah amounted to 65.96 and always increases every year until in 2015 of 68.53. The Kalimantan Tengah HDI 2010 ranking is 17 out of 33 Provinces in Indonesia and by 2015 its ranking has dropped to 21 from 34 provinces.

Performance of macro indicator of Kalimantan Tengah Province is always above national value. When compared with other provinces, Kalimantan Tengah is always in the top 10. The macro indicators are gini ratio, economic growth, poverty, and unemployment. Unlike the above mentioned macro indicators, the human development index (HDI) of Kalimantan Tengah is actually below national value. Even if compared with other regions, HDI Kalimantan Tengah "only" rated 21.

Poverty in Kalimantan Tengah in 2015 was 5.91 percent, lower than the national poverty of 11.13 percent. The percentage of poverty in Kalimantan Tengah is rated 7 nationally. Inequality in Kalimantan Tengah is quite good when compared to other provinces in Indonesia. This is seen from the rank of gini ratio of Kalimantan Tengah in rank 5 compared to 34 provinces. Gini ratio 0.326 is smaller than the national value of 0.408.

<table>
<thead>
<tr>
<th>Macro Indicator</th>
<th>Indonesia</th>
<th>Kalteng</th>
<th>Kalteng Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty</td>
<td>11.13</td>
<td>5.91</td>
<td>7</td>
</tr>
<tr>
<td>Gini Ratio</td>
<td>0.40</td>
<td>0.32</td>
<td>5</td>
</tr>
<tr>
<td>Economic Growth</td>
<td>4.98</td>
<td>7.01</td>
<td>6</td>
</tr>
<tr>
<td>Unemployment</td>
<td>6.18</td>
<td>4.54</td>
<td>9</td>
</tr>
<tr>
<td>HDI</td>
<td>69.55</td>
<td>68.53</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Badan Pusat Statistik

Economic growth of Kalimantan Tengah in 2015 was 7.01 percent, higher than the national economic growth at 4.98 percent. When compared with the economic growth of other provinces, the economic growth of Kalimantan Tengah in the top 6. The open unemployment rate in Kalimantan Tengah amounted to 4.54 percent, less than the national unemployment rate of 6.18 percent. Unemployment in Kalimantan Tengah is ranked 9 out of 34 provinces in Indonesia.

In contrast to the previous four indicators that are better than the national indicators, the value of HDI in Kalimantan Tengah is worse than the national HDI. Kalimantan Tengah HDI value of 68.53 while the Indonesian HDI of 69.55. HDI Kalimantan Tengah "only" ranked 21 if compared to other provinces.

Viewed from other indicators, should the value of HDI Kalimantan Tengah can be easily improved. With the increasing rate of economic growth, declining poverty rates, reductions in income inequality and declining unemployment, human development outcomes should have increased by increasing the rate of economic growth, poverty reduction, reductions in income inequality and reductions in unemployment. In reality, the achievement of HDI is actually much lower than other indicators.
Another problem of human development among regency/municipality in Kalimantan Tengah, the value of HDI is increasing. But the increase is not strong enough to raise the rank of HDI in Kalimantan Tengah. HDI Ranking of Kalimantan Tengah in 2015 actually decreased compared to the HDI ranking in 2010. There was a marked difference in the quality of human development between regency/municipality. Palangka Raya Municipality looks very different in quality of human development compared to other regions in Kalimantan Tengah.

The research conducted by Sofilda et al (2013) entitled human development and poverty in the Papua Province found that between poverty and human development occurs a negative relationship that affect each other. Human development can not be separated with poverty, so if you want to build human beings must also be accompanied by poverty alleviation. Yuliati (2012) examines factors affecting HDI for regency/municipality that border on land with other countries. From the regression result, the most significant variables are per capita GRDP, government expenditure on education sector and road infrastructure, while the level of poverty, government expenditure on health sector, the ratio of education personnel at elementary level and the ratio of health personnel have a significantly negative effect. Hamzah et al (2012) conducted research using Indonesia data between 1993 until 2009. The result of economic growth, income per capita, local government expenditure for education sector and dummy of regional autonomy have positive effect while open unemployment rate have negative effect.

The difference of this study with previous research is this study using the new method of HDI calculation with improvements in the indicators of knowledge and changes in calculation methods from arithmetic to geometric. The calculation of new methods began to be implemented by BPS in 2014 by counting backwards from 2010. In addition, the final year of data used is 2015 so the distance between data and research is not too far away. It is expected that faster research results are implemented due to rapid data changes.

**RESEARCH METHODOLOGY**

The type of data used in this study is panel data consisting of 14 regency/municipality in Kalimantan Tengah Province from 2010 to 2015. Selection of the initial year in 2010 due to adjusting the GDP data according to the latest constant prices is from 2010. In addition the calculation of new method methodology calculated by the BPS (Statistic Indonesia) is from 2010. The data used are secondary data obtained from BPS.

The analytical method used in this research used descriptive analysis and econometric analysis using panel data. Descriptive analysis was conducted using tables and graphs to see the development of HDI and the dimensions used in this study. To estimate panel data regression, there are three models of Pooled Least Square (PLS), fixed effect model (FEM) and random effect model (REM). To select one of the three models above is used several tests that are chow test, lagrange multiplier (LM) Breusch-Pagan test and Hausman test. Chow test to determine the use of FEM or PLS, LM test to determine the use of PLS or REM and hausman test to determine the use of REM or FEM.
The mathematical model used in the study as follows:

\[
\text{IPM}_{it} = \beta_0 + \beta_1 \text{Miskin}_{it} + \beta_2 \ln \text{PDRBKAP}_{it} + \beta_3 \ln \text{Sehat}_{it} + \beta_4 \ln \text{Didik}_{it} + \beta_5 \text{DR}_{it} + \beta_6 \text{TPT}_{it} + \beta_7 \text{Dummy} + \varepsilon_{it} \quad \ldots \ldots \ldots \ldots (1)
\]

Where:
- \( \beta_0 \) = intercept
- \( \beta_i \) = Slope variables (i = 1, 2, ..., 7)
- \( t \) = Regencies/Municipalities
- \( \varepsilon \) = Error
- \( \text{IPM} \) = Human development index
- \( \text{Miskin} \) = Poverty rate (percent)
- \( \text{PDRBKAP} \) = Gross domestic product per capita (rupiah)
- \( \text{Sehat} \) = Government local budget according to health function (rupiah)
- \( \text{Didik} \) = Government local budget according by education function (rupiah)
- \( \text{DR} \) = Population dependency ratio (index)
- \( \text{TPT} \) = Open unemployment rate (percent)
- \( \text{Dummy} \) = Dummy (0 for Regencies, and 1 for Palangka Raya Municipality)

The operational definition of the variables used in this study are as follows:

1. The human development index is a three-dimensional composite index of longevity and healthy living, knowledge, and decent living standards, used for the average achievement of human development in a region in percentage units.
2. The poverty rate is the percentage of the population categorized as poor compared with the population. The poor are people who can not meet basic needs. Basic needs are defined as the poverty line, so the poor are those whose average per capita spending per month is below the poverty line.
3. Gross Regional Domestic Product (GRDP) per capita is the average income received by every resident living in a region over a period of time. GRDP per capita is calculated from the GRDP value at current prices divided by the total population.
4. Government local budget according to health function is the amount of government expenditure allocated for health affairs.
5. Government local budget by educational function is the amount of government expenditure allocated for health affairs.
6. Dependency ratio is the percentage comparison between the number of people aged 0 - 14 years old plus the population aged 65 years old above (not working age) compared with the number of population aged 15 - 64 years old (working age).
7. The open unemployment rate is the percentage of the population from the age of 15 years above with open unemployment status divided by the number of labor force in a particular area and time. The population that belongs to the workforce is the working age population (from 15 years and above) working, while not employed and unemployed. Open unemployment consists of unemployed and job seekers, unemployed and preparing businesses, those who are unemployed and not looking for work because they find it impossible to get a job and those who already have a job but have not started working.
8. Dummy is used to distinguish between regencies and municipality in Kalimantan Tengah Province, in this case is the municipality in Kalimantan Tengah there is only one, that is Palangka Raya Municipality.
AN OVERVIEW OF HUMAN DEVELOPMENT INDEX IN KALIMANTAN TENGAH PROVINCE

During the period 2010 to 2015, HDI in Kalimantan Tengah continues to experience positive growth. Although it is always experiencing growth, the value of Kalimantan Tengah HDI is still in the medium category because the value remains between 60 to 70. The highest growth of HDI in Kalimantan Tengah is 2015 at 1.13 percent or 0.76 points. On average, the growth of HDI in Kalimantan Tengah is 0.77 percent annually. Although the value of the Kalimantan Tengah IPM for five years has increased by 2.57 points or 3.90 percent, but the Kalimantan Tengah IPM category is still medium categorized. When viewed from three dimensions of HDI, Kalimantan Tengah has increased in all dimensions.

Dimensions Longevity and Healthy Life

The trend of life expectancy at birth from 2010 to 2015 always increases both national and Kalimantan Tengah. This means that newborns have hope to live longer because of improved health status of an area from infrastructure, access, to health quality. This is also due to the increase in health facilities and infrastructure as well as the increasing public awareness of healthy lifestyles.

The life expectancy of at birth in Kalimantan Tengah in 2010 was 68.98 years. Life expectancy is increasing every year up to 69.54 years in 2015. Avarage within 5 years life expectancy of at birth in Kalimantan Tengah increased by 0.56 years or 0.81 percent increased 0.16 percent each year. Life expectancy of at birth nationwide in 2010 is 69.81 years. Life expectancy is always increasing every year until the year 2015 to 70.78 years.

Dimensions of Knowledge

The dimensions of knowledge used in the calculation of HDI is the aggregation of the expected years of schooling and mean years of schooling. Expected years of schooling and mean years of schooling of the Kalimantan Tengah period from 2010 to 2015 always increase. Mean years of schooling is relatively slower in growth than the expected years of schooling. This is because the mean years of schooling is an indicator of long-term development output while expected years of schooling are an indicator of the development process of short-term education programs. So it is natural that the development mean years of schooling is relatively slow. Both indicators describe the achievement (stock) and the addition (flow) of human resources in a region. The expected years of schooling of children aged 7 and above at Kalimantan Tengah in 2015 is 12.22 years. It shows that children in Kalimantan Tengah have the hope of going to school to finish high school. However, the hope to finish college education is still low, because only 0.22 years in college.

The growth of expected years of schooling in Kalimantan Tengah during the period 2010 to 2015 is 1.13 years (10.19 percent) or 2.04 percent annually. Although every year from 2010 there is always an increase, but the increase is slower than the National, seen in Figure 1. The expected years of schooling children aged 7 years and over in Indonesia pata in 2015 for 12.55 years, meaning that the old school expectations in Kalimantan Tengah are 0.33 years lower. The nationals expected years of schooling always increased from 2010 by 11.29 years. The national average growth expected years of schooling is 2.23 percent. That mean, the average growth of expected years of schooling Indonesia is higher than Kalimantan Tengah. This should be a serious concern of the Local Government at Kalimantan Tengah Province both provincial and regencies/municipality because the
expected years of schooling is one indicator of the process of development of short-term education programs.

The mean years of schooling age of 25 years and above in Kalimantan Tengah in 2015 is 8.3 years. This means that the mean years of schooling age of 25 years and above has not finished junior high school. The achievement of Kalimantan Tengah in 2015 is higher because it has reached the 8th grade, while the National is still in the 7th grade.

Figure 3 Expected Years of Schooling and Expected Years of Schooling in Kalimantan Tengah dan Indonesia (Year), 2010-2015

Source: Badan Pusat Statistik

For 5 years the mean years of schooling in Kalimantan Tengah has increased by 0.41 years or 5.38 percent. The average annual growth mean years of schooling is 1.08 percent annually. The mean length of schooling population aged 25 years and above the National in 2015 is 7.84 years. Within 5 years has increased by 0.38 years or 5.09 percent. The mean growth in school duration rose 1.02 percent annually. The mean growth of school duration in Kalimantan Tengah is higher than National growth. From 2010-2015 data trends, there is a slowdown in growth in Kalimantan Tengah in 2014, while the National level is slowing down in 2014.

Of the four indicators of the compilers of HDI, only the mean years of schooling indicator that the value of Kalimantan Tengah is higher than the national rate. The mean years of schooling index is the smallest composite index for HDI, both for provinces and regencies and municipality in Kalimantan Tengah. With the higher mean years of schooling index value in Kalimantan Tengah, it is expected that the Kalimantan Tengah HDI value can increase faster.

Eligible Living Standard Dimensions

Dimensions The standard of living is eligible to be represented by a customized per capita expenditure indicator. The per capita expenditure used is by the base year of 2012 which has been adjusted between regions in Indonesia.

In 2015, the expenditure per capita of Kalimantan Tengah reaches Rp 9,809,463 per year. Over the past five years, per capita expenditure has always increased as shown in the figure above. For 5 years per capita expenditure has increased by Rp 552,004 or Rp 110,400 per year. National per capita expenditure in 2015 is Rp 10,149,672. The per capita expenditure...
adjusted in Indonesia has increased year by year. During the last five years per capita expenditures increased by 1.51 percent.

The relationship between HDI value and HDI rate at the regency/municipality level in Kalimantan Tengah is shown in Figure 2. The analysis used is Quadrant analysis. Analyst The vertical line at the HDI value is the average value of the regency / municipality HDI in Kalimantan Tengah Province while the horizontal line is the average rate of HDI.

Quadrant I describes a region with an above average HDI with an HDI rate well above average. The regency/municipality that enter the first quadrant in 2011 only Lamandau Regency. Although the HDI value of Lamandau Regency is only slightly above average, it can show that Lamandau Regency has high HDI value and tends to increase the value of HDI. In 2015 change Gunung Mas Regency in quadrant I. Means in 2015 Gunung Mas Regency has a high HDI value and tend to increase the value of HDI.

Figure 4 HDI Value dan Rate Regency and Municipality in Kalimantan Tengah Province, 2011 and 2015

Source: Badan Pusat Statistik


18th Malaysia Indonesia International Conference on Economics, Management and Accounting (MIICEMA)
October 4-5, 2017 – IPB International Convention Centre, Bogor Indonesia
The regency/municipality in quadrant II have high HDI values but have a slow rate of HDI. Regencies/municipality in quadrant II may still increase the rate of HDI if the increase in HDI value can be higher. In 2011 that went into the second quadrant of Palangka Raya, Kotawaringin Barat, Gunung Mas and Barito Timur regencies. In the year 2015 that entered in the second quadrant of Palangka Raya, Kotawaringin Barat, Kotawaringin Timur, and Barito Timur regencies. Kotawaringin Timur Regency has increased from Quadrant III to Quadrant II, as well as Gunung Mas District increased from Quadrant II to Quadrant I in 2015.

Quadrant III is a region with low HDI value with low HDI rate as well. It needs a hard effort to increase the value of HDI in this quadrant. In 2011, the regency/municipality located in the third quadrant are Kotawaringin Timur Regency, Barito Utara Regency, Sukamara Regency and Pulang Pisau Regency. Barito Utara Regency and Seruyan Regency between quadrant III and IV because the rate of HDI is in the average regencies/municipality of Kalimantan Tengah. In 2015, the third quadrant is Lamandau Regency, Kapuas Regency, Pulang Pisau Regency and Murung Raya Regency.

The regencies / municipality in quadrant IV have high HDI rates, but the HDI scores are lower than the average. With a high growth rate it is possible for these regencies to continue to increase the value of HDI by utilizing all available resources to catch up with the regency/municipality with higher HDI values. In 2011, the regency/municipality that entered in the IV quadrant are Kapuas, Katingan and Murung Raya Regencies. In the year 2015 which entered quadrant IV that is Barito Selatan Regency, Barito Utara Regency, Sukamara Regency and Seruyan Regency.

HDI in 2011 looks more clustered approaching to quadrant III. The regencies that enter quadrant III indeed there are only four regencies, but there are six regencies that are close to quadrant III. The value of HDI in 2015 looks more spread and no longer grouped close to quadrant III. There is an improvement of the spread of HDI values.

Palangka Raya Municipality is seen to have a much higher HDI value compared to other regencies in Kalimantan Tengah, seen in Figure 2. Despite having a slow rate of HDI, but the HDI Palangka Raya Municipality scores have not been able to be pursued by other regencies. The second rank up to the rank of four values of HDI did not change from 2011 until 2015 ie successively Kotawaringin Barat Regency, Barito Timur Regency and Gunung Mas Regency.

Seruyan Regency and Pulang Pisau Regency are the regencies that need attention because they have low value and low HDI rate. Seruyan Regency in 2011 until 2015 always has the lowest HDI value when compared with the value of HDI regencies/municipalities in Kalimantan Tengah. Although the rate of HDI Seruyan Regency has been good in 2015, this should still be a serious concern for local governments, both Kalimantan Tengah and Seruyan. Stronger work is required for the Seruyan Regency HDI scores to increase faster.
The regency/municipality that still remain in the 3rd quadrant in 2011 and 2015 are just Pulang Pisau Regency. Low HDI scores with low rates also make the HDI rating of Pulang Pisau Regency decrease. In 2011 the ranking of HDI Pulang Pisau Regency is on the order of 11 while in 2015 already in the rank 13. There needs to be a development evaluation in Pulang Pisau Regency which causes the value of HDI decreased.

**Table 3 Compiler of Regencies/Municipalities HDI at Kalimantan Tengah, 2015**

<table>
<thead>
<tr>
<th>No</th>
<th>Regencies/ Municilities</th>
<th>Life Expectancy at Birth Index</th>
<th>Expected Years of Schooling Index</th>
<th>Mean Years of Schooling Index</th>
<th>Eligible Living Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kotawaringin Barat</td>
<td>77.04</td>
<td>67.37</td>
<td>53.40</td>
<td>75.65</td>
</tr>
<tr>
<td>2</td>
<td>Kotawaringin Timur</td>
<td>76.17</td>
<td>66.94</td>
<td>51.34</td>
<td>71.70</td>
</tr>
<tr>
<td>3</td>
<td>Kapuas</td>
<td>74.46</td>
<td>64.69</td>
<td>46.30</td>
<td>69.81</td>
</tr>
<tr>
<td>4</td>
<td>Barito Selatan</td>
<td>71.51</td>
<td>66.64</td>
<td>57.28</td>
<td>71.83</td>
</tr>
<tr>
<td>5</td>
<td>Barito Utara</td>
<td>78.47</td>
<td>63.86</td>
<td>55.55</td>
<td>65.29</td>
</tr>
<tr>
<td>6</td>
<td>Sukamara</td>
<td>78.83</td>
<td>64.18</td>
<td>52.05</td>
<td>62.18</td>
</tr>
<tr>
<td>7</td>
<td>Lamandau</td>
<td>75.57</td>
<td>69.04</td>
<td>51.20</td>
<td>70.13</td>
</tr>
<tr>
<td>8</td>
<td>Seruyan</td>
<td>75.20</td>
<td>64.24</td>
<td>49.69</td>
<td>63.42</td>
</tr>
<tr>
<td>9</td>
<td>Katingan</td>
<td>69.66</td>
<td>66.85</td>
<td>57.45</td>
<td>68.88</td>
</tr>
<tr>
<td>10</td>
<td>Pulang Pisau</td>
<td>73.29</td>
<td>67.56</td>
<td>50.63</td>
<td>65.66</td>
</tr>
<tr>
<td>11</td>
<td>Gunung Mas</td>
<td>76.75</td>
<td>63.57</td>
<td>59.51</td>
<td>70.27</td>
</tr>
<tr>
<td>12</td>
<td>Barito Timur</td>
<td>73.40</td>
<td>68.39</td>
<td>60.10</td>
<td>71.83</td>
</tr>
<tr>
<td>13</td>
<td>Murung Raya</td>
<td>75.71</td>
<td>64.95</td>
<td>49.05</td>
<td>68.01</td>
</tr>
<tr>
<td>14</td>
<td>Palangka Raya</td>
<td>81.49</td>
<td>82.76</td>
<td>71.60</td>
<td>77.27</td>
</tr>
</tbody>
</table>

Source: Badan Pusat Statistik

Increase in HDI can be seen from its compilers index. For the index that already high should be maintained, while the index is still low can be further improved. The HDI constituent index is the life expectancy index, expected years of school index, mean years of schooling, and eligible life index obtained from each indicator. The life expectancy index is already high because of the value above 70 except Katingan Regency, even Palangka Raya Municipality has index more than 80. The expected years of schooling index value is more homogeneous except Kota Palangka Raya worth 82.76. The mean years of school index has the most varied values between 46.30 for Kapuas Regency up to 71.60 for Palangka Raya Municipality. The eligible life index is worth between 62.18 for Sukamara Regency up to 77.27 for Palangka Raya Municipality.

The regencies/municipalities in Kalimantan Tengah have an average low mean years of schooling index. To increase the value of HDI, it is necessary to increase the mean years of schooling in Kalimantan Tengah. By calculating the HDI of new methods using geometry averages, the low performance of one composite index will decrease the value of HDI. The mean year of school is a long-term program, it needs a sustainable development of education. This should be a serious concern for the Provincial, Regencies and Municipalities Government at Kalimantan Tengah Province.
**Best Model Selection and Classic Assumption Test**

Random effects Methods (REM) were used in this study. The Hausman test is worth 0.4019 which shows the REM model both from the FEM model. LM test shows reject H₀ because the probability value of 0.0000 means intercept is a random variable. Chow test in this study can not be produced because there are dummy variables that make the matrix is not singular.

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Pagan LM Test</td>
<td>0.0000</td>
</tr>
<tr>
<td>Housman Test</td>
<td>0.4019</td>
</tr>
<tr>
<td>Chow Test</td>
<td>-</td>
</tr>
<tr>
<td>Probability Sum squared resid</td>
<td>355.5829</td>
</tr>
<tr>
<td>(Unweighted)</td>
<td></td>
</tr>
<tr>
<td>Probability Sum squared resid</td>
<td>8.5757</td>
</tr>
<tr>
<td>(Weighted)</td>
<td></td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>0.7081</td>
</tr>
<tr>
<td>Probability Jarque-Bera</td>
<td>0.7018</td>
</tr>
</tbody>
</table>

Source: *E-views 9 Output*

The Sum Square Resid in Weight Statistic is greater than Sum Square Resid at Unweight Statistic which means no heteroscedasticity occurs. Normality test results show that the residual data have normal distribution because Jarque-Bera probability value is 0.7 (> 0.05). Multicollinearity test results are shown in Appendix 1. From the value of correlation between residues between variables no higher than 0.8. So there is no indication of multicollineiritas.

**MODEL INTERPRETATION**

The results of data processing using E-views 9 software using random effects model as in Table 4. The coefficient of determination (R²) model of 0.9076 which means 90 percent of the dependent variable can be explained by the diversity of independent variables. The probability value of the F-statistic model of α value less than 5 percent indicates the independent variables used in collectively able to explain the dependent variable.

The independent variables that significantly influence the value of human development index in Kalimantan Tengah Province at the real level of 5 percent are percentage of poverty, GDP per capita, budget government allocation for health, dependency ratio and open unemployment rate. The variable of budget government allocation for education does not significantly affect the HDI of Kalimantan Tengah.

Poverty has a significant effect on the human development index because it has a probability of 0.0294. The value of poverty percentage regression coefficient is -0.192. From the results of the coefficient states that in cateris paribus condition, if the percentage of poverty decreased by 1 percent, then the average index of human development will rise by 0.192 points. This result is in accordance with previous research by Sofilda et al (2013) that poverty and human development index have a different simultaneous relationship direction. Poverty has an influence on the human development index in all dimensions.
The per capita GRDP becomes an independent variable that partially has a significant influence on human development index. Significance can be seen from the probability value t-statistic value of 0.0078. The coefficient value of the influence of GRDP per capita to the HDI of 3.392, mean if the GRDP per capita rose by 1 percent, then the HDI will increase by 3,392 points. The results of this study are in accordance with the research of Sa’diyah (2014) which shows the GRDP per capita has a positive and significant relationship to the human development index in Nusa Tenggara Barat. The value of significance is the highest value to influence the human development index in this study. This may be due to the increase in per capita output of a region not only affecting one's income, but there is a multiplier effect where health and education also increase so as to increase human development.

The agricultural sector is still dominant in Kalimantan Tengah. In 2015 the share of agricultural sector by 22.84 percent with a growth of 5.32 percent. The next largest share is the manufacturing industry sector of 16.15 percent. The two highest sectors are sourced from the same upstream of oil palm plantations (BPS Kalteng Province, 2016). The annual plantation sub-sector dominates the share in the agricultural sector and the head of the palm commodity dominates the annual plantation sub-sector. The processing industry sector is dominated by Crude Palm Oil (CPO) industry and its derivatives. CPO is a derivative industry of palm oil products

Palm oil commodities have dominated the economy in Kalimantan Tengah. Plantation activities produce fresh fruit bunches (FFBs) that increase the added value of agriculture, forestry and fishery sectors. FFBs is processed through industrial processes to produce CPO before it can be traded. The phases of CPO making produce added value in manufacturing industry sector of the food and beverage industry sub sector. Although CPO is still a raw product but has produced two outputs that drive the economy. To produce final products such as cooking oil, fuel and CPO cosmetics still need further rejection. The cooking oil industry is only one in Kalimantan Tengah (BPS Prov. Kalteng, 2016), so there is still a lot of CPO to be brought out of Kalimantan Tengah.
The area of oil palm plantation in 2015 has increased by 133.88 percent compared to 2006 (Figure 3). If the CPO produced from plantations in Kalimantan Tengah can be processed into the final product before being brought out of Kalimantan Tengah, it will increase the GRDP of Kalimantan Tengah. The added value generated by the industrial sector is higher than the agricultural sector, therefore it is necessary to add the final industries of oil palm derivatives such as cooking oil, fuel or cosmetics in Kalimantan Tengah. CPO prices in the market often experience ups and downs, with the final industry in Kalimantan Tengah will stabilize prices at small farmers' level as their output will remain absorbed by the local industry.

**Figure 5 Area Palm Oil Trees in Kalimantan Tengah Province, 2006-2015**

![Area Palm Oil Trees in Kalimantan Tengah Province, 2006-2015](image)

Source: BPS Provinsi Kalimantan Tengah

To increase the GRDP of palm oil commodities can use the palm oil industry clusters. With the industrial clusters will increase the commodity of palm oil from upstream to downstream. Upstream industries such as fertilizer and seed industries will be used by oil palm plantations. Downstream industries such as final industrial processing not only to CPO. Other sectors that can be developed from oil palm are trading, feeding beef cattle, education and tourism.

The trade sector may increase as the value if the commodities traded out of the region is higher too. The livestock sector GRDP is rising as the pattern of cattle palm integration is encouraged. Beef cattle will eat the remaining FFBs from the CPO and plantation industries get additional manure. In addition, the integration of cattle palm can increase the number of cows in Indonesia so that it can help the government program in meat self-sufficiency. From the education sector can be established research center of palm oil from upstream to downstream. Besides, it can also established colleges that focus on palm oil commodities. The tourism sector can advance because if well managed oil palm plantations can be an attractive tourist attraction. The final result of increasing GRDP is to increase the Human Development Index in Kalimantan Tengah Province, because HDI is also an indicator of development.
Local government budget are basically fiscal policies undertaken by provincial and regencies/municipalities governments. In this study there are two types of fiscal policy obtained from budget by function, namely health and education function. Local government budget regression coefficient for health allocation is 0.768 with t-statistic probability value is 0.0007. Statistically, local government budget allocation for health has significant effect to human development index in Kalimantan Tengah. Under cateris paribus conditions, if the local government budget allocation for the health sector increased by 1 percent, the human development index in Kalimantan Tengah will increase by 0.768. The allocation of local government budget for the education sector did not significantly affect HDI in Kalimantan Tengah because it had a t-statistical probability value of 0.3257. This is probably because education policy is a long-term policy. So that the increase of budget allocation in the education sector can not be directly enjoyed by the improvement of education. For example there is a school construction, can not directly graduate students in the year concerned. There is a lag (time) between the increase in local government budget allocation of education sector with the achievement of human development. This is certainly with the allocation of local government budget for the health sector that can be directly seen the results on human development. Further studies are needed on the effectiveness of the local government budget for the education sector.

The dependency ratio has a significant negative effect on human development index in Kalimantan Tengah. This result can be seen from regression coefficient value equal to -0.287 with t-statistic probability value 0.0000. This means a decrease in dependency ratio of 1 point will increase the value of human development by 0.287 points. This is in accordance with research by Pratowo (2012) which states the dependency ratio has a negative influence on human development index in Jawa Tengah Province.

The open unemployment rate on the estimation results, has a positive and significant coefficient because it has a t-statistical probability of 0.0007. This result is different from the original hypothesis and previous research conducted by Hamzah et al (2012) which

Figure 6 The Number of Unemployment who have completed education in the junior high school above in Kalimantan Tengah, 2011-2015

Source: BPS Prov. Kalteng

The open unemployment rate on the estimation results, has a positive and significant coefficient because it has a t-statistical probability of 0.0007. This result is different from the original hypothesis and previous research conducted by Hamzah et al (2012) which
states the relationship between the unemployment rate and the human development index is negative. This may be due to an increase in educated unemployment in Kalimantan Tengah.

With the increase in the mean years of schooling, will increase the value of HDI. But this is not followed by the absorption of manpower, so the unemployment of junior-educated upwards is increasing. The problem of labor conditions in Indonesia, including in Kalimantan Tengah, is the low quality of work skills in understanding the descriptions of work tasks desired by labor users (Damanhuri et al, 2014). Low skills indicate a gap between educational curriculum and labor absorbent agency needs. This becomes a serious issue of employment in Kalimantan Tengah for the higher the level of education, the easier it is to get a job. The short-term solution is to conduct training in order to improve community skills. Long-term solution by improving the education curriculum consistently and continuously.

The dummy variable shows significant partially because it has a t-statistical probability value of 0.0003. During 2010-2015 Palangka Raya Municipality has statistically different HDI value compared to other region in Kalimantan Tengah Province. With coefficient of 8,918 means that the value of HDI Palangka Raya Municipality is higher by 8,918 compared to other region in Kalimantan Tengah Province.

In Figure 5, the number of doctors among general doctors, specialist doctors, and dentist in Palangka Raya Municipality has a very large number when compared with other areas in Kalimantan Tengah with a total of 204 doctors. The highest number of doctors is Kowaringin Barat and Kotawaringin Timur regencies with 81 and 80 doctors each. It is apparent that there is an imbalance of doctor placement in Kalimantan Tengah. Of course this can make the degree of public health in the municipality and regencies can be different. Moreover, the distance between regencies in Kalimantan Tengah is far apart, making access to physicians more difficult. Breakthroughs are needed from policy makers to resolve them.

**Figure 7 Number of Doctor dan Capacity of Hospitals by Regencies/Municipalities in Kalimantan Tengah, 2014**

Source : BPS Prov. Kalteng
“Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives”
In terms of education, there is an imbalance in the number of universities located in Palangkaraya Municipality as shown in Table 5. Of the 35 universities active in Kalimantan Tengah, almost half or 45 percent are in Palangka Raya Municipality. Of the total number of students, 78.70 percent of the total number of students is in Palangka Raya Municipality. This can cause the value of HDI Palangka Raya Municipality to be higher than other region in Kalimantan Tengah Province.

CONCLUSION

Based on the results of research that has been done then obtained the following conclusions:

1. Kalimantan Tengah HDI is increasing from 2010 to 2015. Although it is up, the Kalimantan Tengah HDI category is still in the medium category.

2. Three Kalimantan Tengah indicators are smaller than the national indicators of life expectancy at birth, expected years of schooling and adjusted per-capita spending. There is only one indicator of HDI HDI Kalimantan Tengah that is higher than the national figure is the mean years of schooling.

3. The estimation result using panel data random effect model (REM) shows that per capita GDP, local government budget for health, open unemployment rate and dummy of regencies/municipalities have significant and positive influence. Poverty and dependency ratios have a significant and negative influence. A significant non-significant variable in HDI in Kalimantan Tengah is local government budget for education sector.

SUGGESTION

1. Development of palm oil industry clusters from upstream to downstream. In the cluster there is an increase of GRDP from fertilizer industry, palm oil final industry, trade, beef cattle breeding, research and tourism center.

2. Increased government budget for health sector annually and sustainable.

3. The higher open unemployment for junior secondary school indicates low skills and gaps between educational curriculum and labor absorbent agencies. The short-term solution is to conduct training to improve community skills and the long-term solution is improve the education curriculum in Indonesia.

4. Required equality of placement of doctors and college for human development not only in the provincial capital. In addition, the allocation of government budget for education needs to be reviewed its effectiveness to be more targeted.

5. Mean years of schooling should be improved because in the calculation of geometric averages into the burden of calculating HDI. Especially for Seruyan Regency and Pulang Pisau Regency to be able to pursue the value of HDI with other regions in Kalimantan Tengah.

6. The use of variables in this study is still less touched operational policies that can be implemented by the government. It is expected that further research can include more operational variables. A further study of the effectiveness of government budget for the education sector in relation to the HDI score is needed.
REFERENCES


BPS Provinsi Kalimantan Tengah. berbagai tahun. *Kalimantan Tengah dalam Angka*. BPS.


Appendix 1 Result of Multicollinearity Test

<table>
<thead>
<tr>
<th></th>
<th>MISKIN</th>
<th>LNPDRBKAP</th>
<th>LNSEHAT</th>
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<th>DR</th>
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<th>DUMMY</th>
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Appendix 2 Result Random Effect Model (REM) Estimation

Dependent Variable: IPM
Method: Panel EGLS (Cross-section random effects)
Date: 01/10/17   Time: 21:33
Sample: 2010 2015
Periods included: 6
Cross-sections included: 14
Total panel (balanced) observations: 84
Swamy and Arora estimator of component variances

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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CAUSALITY ANALYSIS OF PRODUCER PRICE INDEX (PPI) AND CONSUMER PRICE INDEX (CPI) IN INDONESIA

Debby Anggraeni  
Graduate School of Economics, Bogor Agricultural University

Tony Irawan  
Department of Economics, Bogor Agricultural University

ABSTRACT

This study aims to investigate the relationship between PPI inflation and CPI inflation in Indonesia both in general and for each group of commodity, and to identify whether PPI inflation can be a leading indicator for CPI inflation or vice versa. This study employs Granger causality based on VAR model for monthly data series from January 2010 until August 2016. The results show that there are unidirectional relationship between PPI inflation and CPI inflation generally, bidirectional relationship from PPI inflation to CPI inflation for foodstuffs group, unidirectional from CPI inflation to PPI inflation for clothing group, and no causality between PPI inflation and CPI inflation for processed food, beverage, cigarette, and tobacco group.

Keywords: producer price index, consumer price index, VAR, Granger causality.

JEL classification: E31, C22
INTRODUCTION

The price index is an instrument used to measure price changes from one period to another. Price changes at producer and consumer level can be evaluated through the calculation of the price index, i.e., Producer Price Index (PPI) and Consumer Price Index (CPI). PPI measures price changes received by domestic producers for the goods and services they produce, so it is used to measure the price level that occurs at the producer level, while CPI is composed of the price of goods and services consumed by the public, and it is an indicator used to measure inflation (BPS 2015).

There are two approaches in looking at the relationship between PPI and CPI, namely the approach of supply and demand. On the supply side, changes in raw materials prices affect the price change of intermediate and final products. As a result, it will affect the consumer prices (Rogers in Yin and Xuan 2013). Therefore, PPI affects CPI. So, if there is a shock to the producer price, it will affect the consumer price, consequently PPI will affect CPI.

On the demand side, changes in demand in the final products will affect the change in input prices as production cost since the producer's price actually covers the overall cost of production determined by the pull of demand that affects resource costs because it depends on consumer prices (Colclough and Lange 1982). So that, shocks to consumer prices will affect the producer prices, consequently CPI affects PPI.

The relationship between PPI and CPI is still a controversial issue in empirical studies. There are 3 (three) types of relationships that can be inferred from previous studies, namely one-way relationship (unidirectional), bidirectional relationship, and no relationship (Akcay, 2011). Studies on the relationship between PPI and CPI have been conducted in different countries with different results. Ghazali et al. (2008) found that there is a long-term relationship between PPI and CPI, as well as the PPI's one-way relationship to CPI. Caporale et al. (2012) also found a one-way relationship of PPI to CPI in France and Denmark, a two-way relationship for Italy, and no relationship between PPI and CPI for Canadian case studies using Toda and Yamamoto (1995) tests. The unidirectional relationship of CPI to PPI in the US was found by Colclough and Lange (1982) using the Granger causality test. While Clark (1995) and Blomberg and Haris (1995) found that PPI does not significantly affect CPI in the future.

The relationship between PPI and CPI is an important issue for policy makers. If producer prices affect consumer prices, the information on producer prices can provide valuable predictions about consumer prices and policy makers can identify the cost-push shocks that can be used to forecast consumer price inflation (Tiwari 2012). Similarly, if consumer prices affect producer prices, the information on consumer prices can provide valuable predictions about producer prices and policy makers can identify the demand-pull shocks that can be used to forecast producer price inflation.

Research Problems

Inflation can be interpreted as an increase in the price level of goods in general (Mankiw 2006). Inflation is one of the most anticipated indicators to measure overall economic welfare. For the general public, inflation affects welfare because it affects purchasing power; and for the business world, the rate of inflation is an important factor in making decisions. Therefore, inflation has always been a concern of the government in formulating and implementing economic policies for the improvement of people's welfare (Utari et al., 2015).
Inflation is one of the important indicators in an economy that needs to be maintained its stability. According to Galodikwe (2014), inflation can weigh the cost of real economic output, so the price mechanism is difficult to use as a tool for efficient allocation of resources. The cost may be higher for developing countries than developed countries because inflation in developing countries is still relatively high compared to developed countries, so for countries whose incomes are still low trying to avoid the cost of rising prices and inflation including other changes, such as interest rates. It is important to see which inflation has an effect on the economy so as to clarify policy makers to mitigate the negative effects of the economy and the welfare costs of rising inflation (Chowdury, 2014).

Economists argue that PPI can be used as an important indicator in predicting consumer inflation in the future, as changes in prices paid by producers (cost changes) can lead to a change in the price paid by consumers, so it is important to look at the relationships of both indices (Galodikwe, 2014).

As noted above, the relationship between PPI and CPI is still a controversial issue, as there are also international studies that find the fact that the relationship between PPI and CPI is weak, such as Clark (1995) and Blomberg and Haris (1995) who found that PPI do not significantly affect the CPI in the future. In addition, during 2007-2009, 24 central bank publications were found, of which only 19 mentioned the PPI, and only 6 referenced the PPI as an indicator of inflation (Sidaoui et al. 2009).

Research on whether there is a relationship between PPI and CPI in Indonesia has been done by Yin and Xuan (2013) who examine the relationship between PPI and CPI in some countries including Indonesia. The study used PPI and CPI monthly data from 1980 to 2012 from International Financial Statistics (IFS). The PPI data used in the study is the data of the Big Trade Price Index (PPIB) instead of the Producer Price Index (PPI) data, as the PPI in Indonesia is only published in October 2013 with the data series starting in 2010.

Studies on the relationship between PPI and CPI have been conducted in many countries, but not many countries see the relationship between PPI and CPI based on commodity groups from each index. So this study tries to elaborate the relationship between PPI and CPI both in general, and for each commodity group, where the determination of this commodity group is based on identical commodities between the two commodity packages composing the index.

Based on the description above, the formulation of the problem that can be stated is how the causality relationship between PPI inflation and CPI inflation both in general and for each group, and whether the PPI can be a leading indicator for the CPI or vice versa?

THEORETICAL AND EMPIRICAL FRAMEWORK

The Relationship between PPI and CPI

In looking at the relationship between PPI and CPI, there are 2 (two) different approaches namely the supply and demand approach. On the supply side, PPI and CPI are linked by the production chain, where raw materials are used as inputs in the production of intermediate products which will be used in the production of final products. Changes in the price of raw materials will affect the price of intermediate products and final products that ultimately affect the consumer prices (Clark 1995). On the demand side, according to Colclough and Lange (1982), changes in demand for consumer goods affect input costs-production costs.
Production costs reflect the opportunity cost of intermediate products and resources which will reflect the demand for final products and services (Caporale et al., 2012).

Cushing and McGarvey (1990) assumed that demand for primary goods depends on future consumer price expectations. This assumption indicates that current demand and expectations of current demand in the past determine the consumer prices, and future demand expectations determine the producer prices. Demand for the final products has an impact on input prices. Therefore, CPI affects PPI.

Clark (1995) stated that the production chains linking PPI and CPI are weak. PPI changes can sometimes predict CPI changes but fail to systematically predict. Ghazali et al. (2008) in Malaysia, found that there is a long-term relationship between CPI and PPI, and there is a one-way relationship from PPI to CPI. In Mexico, it was found that PPI has an important relationship in predicting CPI inflation (Sidaoui et al., 2009). Galodikwe (2014) found a positive relationship between PPI and CPI in South Africa, which means that changes to PPI can significantly affect CPI changes.

According to the study conducted by Akcay (2011) and Tiwari (2012), there are 4 (four) possible relationships between PPI and CPI. There is no relationship, two-way relationship, one-way relationship of PPI to CPI, and one-way relationship of CPI to PPI.

The scope between PPI and CPI is different which lies in price, weighing, compilation method, and base year. To overcome these differences, researchers used changes in both indices and inflation values to see the relationship between PPI and CPI. In addition, the coverage of commodity groups between PPI and CPI is also different. PPI covers only 3 (three) major sectors namely agriculture, mining and quarrying, and processing industries. While CPI is grouped into seven groups, namely i) foodstuffs; ii) processed food, beverages, cigarettes, and tobacco; iii) housing, water, electricity, gas and fuel; iv) clothing; v) health; vi) education, recreation, and sport; and vii) transportation, communications and financial services (BPS 2015). So to adjust between PPI and CPI, as well as to see which groups have the greatest influence on inflation, we formed a new group on PPI containing commodities identical to CPI. The adjustable groups are foodstuffs, processed food, beverages, cigarettes, and tobacco, and clothing groups.

**Previous Studies**

Research on causality relationship between producer price index and consumer price index has been done in many countries. Among them, Akcay (2011) examined the causal relationship between PPI and CPI for 5 (five) countries in Europe using monthly data (processed) from August 1995 to December 2007. His research resulted in a one-way causal relationship between PPI and CPI in Finland and France, and there is a two-way / mutually influential relationship between the two indices in Germany. For the Netherlands and Sweden, no significant relationship was found.

Research by Ulke and Ergun (2013) resulted in a long-term one-way relationship of CPI to PPI in Turkey and a linear one-way long-term causality relationship between the variables. While the results of Granger causality does not indicate a short-term causality relationship. In Mexico, it was found that PPI has an important relationship in predicting CPI inflation (Sidaoui et al., 2009).
Another study by Tiwari and Shahbaz (2010) which examined the causality relationship between PPI and CPI showing the results that the variables cointegrated over the long term, indicating that the variables would change together. In his research also found that there is a two-way causal relationship between PPI and CPI both in the short and long term. Furthermore, it is found in forecasting analysis that in India, PPI can be an early indicator for CPI, which means that PPI is determined by market forces and become leading indicator for consumer price and inflation.

Clark (1995), Blomberg and Haris (1995) found that PPIs do not significantly affect CPI in the future. Clark (1995) pointed out that the production chains that link PPI and CPI are weak. PPI changes can sometimes predict CPI changes but fail to systematically predict them.

Yin and Xuan (2013) examined the cointegration relationship between PPI and CPI by using Granger causality analysis. Based on the study, it is found that there is a two-way relationship in the countries of Canada, Denmark, Indonesia, Japan, Pakistan and Uruguay, while in Spain, it is found that there is a one-way relationship from CPI to PPI. In Indonesia, we have not found any research on the causality relationship between producer price index and consumer price index, so this becomes a new research in Indonesia.

**Empirical Framework**

There are 2 (two) approaches in looking at the relationship between PPI and CPI, namely supply side and demand side (Akcay 2011). On the supply side, changes in raw product prices affect the price change of intermediate and final products, as a result, it will affect the consumer prices (Rogers in Yin and Xuan 2013). On the demand side, changes in demand in the final products will affect the change in input prices as production costs, since the producer’s price actually covers the overall cost of production determined by the pull of demand that affects resource costs because it depends on consumer prices (Colclough and Lange 1982). So that, shocks to consumer prices will affect the producer price, consequently CPI affect PPI.

This study will examine whether there is a causal relationship between PPI and CPI and whether PPI can be a leading indicator for CPI or vice versa. The flow of thought that will be used in this research can be seen in Appendix 1.

**RESEARCH METHOD**

The data used in this research is secondary data in the form of time series. The PPI and CPI data and their seven groups are obtained from BPS. The data used is monthly data from January 2010 to August 2016. The analysis method used in this study is VAR analysis with Granger causality test. VAR analysis is used to see the causality relationship between PPI inflation and CPI inflation both in general, and for each commodity group.

The VAR model assumes that all economic variables are interdependent with others. Enders (2004) explained when the researcher does not have the certainty to determine that a variable is exogenous, then an expansion of natural displacement function analysis will treat each variable symmetrically. Based on previous explanation and previous research, it is assumed that there is causality relation between each variable, so the equation estimation using Vector Auto Regression (VAR) from the variables used in this research can be written as follows:
The relationship between general PPI and general CPI

\[ IHP_{\text{UMUM}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHP_{\text{UMUM}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHK_{\text{UMUM}}_{t-i} + \varepsilon_t \]

\[ IHK_{\text{UMUM}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHK_{\text{UMUM}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHP_{\text{UMUM}}_{t-i} + \varepsilon_t \]

b) The relationship between PPI of Foodstuffs and CPI of Foodstuffs

\[ IHP_{\text{BM}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHP_{\text{BM}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHK_{\text{BM}}_{t-i} + \varepsilon_t \]

\[ IHK_{\text{BM}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHK_{\text{BM}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHP_{\text{BM}}_{t-i} + \varepsilon_t \]

c) The relationship between PPI of Processed food, Beverages, Cigarettes and Tobacco and CPI of Processed food, Beverages, Cigarettes and Tobacco.

\[ IHP_{\text{MMRT}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHP_{\text{MMRT}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHK_{\text{MMRT}}_{t-i} + \varepsilon_t \]

\[ IHK_{\text{MMRT}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHK_{\text{MMRT}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHP_{\text{MMRT}}_{t-i} + \varepsilon_t \]

d) The relationship between PPI of Clothing and CPI of Clothing

\[ IHP_{\text{SDG}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHP_{\text{SDG}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHK_{\text{SDG}}_{t-i} + \varepsilon_t \]

\[ IHK_{\text{SDG}}_t = \beta_{10} + \sum_{i=1}^{P} \beta_{1i} IHK_{\text{SDG}}_{t-i} + \sum_{i=1}^{P} \alpha_{1i} IHP_{\text{SDG}}_{t-i} + \varepsilon_t \]

Where each variable is defined as general PPI inflation (PPI_UMUM), general CPI inflation (CPI_UMUM), PPI_BM inflation, foodstuffs CPI inflation (CPI_BM), PPI inflation of processed food, beverage, cigarette and tobacco (PPI_MMRT), CPI inflation of processed food, beverages, cigarettes and tobacco (CPI_MMRT), PPI Inflation of clothing (PPI_SDG), and CPI Inflation of clothing (CPI_SDG).

RESULT AND DISCUSSION

Stationarity Test

The first stage performed in VAR analysis before analyzing the model is to test the stationarity of the data for each variable used because most of the time series data has a unit root. The test is performed on each variable to be included in the model and the data entered is in the form of change of value of each index (inflation value). Test results of all variables at the level using Augmented Dicky Fuller (ADF) test are presented in the following table.

<table>
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<tr>
<th>Variable</th>
<th>Level</th>
<th>Probability</th>
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<td>CPI_SDG</td>
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<td>PPI_SDG</td>
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</table>
Lag Optimal Test

Optimal lag determination becomes very important in VAR because the independent variable used is the lag of the endogenous variable. To obtain optimal lag, it can be used Akaike Information Criterion (AIC), Schwarz Information Criterion (SC) and Hannan-Quinn Information Criterion (HQ). The size of the selected lag is the lag that produces the smallest AIC, SC or HQ.

Lag length selection is important because it can affect the acceptance and rejection of the null hypothesis, resulting in estimation bias and can produce inaccurate predictions. The optimal lag length selection in the var model is mainly to avoid the occurrence of serial correlation between error term with endogenous variable in the model which can cause the estimator to be inconsistent. The longer the lag used will reduce the degree of freedom and the amount of observation, whereas too short lag will produce wrong specification (Gujarati, 2009).

Table 2 Lag Optimum

<table>
<thead>
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<th>Lag</th>
<th>AIC (PPI-CPI (Umum))</th>
<th>AIC (PPI-CPI (BM))</th>
<th>AIC (PPI-CPI (MMRT))</th>
<th>AIC (PPI-CPI (SDG))</th>
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</tr>
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<td>1.660414</td>
<td>5.699700</td>
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<td>6.196306</td>
<td>1.768988</td>
<td>5.738978</td>
</tr>
</tbody>
</table>

*) The smallest AIC value

Impulse Response Function (IRF) Analysis

The impulse response function describes the rate of shock of one variable to another variable over a period of time. So it can be seen the effect of the shock of a variable on another variable until the influence is lost or return to the point of balance. With impulse response, we can track the response of endogenous variables within the VAR system due to shocks or changes in the interference variable / ε (Widarjono 2016).

Based on IRF results above, it can be seen that generally when there is a good shock on consumer price inflation and producer price inflation, the response from producer price inflation and consumer price inflation only lasts about seven months, then gradually disappears. In the foodstuffs group, response from PPI inflation and CPI inflation when there was a shock to CPI inflation and PPI inflation, the response lasted about ten months and then gradually lost. While in the processed food, beverage, cigarette, and tobacco and clothing groups, the response from PPI inflation and CPI inflation when there is a shock to CPI inflation and PPI inflation lasts about six months and then gradually disappears.
The results of IRF analysis indicate that the foodstuffs group has the longest response period compared to the other groups when there is a shock both on PPI inflation and CPI inflation. This can be due to the characteristics of the Indonesian people who are largely dependent on foodstuffs (agricultural products), so that when there is a shock from either the supply side or the demand side, the resulting impact will be longer. While the group of processed food, beverages, cigarettes and tobacco, and clothing group has the shortest response when there is a shock compared to other groups. This IRF result can be seen in Appendix 2.

**Variance Decomposition (VD) Analysis**

Variance decomposition (VD) is a VAR model instrument that separates the variance of variables into variable innovation with the assumption that innovation variables are not mutually correlated. Variance decomposition (VD) is performed to characterize the dynamic structure among variables within the VAR model. In other words, VD produces information about the relative importance of each random innovation or how strongly the contribution of the role of a particular variable to other variables in the VAR model (Wulandari, 2007).

Based on the results of Variance Decomposition analysis, it can be seen that the producer price of the foodstuffs group has the greatest contribution in explaining the variation of consumer prices of the foodstuffs group. This is also in line with the IRF analysis showing that the PPI and CPI inflation response when there is a shock to CPI inflation or PPI inflation has the longest period. For more details see Appendix 3.

**Granger Causality Analysis**

This test is used to find the causality or reciprocal relationship between two variables so that it can be seen whether the two variables are statistically affecting each other (two-way or reciprocal relationship), a one-way relationship, or there is no relationship (not affect each other) (Manik and Hidayat 2010). The results of Granger Causality Test are in the following Table 3.

<table>
<thead>
<tr>
<th>Group</th>
<th>Hypothesis</th>
<th>$F$-Statistics</th>
<th>$p$-value</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Umum</td>
<td>PPI_UMUM does not Granger Cause CPI_UMUM</td>
<td>3.42369</td>
<td>0.0057***</td>
<td>PPI Umum $\rightarrow$ CPI Umum</td>
</tr>
<tr>
<td></td>
<td>CPI_UMUM does not Granger Cause PPI_UMUM</td>
<td>1.85191</td>
<td>0.1042</td>
<td>CPI Umum</td>
</tr>
<tr>
<td>BM</td>
<td>PPI_BM does not Granger Cause CPI_BM</td>
<td>2.23900</td>
<td>0.0914*</td>
<td>PPI BM $\leftrightarrow$ CPI BM</td>
</tr>
<tr>
<td></td>
<td>CPI_BM does not Granger Cause PPI_BM</td>
<td>2.25551</td>
<td>0.0896*</td>
<td>CPI BM</td>
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<tr>
<td>MMRT</td>
<td>PPI_MMRT does not Granger Cause CPI_MMRT</td>
<td>0.22516</td>
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<td>Tidak Ada Hubungan</td>
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<tr>
<td></td>
<td>CPI_MMRT does not Granger Cause PPI_MMRT</td>
<td>0.09199</td>
<td>0.9122</td>
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<td>SDG</td>
<td>PPI_SDG does not Granger Cause CPI_SDG</td>
<td>1.09318</td>
<td>0.3579</td>
<td>CPI SDG $\rightarrow$ PPI SDG</td>
</tr>
<tr>
<td></td>
<td>CPI_SDG does not Granger Cause PPI_SDG</td>
<td>3.97756</td>
<td>0.0113**</td>
<td>PPI SDG</td>
</tr>
</tbody>
</table>

Note: *** significant at level 1%; ** significant at level 5%; * significant at level 10%
Table 3 shows that there is a one-way relationship of the general PPI to the general CPI. Whereas the general CPI does not affect the general PPI, which can be seen from its insignificant probability value at 1% significance level. This shows that consumer price inflation is influenced by producer price inflation. These results imply that general PPI inflation may be a leading indicator of CPI inflation. These results are also consistent with Roger's research in Xin and Yuan (2013), where changes in the price of a raw materials affect the price change of intermediate and final products, as a result, it will affect consumer prices. Therefore, PPI affects CPI, so if there is a shock to producer price, then consumer price will be affected, consequently PPI inflation affects CPI inflation. These results are also consistent with Sidaoui et al. (2009) using Granger's causality analysis found that producer price inflation can serve as a significant tool in predicting consumer price inflation in Mexico.

The PPI group and the foodstuffs CPI have shown a two-way relationship between foodstuffs PPI inflation and foodstuffs CPI inflation at a significance level of 10%. The result means that food price inflation in consumer prices is influenced by food price inflation in producer prices. Similarly, food price inflation in producer prices is influenced by consumer price inflation. This empirical evidence suggests that for the foodstuffs group, PPI inflation may be a leading indicator of CPI inflation and vice versa. That is, changes in producer prices can be an important information in predicting changes in consumer prices and vice versa. This result is consistent with research conducted by Xin and Yuan (2013) which also finds a two-way relationship between PPI and CPI in some countries, i.e. Canada, Denmark, Indonesia, Japan, Pakistan, and Uruguay using Granger causality analysis. The two-way relationship between PPI and CPI is also found by Jones in Xin and Yuan (2013) by using Granger analysis, Jones finds a two-way relationship between PPI and CPI in the US. From the supply side, it means that producer price change for foodstuffs group both input price and intermediate input price will affect the price of final products from group of foodstuffs sold to consumers. Conversely, from the demand side, changes in the final demand for foodstuffs group will affect the changes in production costs in producing goods / services that will affect the price of producers. For clothing group, it is found that there is a one-way relationship from clothing CPI inflation to clothing PPI inflation. The one-way relationship of CPI inflation to PPI inflation for clothing group indicates that in Indonesia clothing inflation is influenced by the demand side. Where changes in demand in the final product will affect the change in input prices as production costs, since the producer's price actually covers the overall cost of production determined by the pull of demand that affects the cost of the resource as it depends on consumer prices (Colclough and Lange 1982). So that shocks to consumer prices will affect the producer price, consequently CPI affect PPI. In other words, CPI inflation can be a leading indicator for PPI inflation, which means that changes in consumer prices for these clothing groups can provide an early indicator for changes in producer price levels. Colclough and Lange (1982) found a one-way relationship of CPI to PPI in the US using Granger causality analysis.
While in the group of processed food, beverages, cigarettes and tobacco, there is no causality relationship between PPI and CPI or vice versa. The absence of a relationship between PPI and CPI inflation for this group could happen when viewed from the graph and the correlation analysis results between the two variables does not indicate a strong relationship. So, for this group, neither the value of PPI or CPI inflation does not influence each other. This result is supported by previous correlation and variance decomposition (VD) analysis results, where the correlation analysis results show that there is no significant relationship between PPI and CPI inflation for processed food, beverage, cigarette and tobacco group. The result of VD analysis also shows that the PPI MMRT variance that explains the variance of CPI MMRT and vice versa is very small, which means that the relationship between the two variables is also weak.

As explained in previous sections, the issue of the relationship between PPI and CPI is still a controversial issue, as there are also studies that do not find any connection between PPI and CPI. As Akcay (2011) using Granger causality analysis found no link between PPI and CPI in the Netherlands and Sweden. In addition, Clark (1995) and Blomberg and Haris (1995) found that PPIs do not significantly affect CPI in the future. Clark (1995) points out that the production chains that link PPI and CPI are weak. PPI changes can sometimes predict CPI changes but fail to systematically predict them.

The existence of the relationship between PPI and CPI both in general and for foodstuffs and clothing groups shows that PPI can be a leading indicator for CPI and vice versa, especially the role of PPI in predicting consumer price inflation. Thus, the government needs to pay more attention to producer prices and make PPI a priority, given that the PPI is currently still releasing on a quarterly basis with 30-day lag.

The role of PPI that can be a leading indicator in predicting consumer price inflation can be one of the important variables for government and policy makers in predicting inflation. While the role of CPI that can be a leading indicator in predicting producer price inflation can also be used by market participants, especially manufacturers in the escalation of contracts.

CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on the results of research that has been done on research entitled Causality Analysis of PPI and CPI in Indonesia then obtained the following conclusion:

1. Through the variance decomposition analysis (VD), the variable that has the greatest variance is the PPI variable of foodstuffs in explaining the variances of the foodstuffs CPI variable, then the general PPI variable in explaining the variances of general CPI variables. While the PPI and CPI variables for the processed food, beverage, cigarette, and tobacco groups, and clothing groups have small variance values in explaining the variance of other variables.

2. Based on the results of Impulse Response analysis, it can be seen that the response of each variable when there is shock to other variables, the average response lasted for six to seven months, then gradually lost.
3. Based on the Granger causality test results, the following results are found:

- General PPI inflation affects the general CPI inflation, so we can conclude that general PPI inflation may be a leading indicator of general CPI inflation.
- Foodstuffs PPI inflation has bidirectional relationship with CPI inflation of foodstuffs so it can be concluded that PPI inflation of foodstuffs group can be a leading indicator for CPI inflation of foodstuffs and vice versa.
- CPI inflation in the clothing group affects the PPI inflation of clothing, which means that CPI inflation of clothing can be a leading indicator for PPI inflation of clothing.
- There is no relationship between PPI inflation and CPI inflation for processed food, beverage, cigarette and tobacco groups.

**Suggestion**

Based on the above conclusions, the following suggestions can be drawn:

1. Based on the results of the research, it can be seen that PPI can be a major indicator for CPI, so it is important to make PPI a priority, by releasing PPI data on a monthly basis without any lag.

2. For the government, the information contained in producer prices, can be one important consideration in taking the policy of controlling inflation. As for business actors, information about producer prices can be important information to make decisions in running a business.

3. Looking at the response of PPI and CPI both in general and to each group when shock occurs one of the variables last for an average of 6 to 7 months, then when a shock occurs in one variable (PPI or CPI), the government can intervene for the next 6 to 7 months.

4. It is important for the government to always monitor prices both at producer and consumer level, especially for foodstuffs group considering the foodstuffs group has a large contribution to inflation.

**REFERENCES**


Shahbaz M, Tiwari AK, Tahir MI. 2012. Does CPI Granger-Cause WPI?, New Extensions from Frequency Domain Approach in Pakistan, COMSATS Institute of Information Technology, Lahore, Pakistan, ICF AI University, Tripura, GIFT University, Pakistan


Yin WK, Xuan JL. 2013. Threshold Cointegration and Causality between CPI and PPIin Selected Countries-Some International Evidence. Working Paper Series August 2013, Department of Economics and Finance Hong Kong Shue Yan University 48

Appendix 1 Empirical Framework

**Relationship of PPI and CPI**

- **PPI lead CPI**
  - (Rogers 1998)

- **CPI lead PPI**
  - (Colclough dan Lange 1982)

**Supply side**

- PPI can be a leading indicator for CPI (BPS 2015)
- There has not yet been any research on the relationship between PPI and CPI that has been done in Indonesia

**Demand side**

**Leading indicator**

- PPI
- CPI

**Suggestions**
Appendix 2 Impulse Response Function (IRF)

a. General PPI and General CPI

b. PPI of Foodstuffs and CPI Foodstuffs
c. PPI and CPI of Processed Food, Beverages, Cigarette, and Tobacco
   Response to Cholesky One S.D. Innovations ± 2 S.E.

   Response of IHP_MMRT to IHP_MMRT
   Response of IHP_MMRT to IHK_MMRT
   Response of IHK_MMRT to IHP_MMRT
   Response of IHK_MMRT to IHK_MMRT

   Response of IHP_SDG to IHP_SDG
   Response of IHP_SDG to IHK_SDG
   Response of IHK_SDG to IHP_SDG
   Response of IHK_SDG to IHK_SDG

   d. PPI and CPI of Clothing
   Response to Cholesky One S.D. Innovations ± 2 S.E.
Appendix 3 *Variance Decomposition (VD)*

**a. General Group**

<table>
<thead>
<tr>
<th>Period</th>
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<th>CPI_UMUM</th>
</tr>
</thead>
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</tr>
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<td>10</td>
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</table>

**Variance Decomposition of CPI_UMUM:**

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<th>CPI_UMUM</th>
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<td>18.17476</td>
<td>81.82524</td>
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</table>

Cholesky Ordering:

- PPI_UMUM
- CPI_UMUM

**b. Foodstuffs Group**

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Variance Decomposition of CPI_BM:

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Cholesky Ordering:
- PPI_BM
- CPI_BM

c. Processed Food, Beverages, Cigarette, and Tobacco Group

Variance Decomposition of PPI_MMRT:

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Variance Decomposition of CPI_MMRT:

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d. Clothing Group

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<td>97.41048</td>
<td>2.589519</td>
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<td>1.431971</td>
<td>97.41040</td>
<td>2.589599</td>
</tr>
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<table>
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<th>S.E.</th>
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<th>CPI_SDG</th>
</tr>
</thead>
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<td>1.259401</td>
<td>98.74060</td>
</tr>
<tr>
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<td>0.741709</td>
<td>4.340281</td>
<td>95.65972</td>
</tr>
<tr>
<td>3</td>
<td>0.746768</td>
<td>4.871067</td>
<td>95.12893</td>
</tr>
<tr>
<td>4</td>
<td>0.752685</td>
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<td>93.93443</td>
</tr>
<tr>
<td>5</td>
<td>0.753266</td>
<td>6.208873</td>
<td>93.79113</td>
</tr>
<tr>
<td>6</td>
<td>0.753292</td>
<td>6.211424</td>
<td>93.78858</td>
</tr>
<tr>
<td>7</td>
<td>0.753315</td>
<td>6.211502</td>
<td>93.78850</td>
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<tr>
<td>8</td>
<td>0.753317</td>
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<td>93.78848</td>
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<td>9</td>
<td>0.753317</td>
<td>6.211622</td>
<td>93.78838</td>
</tr>
<tr>
<td>10</td>
<td>0.753318</td>
<td>6.211714</td>
<td>93.78829</td>
</tr>
</tbody>
</table>
ANALYSIS OF FACTORS AFFECTING INCOME DISTRIBUTION INEQUALITY IN EAST JAVA PROVINCE

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Wiwiek Rindayati  
Department of Economics, Bogor Agricultural University

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ABSTRACT

This study aims to determine the level of income inequality in East Java and the factors that influence it. The method used is the panel data regression 38 regency/city in East Java Province in 2010-2015. The results show that Gini ratio in East Java Province increased during the period. The factors affecting income distribution inequality are GRDP per capita, the percentage of education spending and city dummy significant positive effect on Gini ratio. Meanwhile, the industrial sector's contribution to the GRDP and the percentage of revenue DAU have negative effect on Gini ratio.

Keywords: Gini ratio, income inequality, panel data, East Java

JEL classification: D31, O15
IDENTIFICATION OF MONETARY POLICY TRANSMISSION MECHANISM CREDIT CHANNEL IN INDONESIA: PERIOD 2000Q1-2014Q3

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ABSTRACT

The objective of the research is to identify the mechanism of transmission of monetary policy through bank credit channel consisting of banking credit channel for investment and banking credit channel for consumption. The study was conducted in Indonesia during the period 2000Q1-2014Q3. The data used are sourced from the Indonesian Central Bureau of Statistics and Economic and Financial Statistics. The object of research is the transmission of monetary policy conducted by Bank Indonesia. Methods of data analysis using vector error correction model (VECM). Before data is processed stationary data test, root test unit, optimum lag, Johansen cointegration test. The results show that the monetary policy transmission mechanism on the banking credit channel for investment and the credit line of banking for consumption has not been effectively in Indonesia during the period 2000Q1-2014Q3.

Keywords: monetary policy transmission mechanism, credit channel, VECM
SPATIAL DYNAMICS AND DETERMINANT OF FOREIGN DIRECT INVESTMENT (PMA) IN INDONESIA: A COMPARATIVE STUDY OF PRE AND POST AUTONOMOUS AREA 1990-2014

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ABSTRACT

The purpose of this study is to analyze determinant of foreign investment in Indonesia for the period of 1990 to 2014, before and after the implementation of regional autonomy. The analysis method is using a panel data regression throughout Indonesia with provincial analysis unit, Entrophy Theil Index and GIS analysis, which is divided into two intervals ie, before the 1990-2000 regional autonomy, and after the 2001-2014 regional autonomy. Factor that affect the determinant of foreign investment in Indonesia are Market Size indicators (GDP of province and population of province), Resources indicators (labor force and human capital) and Competitiveness indicators (installed electric power, long road, wages, and level of economic openness). The results of analysis showed that only two significant indicator of the determinant of foreign investment which are Resources and Competitiveness indicator. Variable labor force influential with a positive direction, for the whole period (1990-2014) and the period after the regional autonomy (2001-2014). Human capital variables also positive effect on foreign investment in the province in Indonesia the positive direction, for the whole period and the period after the regional autonomy. Variable electric power and length of the road for the whole period and the period after the regional autonomy, in a study conducted no effect on foreign investment in the provinces in Indonesia. While variable installed electric power and significant influence with a positive sign after the regional autonomy era. Wages variables have positive and significant correlation with the variable of foreign investment for the whole period and the period before the regional autonomy. Variable economic openness (openness) positive and significant impact on foreign investment in the province for the entire period both before the regional autonomy and after the regional autonomy.

Keywords: Foreign Investment, Market size, Competitiveness, Resources, Regional Autonomy, Investment disparity, Entrophy Theil Index and GIS
INTRODUCTION

In terms of regional development, investment plays an important role to drive economic growth. Investment generally, both in the form of domestic investment (PMDN) and foreign investment (PMA), requires the presence of a healthy climate as well as ease and clarity of investment procedures. Regional economic development dynamics have so far been driven by domestic consumption, but it should also be driven by investment and export. Thus, it requires a conducive investment climate (Kuncoro, 2004). According to Tambunan (2007), a conducive investment climate is a climate that encourages a person to make investment with the lowest cost and risk that are possible, yet with high long-term benefits. In addition, there are various factors that affect whether the investment climate in Indonesia is good. These factors are related to not only its political and social stability, but also economic stability, basic infrastructure conditions (electricity, telecommunications, road and port infrastructure), well-functioning financial sector and labor market (including labor issues), regulation and taxation, bureaucracy (in terms of time and cost that are created), good governance issues including corruption, consistency and the certainty of government policy.

Data of the last five years from 2011-2015 show that the inflow of foreign investment in Indonesia was very striking. Java Island attracted 57 percent of the accumulated foreign investment worth US$43542.23 million. On the other hand, other areas such as Borneo Island only reached 14 percent valued at US$ 7987.94 million. Sumatera Island reached 13 percent worth US$ 7733.98 million and Sulawesi Island reached 5 percent or US$ 3424.38 million (see Table 1).

Table 1 Development of Foreign Direct Investment Realization by Island in 2011-2015 (US$ Million)

<table>
<thead>
<tr>
<th>No</th>
<th>Lokasi</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sumatera</td>
<td>2076.56</td>
<td>3729.29</td>
<td>3395.35</td>
<td>3,844.6</td>
<td>3,732.8</td>
<td>7733.98</td>
</tr>
<tr>
<td>2</td>
<td>Jawa</td>
<td>12324.54</td>
<td>13659.92</td>
<td>17326.38</td>
<td>15,436.7</td>
<td>15,433.0</td>
<td>43542.23</td>
</tr>
<tr>
<td>3</td>
<td>Bali dan Nusa Tenggara</td>
<td>952.65</td>
<td>1126.55</td>
<td>888.87</td>
<td>993.4</td>
<td>1,265.1</td>
<td>3513.87</td>
</tr>
<tr>
<td>4</td>
<td>Kalimantan</td>
<td>1918.85</td>
<td>3208.65</td>
<td>2773.4</td>
<td>4,673.6</td>
<td>5,842.9</td>
<td>7987.94</td>
</tr>
<tr>
<td>5</td>
<td>Sulawesi</td>
<td>715.26</td>
<td>1507.03</td>
<td>1498.16</td>
<td>2,055.7</td>
<td>1,560.4</td>
<td>3424.38</td>
</tr>
<tr>
<td>6</td>
<td>Maluku</td>
<td>141.54</td>
<td>98.77</td>
<td>321.23</td>
<td>311.8</td>
<td>286.2</td>
<td>583.2</td>
</tr>
<tr>
<td>7</td>
<td>Papua</td>
<td>1345.14</td>
<td>1234.47</td>
<td>2414.16</td>
<td>1,414.0</td>
<td>1,155.7</td>
<td>3080.37</td>
</tr>
<tr>
<td></td>
<td><strong>Jumlah Total</strong></td>
<td>19474.53</td>
<td>24564.67</td>
<td>28617.55</td>
<td>28529.7</td>
<td>29275.94</td>
<td>69865.97</td>
</tr>
</tbody>
</table>


Java in general is more attractive to foreign investors compared to other regions because it has a number of attractiveness such as the availability of adequate facilities and infrastructure, abundant labor, as well as relatively better transportation and information access. The development of investment for Foreign Direct Investment (PMA) which has been approved in the last five years (2011-2015) shows that FDI was still concentrated in Java, especially in DKI Jakarta, West Java, Banten and East Java (see Table 2).
Table 2 Development of FDI Realization in Java Island in 2011-2015 (US$ Million)

<table>
<thead>
<tr>
<th>No</th>
<th>Lokasi</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DKI Jakarta</td>
<td>4,824.08</td>
<td>4107.72</td>
<td>2591.13</td>
<td>4,509.36</td>
<td>3,619.39</td>
<td>19,651.69</td>
</tr>
<tr>
<td>2</td>
<td>Jawa Barat</td>
<td>3,839.36</td>
<td>4210.70</td>
<td>7124.88</td>
<td>6,561.95</td>
<td>5,738.71</td>
<td>27,475.60</td>
</tr>
<tr>
<td>3</td>
<td>Jawa Tengah</td>
<td>174.96</td>
<td>241.51</td>
<td>464.30</td>
<td>463.36</td>
<td>850.40</td>
<td>2,194.53</td>
</tr>
<tr>
<td>4</td>
<td>DIY</td>
<td>2.41</td>
<td>84.94</td>
<td>29.58</td>
<td>64.89</td>
<td>89.11</td>
<td>270.92</td>
</tr>
<tr>
<td>5</td>
<td>Jawa Timur</td>
<td>1,312.04</td>
<td>2298.78</td>
<td>3396.26</td>
<td>1,802.51</td>
<td>2,593.38</td>
<td>11,402.96</td>
</tr>
<tr>
<td>6</td>
<td>Banten</td>
<td>2,171.69</td>
<td>2716.26</td>
<td>3720.23</td>
<td>2,034.63</td>
<td>2,541.97</td>
<td>13,184.78</td>
</tr>
<tr>
<td></td>
<td><strong>Total P. Jawa</strong></td>
<td><strong>12,324.54</strong></td>
<td><strong>13659.92</strong></td>
<td><strong>17326.38</strong></td>
<td><strong>15,436.69</strong></td>
<td><strong>15,432.96</strong></td>
<td><strong>74,180.48</strong></td>
</tr>
</tbody>
</table>


The fact that foreign direct investment is concentrated in Java Island has become interesting when Indonesia is developing regional autonomy policies. When local governments are expected to be self-sufficient in developing their regions, the reality shows that only less than ¼ (quarter) of the regions are economically self-sufficient because these regions happen to have natural resources. However, the rest are still facing difficulties in meeting the needs for capital and investment to carry out economic development in their regions (Kurniawan, 2002).

Regarding the broad implementation of regional autonomy (Otda) since 2001, after the change of the New Order regime to the Reform Era, there are many hopes for changes and it becomes a turning point to change the relationship pattern from dominant-dependent to mutually interdependent pattern. The spirit to change the relationship pattern among these regions must be promoted by both the central and regional governments, supported by systematic and serious efforts to achieve it. If the inter-regional relationship pattern has changed to become mutually interdependent, all regions will contribute optimally to the national economic development and economic growth, and at the same time minimizing inter-regional economic disparities.

Nonetheless, after sixteen years of regional autonomy, equity in development has not yet been achieved; inter-regional development disparities continue to occur. Without any correction, inter-regional development disparities will continue to occur. Java and Sumatera still get more than 2/3 GRDP distribution of the total national GDP. Inter-regional development disparities are still occurring in Indonesia because its economic activity tends to be geographically concentrated in the Western Region of Indonesia in the last 5 decades. BPS data in 2015 showed that spatial economic activity was still dominated by provinces in Java Island which contributed 58.27 percent, followed by Sumatera Island of 22.37 percent, but the Eastern Region of Indonesia (KTI) only contributed the rest of about 17.96 percent. Table 3 below shows the detailed roles of regions/islands in the composition of the national GDP.

Table 3 Roles of Regions/Islands in National GDP Composition (Percent)

<table>
<thead>
<tr>
<th>Wilayah/Pulau</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumatera</td>
<td>23.5</td>
<td>23.74</td>
<td>23.81</td>
<td>23.63</td>
<td>22.37</td>
</tr>
<tr>
<td>Jawa</td>
<td>57.6</td>
<td>57.65</td>
<td>57.99</td>
<td>58.51</td>
<td>58.27</td>
</tr>
<tr>
<td>Bali dan Nusa Tenggara</td>
<td>2.6</td>
<td>2.51</td>
<td>2.53</td>
<td>2.58</td>
<td>3.38</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>9.6</td>
<td>9.30</td>
<td>8.67</td>
<td>8.21</td>
<td>7.99</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>4.6</td>
<td>4.74</td>
<td>4.82</td>
<td>4.97</td>
<td>5.01</td>
</tr>
<tr>
<td>Maluku dan Papua</td>
<td>2.1</td>
<td>2.06</td>
<td>2.18</td>
<td>2.10</td>
<td>2.98</td>
</tr>
<tr>
<td><strong>Jumlah</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
THEORETICAL REVIEW

Foreign Direct Investment (FDI) is defined as long-term investments made directly by foreign investors in a business field of domestic citizens. Investment in the form of FDI is a relatively stable investment in the long run. There are several types of FDI as follows: 1) FDI vertical. FDI made vertically involves geographical decentralization of a company's production flow. The company will carry out its production activities in a country with low labor costs, then the products produced in that country will be brought back to the host country. For example, a product whose production process is capital intensive will move its production process to a country that is rich in capital. 2) Horizontal FDI. FDI made horizontally will produce the same products in several countries. The motivation of this type of FDI is to search for new markets. The benefit of this type of FDI is efficiency in transportation costs because the production site is closer to its consumers.

The decision of foreign investors to make investment in the form of FDI compared to other forms of investment in a country is influenced by several conditions of the host country of FDI (pull factor) that may include market conditions, resources, competitiveness, trade and industry-related policies as well as FDI policies. In addition, there are also the conditions and strategies of foreign investors (push factors) that make investment (Kurniati, Y, et.al, 2007). According to Ohlin, traditional trading theory considers FDI as a form of international capital movement. The presence of inter-country relative differences of labor and capital may cause differences in rate of return of capital as stated in the interest rate. This encourages capital movement from rich to poor countries.

EMPIRICAL REVIEW

Spatial Dynamics of Investment

A study by Sarungu (2008) in Indonesia has interesting findings in terms of the spatial distribution pattern of investment by island and archipelago categories. Although Sumatera, Borneo, and other islands in Indonesia show changes in the distribution patterns in the direction that tends to spread, Sulawesi Island shows a pattern that tends to be concentrated. Even Java Island, which becomes the largest investment attractiveness in Indonesia because of both government policies and economic infrastructure facilities that are more adequate compared to other regions, shows the distribution pattern of investments that tends to be concentrated. This way, it is time to make efforts in order to achieve equitable distribution of development activities, and the results are also seen from the perspective of the islands and archipelago, instead of only seen from the perspective of the Western Region (KBI) and Eastern Region (KTI) of Indonesia.

Kang Yu, et.al (2008) conducted a study in China. The study results show that regional policy on FDI in China has had an impact, so the FDI disparity decreased from 24% in 1989 to 13% in 2005; indicating that the regional policy on the inflow of FDI becomes less influential in China, resulting in regional FDI disparity. It is necessary to have changes in regional preferential policy that dominates all other factors in reducing regional disparity.
A study by Lucio, C, et al. (2008) in Argentina indicates the importance of the effect of regional size (in this case it is shown by the weighted average of distance GPP/the number of citizens in the neighboring provinces) and domestic as well as the regional public infrastructure (for example paved roads) in determining the spatial distribution of FDI. A study by Huang Hao & Y.H. Dennis Wei (2010) in China shows that institutional, transportation, and agglomeration are the main factors determining the location of FDI in China. However, Guangdong, Pan-YRD and BRR have different factors in determining its concentration. Institutional is the most influential factor on the investments in Guangdong; transportation is the most influential factor in Pan-YRD, and agglomeration affects most of the investments in BRR area. This study shows the importance of certain policies that are appointed by the central government. A comparison of spatial and temporal changes of FDI in Guangdong, Pan-YRD and BRR shows the importance of national government incentives, especially in the early stages.

A study by Firdaus (2010) in Indonesia shows that there are several spatial determinants of foreign direct investment inflows, namely: market size, economic development level, infrastructure, and educational attainment level; these are statistically significant in attracting foreign investors to come to a province. Investment is proven to play an important role in overcoming regional disparity issues. Government should prioritize some efforts to attract foreign direct investment to the province. Some of the remote areas and eastern parts of Indonesia should be given larger incentives because regional policies have not been effective in attracting foreign investors. These policies include preferential policies in taxation, preferential policies in land use, increase in government and local investment in expanding foreign investment in the remote and eastern parts of Indonesia. The central government should pay more attention to the development of infrastructure and improvement of educational programs in the remote and eastern parts of Indonesia.

**Determinants of Investment**

A study by Agnieszka, C, & Stephen, Y, (2008) in Poland shows that, first, regional autonomy in Poland has relatively made a difference in the attractiveness for foreign direct investment, regional potential, and economic development. Second, governments should focus on both short-term and long-term measures that are designed to strengthen economic fundamentals and institutional systems. Local governments with the highest attractiveness for FDI will be suggested to focus on efforts to improve their investment climate through political, economic and institutional reforms in their regions.

James, B, A. (2008) examined the determinants of FDI in Malaysia. The results are consistent with the findings of Chakrabarti (2001), Asiedu (2002) and Fedderke and Romm (2006), where greater trade liberalization may be conducive to foreign direct investment. FDI inflows react negatively to the increase in corporate tax rates. This result is in accordance with the opinion that reducing corporate tax rates is an effective policy instrument to increase FDI. Interestingly, macroeconomic uncertainty seems to encourage FDI inflow, this way, the study results imply that the composition of FDI may have shifted towards a more speculative foreign investment that is not necessarily pro-growth.
Recep, K. & Bernur, AE. (2009) conducted a study in developing countries. The results show that appropriate domestic policies will help attract FDI and maximize its benefits, and at the same time also remove obstacles to local business. Foreign corporations, similar to those in the host country, search for a good business environment. Foreign corporations tend to look for regions that offer government incentives, transparency and accountability. Therefore, it is essential for local governments and companies to provide a credible and effective framework for the society, environment, and the local citizens’ lives.

A study by Yuah-HC (2010) was carried out with a case study in China. The results confirm the compatibility with the theory, i.e. the presence of positive effect of economic infrastructure and agglomeration on FDI. Econometric model also shows that the political capacity of provincial government may become an important factor that influences the inflows of FDI. Apart from increasing the resolution of the theory of FDI location to local level, this study also discusses the importance of political considerations in terms of international production. Further, the findings also indicate that development level is positively significant in model 2 but not in model 1. The measurement of infrastructure (transportation and human resources) has a positive and significant effect to attract FDI inflow. Empirical results confirm the positive effect of infrastructure and agglomeration on FDI inflows. Econometric model shows that the political capacity of provincial government may become important to influence the inflow of FDI in China.

A study conducted by Kelly Liu, et al. a) (2012) in China shows a diverse picture, for example we found that market size becomes a priority for FDI inflows into coastal and northeastern regions, while the level of openness is the most important determinant of FDI inflows in the central regions. The quality of labor does not have any impact in the central region but has a positive impact on the FDI inflows in the coastal and northeastern regions. This result has important implications for Chinese regional policymakers as it can help them identify the types of industries that respond specifically as well as identify any regional socioeconomic characteristics that are more attractive for FDI inflows.

TaeUg Rho et.al (2012) conducted a study in Korea with an analysis unit of provinces and found that the location characteristics (endowment) of each region at the time of FDI inflow influence the final decision regarding location selection.In addition, a study by Kelly Liu, et.al. b) (2012) in China revealed that market size, labor quality, and government incentives to attract FDI have a positive and significant effect on FDI inflows. On the other hand, high labor costs reduce the attractiveness of an area. Physical infrastructure in the central regions is an important factor to attract FDI because a large number of low-tech, labor-intensive FDI from new industries are concentrated in the central region.

A study by Yiyang Liu, et.al (2013) suggests that regional disparities into FDI inflows have important policy implications because there is relationship between FDI inflows and China's economic growth. This study found that the determinants of location in the coastal and northeastern areas are quite similar. In addition, the study also revealed that market size, labor quality, and government incentives to attract FDI have a significant and positive effect on FDI inflows, while high labor costs reduce the attractiveness of a region. Physical infrastructure in the central regions is an important factor to attract FDI.
A study by Nam Hoai Trinh in Vietnam (2013) has contribution to the literature on agglomeration economies, location and foreign direct investment in various aspects. Empirical findings on agglomeration economies are useful for provincial governments in designing policies to attract more foreign direct investments. The results of the study also indicate that provincial characteristics are an important determinant in attracting foreign investors. A study by Fitriandi et. al (2014) has some important implications on public policies intended to attract foreign direct investment in certain provinces in Indonesia. Infrastructure development is needed to increase FDI inflows; the government should pay more attention to the quality of infrastructure development for foreign companies. Apart from that, regarding the fact that a large government spending may drive down FDI inflows due to crowding-out effect, the government should limit its intervention and promote private as well as and private economic activities.

ANALYSIS TECHNIQUE

Theil’s Coefficient (Theil Entropy Index)

To measure variation and diversity of the average investment allocation, coefficient of Theil Entropy Index was used (Kuncoro, 2013). The greater the value, the higher the disparity of investment distribution by province or region. This shows that the distribution pattern is increasingly concentrated in a particular province or region. On the other hand, if the value is closer to 0, the distribution pattern tends to spread more.

The calculation of the coefficient of Theil Entropy Index was carried out in the following way. Variation of investment allocation among provinces in all regions in Indonesia

\[ I(y) = \sum_{i=1}^{N} y_i \log \frac{y_i}{N} \]

(1.1)

\( I(y) \) is the overall entropy index of the spatial disparity of investment, \( y_i \) is the province's share of the total investment in Indonesia, \( N \) is the total number of provinces in Indonesia.

Geographic Information System (GIS)

Geographic Information System (GIS) is a specialized information system that manages data that contain spatial information (spatial reference), or in a more narrow sense, it is a computer system that has the ability to build, store, manage and display information that is geographic reference, for example data that are identified by location in a database. Another source mentions that GIS is an information system designed to work with spatial reference or geo-coordinated reference data. In other words, GIS is a database system with special ability to handle spatial reference data along with a set of operations (Barus and Wiradisastra, 2000).

Estimation Model

The model used in this study was panel data and translog model (Dees, 1998; Fung et al, 2000, 2002; Sun et al, 2002) written as follows:

\[ \ln Y_{it} = \alpha_i + \sum \beta_k \ln X_{kt} + \varepsilon_{it} \]

(1)
Where $Y_{it}$ is the value of investment, $X_{it}$ ’s is the the determinant of investment location, $\alpha_{it}$ is individual effect that is constant between t time and specific for each unit of cross section i. i = 1,2,….n refers to the unit of cross section, and t = 1,2,…. t refers to a given time. Ordinary least square method could give consistent and efficient estimation of $\alpha$ and $\beta$. In addition, the determinants of investment, $X_{it}$ consists of, the effects of objective economic condition of a region (market, resources, and competitiveness) in a region/province towards the selection of investment location pre and post regional autonomy, so that the translog model turns to be the following:

$$\ln Y_{it} = \alpha_i + \sum \beta_i \ln MarketSize_{it} + \sum \phi_i \ln Resources_{it} + \sum \lambda_i \ln Competitiveness_{it} + \epsilon_{it}$$

(2)

Thus, the determinant of investment location by inserting all the variables could be written as follows:

$$\ln Y_{it} = \alpha_i + \beta_1 \ln x1_{it} + \beta_2 \ln x2_{it} + \beta_3 \ln x3_{it} + \beta_4 \ln x4_{it} + \beta_5 \ln x5_{it} + \beta_6 \ln x6_{it} + \beta_7 \ln x7_{it} + \beta_8 \ln x8_{it} + \epsilon_{it}$$

(3)

t is time (1990-2014)
i is region/province (26 provinces)
Y is the value of FDI realization
Indicator **Market size**
X1 : regional/provincial GRDP
X2 : the number of citizens in a region/province
Indicator **Resources:**
X3 : Workforce is the number of workforce in a region/province
X4: Human Capital is the number of graduates from High School level in a region/province
Indicator **Competitiveness:**
X5 : Electricity installed capacity in a region/province
X6 : Length of road in a region/province
X7 : UMP is provincial minimum wages
X8: is the level of economic openness (export netto) in a region/province
D Otda : Dummy for Regional Autonomy Policy

Equation (2) above, $\beta_1$ is the elasticity of GRDP and $\beta_2$ is the number of citizens that are expected to be positive. Dimension of Resources is workforce ( $\beta_3$), based on the theory, the sign is expected to be positive. Coefficient of human capital ( $\beta_4$) is expected to positively contribute to the disparity of investment. Dimension of Competitiveness is the electricity installed capacity and the length of road that are also expected to contribute positively. So, $\beta_5$ and $\beta_6$ are expected to have positive signs, while provincial minimum wage is ambiguous $\beta_7 \neq 0$. Further, economic indicator including export netto ( $\beta_8$) is expected to have positive sign. From the above two models, overall panel data regression (1990-201 4) and separation between the time pre autonomy (1990-2000) and post regional autonomy (2001-2014) were done to each, so that it can show the effects of the variables in the models in influencing FDI both before and after regional autonomy.
Estimation Technique

Theoretically, there are several benefits from using the combined data. First, there are more number of observations for the interest of estimating population parameters that bring positive results by increasing the degree of freedom and reducing the possibility of collinearity among independent variables. Second, it is possible to have separate estimation between each individual characteristic and characteristics according to time. Therefore, the analysis of estimation results will be more comprehensive since it includes things that are closer to reality. (see, Hsio, 1995).

In the classical linear regression model, error terms are always stated to be homoscedastic and serially uncorrelated. Thus, the use of ordinary least square method will result in the best linear unbiased estimator. Nonetheless, assumptions regarding the error terms cannot be applied to panel data. Panel data, composed of multiple individuals for several periods, bring a new problem in the characteristics of the error terms. The problem is that the current disturbances or error terms are in the form of three types: time-series related disturbances, cross-section disturbances and disturbances coming from both. (see, Gujarati, 2003).

If all the section disturbances (μ_i), time disturbances (λ_t) and random noise are combined into one and follow all the initial assumptions of random noise that is distributed normally-freely-identically, then the use generalized least square method will produce the best linear unbiased estimators. In other words, this method states that all the disturbances that occur follow a normal distribution, with an expected value of zero, as assumed in the classical linear regression model. This method is well-known as Random Effect Model, or Error Components Model.

However, if the assumption that all the disturbances are stated to not follow the whole assumption of random noise as in the classical linear regression model, then the use of neither ordinary least square or generalized least square model will yield results that satisfy the best linear unbiased characteristics. Thus, the components of time-series disturbances and cross-section disturbances will be combined in the constant of intercept model. This method is known as Fixed Effect Model or also called Dummy Variable Model. This estimation method produces an efficient estimator by applying an estimation process to deviation data from the average by time, the average by sections, and the average by both. Thus, to determine whether to use dummy variables model or error components model, this research used Hausman statistics.

Specification of Hausman Test

The main assumption in regression model is that the component of error or \( E(u_t / X_t) = 0 \). This is crucial because the factor of disturbance contains invariant individual effect (μ_i) that is unobserved and possibly correlated with \( X_t \). For example, in an equation where \( μ_i \) might be denoted as unobservable individually and possible correlated with a number of variables on the right-hand side of the equation. In this case, \( E(u_t / X_t) ≠ 0 \) and estimator GLS (\( \hat{β}_{GLS} \)) will be bias and inconsistent with \( β \). Even so, by performing transformation \( μ_i \) and ignoring it, then estimator (\( \hat{β}_{Within} \)) will be unbiased and consistent with \( β \).
Hausman (1978) suggested to compare \( \hat{\beta}_{GLS} \) with \( \hat{\beta}_{Within} \), where both are consistent with null hypothesis \( H_0: E(u_i / X_{it}) = 0 \), but of course with differences in probability limit. In fact, \( \hat{\beta}_{Within} \) will be consistent even if \( H_0 \) is correct or incorrect, while \( \hat{\beta}_{GLS} \) will be BLUE, consistent and asymptotic on \( H_0 \), but will be inconsistent if \( H_0 \) is incorrect. Statistical test will be based on \( q_1 = \hat{\beta}_{GLS} - \hat{\beta}_{Within} \), with \( H_0 \), \( p \lim q_1 = 0 \) and \( \text{cov}(q_1, \hat{\beta}_{GLS}) = 0 \).

By considering the fact that \( \hat{\beta}_{GLS} - \beta = (X' \Omega^{-1} X)^{-1} X' \Omega^{-1} u \) and \( \hat{\beta}_{Within} - \beta = (X' Q X)^{-1} X' Q u \), \( E(q_1) = 0 \) will be obtained, and

\[
\text{cov}(\hat{\beta}_{GLS}, q_1) = \text{var}(\hat{\beta}_{GLS}) - \text{cov}(\hat{\beta}_{GLS}, \hat{\beta}_{Within}) = (X' \Omega^{-1} X)^{-1} - (X' \Omega^{-1} X)^{-1} X \Omega^{-1} E(uu') Q X (X' Q X)^{-1} = (X' \Omega^{-1} X)^{-1} - (X' \Omega^{-1} X)^{-1} = 0 \quad \text{..................................................(4)}
\]

Further, if \( \hat{\beta}_{Within} = \hat{\beta}_{GLS} - q_1 \), will be obtained

\[
\text{var}(\hat{\beta}_{Within}) = \text{var}(\hat{\beta}_{GLS}) + \text{var}(q_1)
\]

Since \( \text{cov}(\hat{\beta}_{GLS}, q_1) = 0 \), then;

\[
\text{var}(q_1) = \text{var}(\hat{\beta}_{Within}) - \text{var}(\hat{\beta}_{GLS}) = \sigma_v^2 (X' Q X)^{-1} - (X' \Omega^{-1} X)^{-1} \quad \text{..................................................(5)}
\]

This way, Hausman statistical test is as follows:

\[
m_i = q_1 \left[ \text{var}(q_1) \right]^{-1} q_1 \quad \text{..................................................(6)}
\]

where \( H_0 \) is asymptotic and distributed as \( \chi^2_K \) where \( K \) is the dimension of slope vector \( \beta \). Next, in order to meet the technical-operational aspect, \( \Omega \) will be replaced by the consistency of estimator \( \hat{\Omega} \), so that GLS is possible to perform. The rejection of Hausman statistics means the rejection of fixed effect model or dummy variable model. Thus, the greater the value of Hausman statistics, the greater the possibility to the acceptance of error components model estimation. (see, Baltagi, 2003).
RESULTS AND DISCUSSION

Results of Theil Entropy Index: Prior to the Era of Regional Autonomy

The results of Theil entropy index before the implementation of regional autonomy is shown in Table 4 as follows.

Table 4 Theil Entropy Index of FDI before OTDA

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Indeks Entrophy Theil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>0.198071522</td>
</tr>
<tr>
<td>1991</td>
<td>0.349071654</td>
</tr>
<tr>
<td>1992</td>
<td>0.329348574</td>
</tr>
<tr>
<td>1993</td>
<td>0.176085268</td>
</tr>
<tr>
<td>1994</td>
<td>0.2001158</td>
</tr>
<tr>
<td>1995</td>
<td>0.165409661</td>
</tr>
<tr>
<td>1996</td>
<td>0.053715809</td>
</tr>
<tr>
<td>1997</td>
<td>0.15328229</td>
</tr>
<tr>
<td>1998</td>
<td>0.176309311</td>
</tr>
<tr>
<td>1999</td>
<td>0.364823974</td>
</tr>
<tr>
<td>2000</td>
<td>0.279645617</td>
</tr>
</tbody>
</table>

Source: author calculation

Table 4 shows that the total theil entropy index indicates a high spatial disparity of foreign investment before autonomy. Another important finding was that the era between 1990 until 2000 (before regional autonomy) had a pattern of ups and downs, in 1990 it was 0.19, from 1991 to 1992 there was an increase by 0.34, then it decreased steadily until 1998 to 0.17 and in 1999 it reached its peak with an index of 0.36 (increased disparity). The substantial increase from 1998 to 1999 shows that, starting in 1999, Indonesia’s economy began to recover from the crisis, so investment was also increasing in line with the improvement of macroeconomic conditions. Increased investment will, in turn, encourage an increase in the value of theil entropy index, meaning that the disparity of foreign investment increases. This reflects an uneven spatial distribution pattern of investment in the era prior to regional autonomy (see Figure 1.)

![Figure 1 Trend of Entropy Index of FDI before Regional Autonomy](image-url)
Figure 1 shows that Theil Entropy Index in 1991 increased then fell to the lowest point in 1996 and rose again until 2000, or formed letter "U". This reflects that there is a dispersion trend of foreign investment before regional autonomy spatially among the provinces in Indonesia. In the period before 1996, there was a declining pattern, reflecting an increase in the spread of FDI in Indonesia. In other words, until 1996, there was evidence that spatial concentration tends to decrease. However, the opposite pattern occurred between 1996 and 2000, where spatial concentration tends to increase. Even in 1998 there was a sharp increase.

Results of Theil Entropy Index: After the Era of Regional Autonomy

The results of Theil entropy index after the implementation of regional autonomy is shown in Table 5 as follows.

Table 5 Theil Entropy Index of FDI after OTDA

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Indeks Entropy Theil</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>0.10022149</td>
</tr>
<tr>
<td>2002</td>
<td>0.21825783</td>
</tr>
<tr>
<td>2003</td>
<td>0.41274667</td>
</tr>
<tr>
<td>2004</td>
<td>0.16773457</td>
</tr>
<tr>
<td>2005</td>
<td>0.09187596</td>
</tr>
<tr>
<td>2006</td>
<td>0.07995996</td>
</tr>
<tr>
<td>2007</td>
<td>0.16239832</td>
</tr>
<tr>
<td>2008</td>
<td>0.33747562</td>
</tr>
<tr>
<td>2009</td>
<td>0.35254287</td>
</tr>
<tr>
<td>2010</td>
<td>0.18420002</td>
</tr>
<tr>
<td>2011</td>
<td>0.39375384</td>
</tr>
<tr>
<td>2012</td>
<td>0.345627475</td>
</tr>
<tr>
<td>2013</td>
<td>0.151961085</td>
</tr>
<tr>
<td>2014</td>
<td>0.13008833</td>
</tr>
</tbody>
</table>

Source: author calculation

Table 5 shows that Theil Entropy Index after the era of regional autonomy is fluctuating, indicating that in the era of regional autonomy, each region/province in this study has been competing to get investors. This means that the regions/provinces have been increasingly aware of the importance of investment to increase their regional economic growth. It can be seen that from 2005-2007 there was a decrease (low disparity); in 2008 there was an increase to be 0.33, in 2010 it decreased, in 2011-2012 it increased, and decreased again in 2013-2014 increased slightly (see Figure 2).
Figure 2 shows that the distribution pattern of FDI after the implementation of regional autonomy is also fluctuating as that before the implementation of regional autonomy. However, the increase and decrease from year to year is not significant (the disparity is more evenly distributed). An increase only occurred in 2003 (highest position) after the implementation of regional autonomy. The distribution pattern of FDI from 2003 to 2006 decreased (the disparity is increasingly evenly distributed). Then starting in 2007, it increased until 2009 (the disparity is uneven). In 2010, it decreased then rose again until 2012, after which it decreased until 2014 (the disparity is more even).

This is possible because after the era of regional autonomy, the regions have more authority to attract investors both domestic and foreign investors, so that each region competes with each other in attracting investors, by marketing their regions. Based on a study by KPPOD-BKPM in 2008, the commitment of local government is the main component that gives the greatest proportion in the establishment of investment climate in the regions. The commitment of local government in creating a conducive climate is important to provide certainty to investors in easily making investment and business expansion.

GIS Analysis on FDI before Regional Autonomy (1990-2000)

The distribution of FDI prior to the era of regional autonomy by main islands (% of total) in 1990 was dominated by Java, Sumatera and Borneo. Then in the next five years or in 1995 there was a change in which it was dominated by Java, Sumatera, Maluku and Papua. This change is mainly due to an increase in FDI in the eastern regions (Maluku and Papua) that is more resource or asset-seeking oriented because these regions are rich in natural resources. In 2000, it was dominated by three islands namely Sumatera, Bali, East and West Nusa Tenggara, followed by Java. This can be seen in Table 1.10. This change is mainly caused by an increase in FDI in Bali, East and West Nusa Tenggara which are associated with the tourism sector because these islands are well-known as a tourist destination in Indonesia even in the world. Thus, this investment can be categorized as market seeking oriented investment. This is shown in Table 6.

Table 6 Distribution of FDI by Main Islands (%)

<table>
<thead>
<tr>
<th>Pulau</th>
<th>1990</th>
<th>1995</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumatera</td>
<td>10.32</td>
<td>12.85</td>
<td>49.99</td>
</tr>
<tr>
<td>Jawa</td>
<td>73.13</td>
<td>64.67</td>
<td>19.90</td>
</tr>
<tr>
<td>Bali, NTB dan NTT</td>
<td>6.97</td>
<td>0.77</td>
<td>25.74</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>8.01</td>
<td>3.88</td>
<td>2.28</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>1.54</td>
<td>5.61</td>
<td>1.20</td>
</tr>
<tr>
<td>Maluku &amp; Papua</td>
<td>0.04</td>
<td>12.22</td>
<td>0.88</td>
</tr>
<tr>
<td><strong>Jumlah</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: author calculation
Figure 3 shows that the distribution of FDI before the implementation of regional autonomy (1990-2000) was dominated by Java Island, followed by Sumatera Island; but slowly Papua Island and Bali Island began to change the dominance. This indicates that the spatial concentration of FDI by islands is still dominated by Java Island, namely the provinces of West Java and East Java and Sumatera Island, namely Riau Province. The spatial concentration of FDI is in line with figure 1.9, where there is a bias to Java Island as the main island and Sumatera Island as the second main island. These findings are in line with a study by Sarungu (2008) which found that Java Island, which so far has become the largest center of investment attraction in Indonesia because of both its government policy and its economic infrastructure facilities that are more adequate compared to other regions, is increasingly showing the distribution pattern of investment that tends to be concentrated.

Figure 3 Map of FDI Distribution before Regional Autonomy

GIS Analysis on FDI after Regional Autonomy (2001-2014)

The distribution of FDI after the era of regional autonomy by main islands (% of total) in 2001 was dominated by Java, Sumatera, Bali, East and West Nusa Tenggara. Then in the next six years or in 2007, it underwent a change where it was dominated by Java, Sumatera and Borneo. In 2012, it was similar to that in 2006: dominated by Java, Sumatera and Borneo Island. The only difference is that Island Borneo increased from 8.92 percent in 2007 to 13.48 percent in 2014. The increase in the percentage of FDI in Borneo Island is dominated by investment in natural resources because this island is rich in natural resources, especially coal. In other words, FDI in Borneo Island has more orientation on resources or asset seeking. This is shown in Table 7.

Table 7 Distribution of FDI by Main Islands (%)

<table>
<thead>
<tr>
<th>Pulau</th>
<th>2001</th>
<th>2007</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumatera</td>
<td>26.04</td>
<td>14.74</td>
<td>13.48</td>
</tr>
<tr>
<td>Jawa</td>
<td>63.53</td>
<td>73.91</td>
<td>54.11</td>
</tr>
<tr>
<td>Bali, NTB dan NTT</td>
<td>5.81</td>
<td>1.83</td>
<td>3.48</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>2.68</td>
<td>8.92</td>
<td>16.38</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>0.78</td>
<td>0.26</td>
<td>7.21</td>
</tr>
<tr>
<td>Maluku &amp; Papua</td>
<td>1.16</td>
<td>0.34</td>
<td>5.35</td>
</tr>
<tr>
<td><strong>Jumlah</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: author calculation
Figure 4 Map of FDI Distribution after Regional Autonomy

From Figure 4, it can be seen that the distribution of FDI after the implementation of regional autonomy (2001-2012) was dominated by Java Island, especially West Java Province, followed by Sumatera Island (Riau Province) and Borneo (East Kalimantan Province). The distribution pattern of FDI after regional autonomy had no significant difference with that before autonomy, indicating that the spatial concentration of investment is still biased to Java Island, as the main island, followed by the second main islands i.e. Sumatera and Borneo Island.

Results of Panel Data Regression

The stage of Hausman test or Hausman statistical test was to test between fixed and random effect approach. Hausman test results for the three periods show that chi square count is greater than chi square table so Ho is rejected. This way, the estimation shows that the fixed effects approach is better than the random effect approach, meaning that there is a difference among units that can be seen through a difference in constant term. In the fixed effects model, it is assumed that there is no time-specific effect and only focuses on individual-specific-effects.

Table 8 Hausmann Test

<table>
<thead>
<tr>
<th>Periode Pengamatan</th>
<th>( \chi^2 ) Hitung</th>
<th>( \chi^2 ) Tabel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seluruh Data (1990-2014)</td>
<td>56.927053***</td>
<td>20.09</td>
</tr>
<tr>
<td>Pra Otonomi (1990-2000)</td>
<td>58.953258***</td>
<td>20.09</td>
</tr>
<tr>
<td>Pasca Otonomi (2001-2014)</td>
<td>233.451563***</td>
<td>20.09</td>
</tr>
</tbody>
</table>

Sumber : Data Diolah
Keterangan : *** sig pada \( \alpha = 0.01 \)
The estimation results using fixed effect model are presented in Table 8.

Table 8 Estimation Results of Fixed Effect Regression Equation

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG PDRB</td>
<td>-0.000318*** (-4.156773)</td>
<td>-3.55E-05 (0.213481)</td>
<td>0.0002050* (1.824667)</td>
</tr>
<tr>
<td>LOG JP</td>
<td>1.64E-08*** (7.497322)</td>
<td>1.85E-08*** (2.674948)</td>
<td>1.00E-08*** (4.544089)</td>
</tr>
<tr>
<td>LOG UMP</td>
<td>6.19E-08** (2.179606)</td>
<td>1.54E-07*** (2.599870)</td>
<td>4.64E-08* (1.900114)</td>
</tr>
<tr>
<td>LOG AK</td>
<td>0.009206*** (25.64417)</td>
<td>0.001985 (0.975298)</td>
<td>0.010581*** (42.90104)</td>
</tr>
<tr>
<td>LOG EKSP</td>
<td>1.51E-07*** (3.194558)</td>
<td>1.94E-06** (2.028006)</td>
<td>2.83E-08 (0.879494)</td>
</tr>
<tr>
<td>LOG DL</td>
<td>2.76E-10 (0.254094)</td>
<td>2.79E-08** (2.207583)</td>
<td>1.30E-09* (1.819534)</td>
</tr>
<tr>
<td>LOG PJ</td>
<td>0.000757*** (6.914184)</td>
<td>0.000643 (-0.622300)</td>
<td>0.000455*** (4.801749)</td>
</tr>
<tr>
<td>LOG HC</td>
<td>0.000138*** (5.089244)</td>
<td>0.000351*** (4.848077)</td>
<td>3.33E-05 (1.599225)</td>
</tr>
<tr>
<td>D OTDA</td>
<td>0.807315*** (20.99076)</td>
<td>0.0002050* (4.848077)</td>
<td>0.000351*** (4.848077)</td>
</tr>
</tbody>
</table>

F hitung 24.79916 5.742943 84.14369
R 2 hitung 0.545029 0.357306 0.884332

Sumber: Data Diolah
Keterangan: *** sig pada α = 0.01; ** sig pada α = 0.05; * sig pada α = 0.10
Angka dalam kurung adalah statistik hitung

Analysis and Discussion of Panel Regression

The results of analysis using fixed effect method indicate that, from all the indicators used in this study, the significant indicators to the variable of FDI in Indonesia are Market Size, Competitiveness and Resources.

The dummy variable of regional autonomy affects FDI in Indonesia, indicating that the government's policy on regional autonomy in Indonesia results in the change of FDI. In the current Indonesia’s economy, regions are increasingly varying from one another to attract larger amount of investment, especially foreign direct investment. Several provinces or regions absorb more than others. Thus, an important element that makes economic disparity among regions larger is the inflow of investment as a growth engine. Data in the last five years from 2011-2015 indicate that the inflows of FDI in Indonesia were very striking. Java attracted 57 percent of foreign direct investment (BPS, 2015).
Indicator of Market Size is significant to FDI in Indonesia in the three observation periods (1990-2014), before regional autonomy (1990-2000) and after autonomy (2001-2014). This provides evidence that FDI invested in Indonesia aims for market seeking, both domestic-market oriented and export-market oriented. This finding is in line with previous studies. This is reasonable considering that Indonesia has a very large population. In addition, in this study FDI was not differentiated by sectors, so that it is not known which sectors are the most dominant (only using the total FDI in each province). The results of this study are in line with the study by Abu N.M. Wahid, et.al (2004) in Africa, resulting that abundant natural resources become positive and significant (supporting the presence of resource-seeking FDI) and in line with a study by Aseidu (2002) and Kinoshita and Campos (2004).

Variable of workforce has effects with a positive sign, for the whole periods (1990-2014) and the period after regional autonomy (2001-2012). This is in accordance with the existing studies on investment, stating that FDI or MNCs are more interested in coming to a country that has the a large and inexpensive availability of workforce (Hayter, 2000: 99). A study of Qian Sun, et.al (2002) in China also provides evidence that the importance of FDI determinants moves over time. The quality of labor and infrastructure is also an important determinant of FDI distribution. High labor quality and good infrastructure attract foreign investors. Such findings indicate that during the period of this study and after the era of regional autonomy, Indonesia has a superior value in the perspective of investors, particularly on the availability of workforce and low labor wages. Variable of human capital also positively influences FDI in provinces in Indonesia for the entire periods (1990-2014) and the period before regional autonomy (1990-2000). This result is in line with a previous study by Kelly Liu, et.al (2012), showing that quality of labor has a significant and positive effect on FDI inflows. The same study conducted by Danciu Aniela Raluca, et.al (2012) using the variable of the number of scientists shows a positive and significant relationship with the inflows of FDI. The fact that human capital variable is significant in this study provides evidence that, in the case of the provinces in Indonesia, the existence of human capital in proxies with the number of senior high school graduates may affect foreign direct investment into the provinces. However, for the period after regional autonomy (2001-2014) the variable of human capital has no effect on FDI. This indicates that the FDI that comes to Indonesia after regional autonomy does not recognize the skills of high school graduate workers, so it is necessary for local governments to improve the quality of human resources considering the fact that the quality of human capital is becoming more important in influencing foreign direct investment in Indonesia.

From the variable of electric power and road length for the entire period (1990-2014), only road length was influential. Meanwhile, the variable of electricity installed capacity is significant with a positive sign only before regional autonomy (1990-2000). Although this result is not in line with a previous study (Fitriandi et al., 2014), infrastructure in this study has an effect on FDI in Indonesia. A study conducted by Fitriandi et al (2014) in Indonesia has clear evidence that supports the argument that infrastructure development, in terms of electricity distribution, road length, water distribution, and water capacity, plays an important role in attracting FDI to the provinces in Indonesia. In the period after autonomy (2001-2014), both electric power and road length positively affect FDI in Indonesia, indicating the importance of infrastructure variables on the inflows of FDI to the provinces in Indonesia. This way, infrastructure development in the provinces is a condition to be undertaken by local governments in order to ensure the presence of investment in the regions.
Variable of wage has a positive and significant relationship with the variable of FDI for the entire period of observation (1990-2014), the period before the regional autonomy (1990-2000) and the period after the regional autonomy (2001-2014). This positive relationship is because investors currently no longer take into account low wages, but more on production cost efficiency and optimization of the productivity of any existing resources (Hayter, 2000: 99). Several studies conducted by Smith & Florida found that Japanese automotive companies tend to select locations with higher wage rates (Smith & Florida, 1994: 34). Meanwhile, a study conducted by Kuncoro in Indonesia from 1976-1996 found that wage rates are positively associated with FDI (Kuncoro, 2000: 139-141). In other words, the variables described by wages include not only the effect of cost, but also the effect of skills. For example, MNCs look for a highly educated workforce (Bonlarron, 2001: 11). Nonetheless, for the period after regional autonomy (2001-2012), the variable of wage is not significant. A study from Qian Sun, et.al (2002) in China provides evidence that the importance of FDI determinants moves over time. Wages had a positive relationship with FDI before 1991. Variable of economic openness has a positive and significant impact on FDI in the provinces for the whole period (1990-2014) and before regional autonomy (1990-2000). This is in line with studies by Nonnemberg and Mendonca (2001), Abu N.M. et.al (2005), James B. Ang (2008), Kishor Sharma and Yapa Bandara (2010). The same study by Yiyang Liu, et.al (2013) shows that the more open an economy, the more connected with economic activities throughout the world. Thus, a high level of openness in a region is more attractive for FDI inflows, especially for export-oriented FDI inflows. These findings are in line with several studies conducted by Chakrabarti (2001), Asiedu (2002) and Fedderke and Romm (2006). Therefore, the results imply that greater trade liberalization is conducive to foreign direct investment

CONCLUSIONS AND POLICY RECOMMENDATIONS

Local governments are expected to issue a new policy that encourages investment at regional level, both domestic and foreign investors, so as to promote regional economic growth and reduce income disparities.

Local governments also need to make coordination about legislative regulations both at the vertical level (among the central-provincial-municipal/regency level government) and at the horizontal level (among any relevant departments and agencies), so that it is necessary to have fundamental reforms related to improving the business climate, export and FDI in Indonesia. The reform agendas that need to be undertaken are: first, to review all local regulations from the provincial and regency/municipal governments in their respective areas regarding investment, second, to have cooperation with the central government and the governments of other provinces in developing procedures and standards for reviewing local regulations related to investment.

The results of this study have some important implications related to public policy aimed at attracting foreign direct investment in several provinces in Indonesia. Infrastructure development is highly needed to increase the inflow of investment; the government should pay more attention to the development and quality of infrastructure for foreign companies. Another policy for the government to attract more investments is to prioritize human resources sector, consisting of education and improvement of human capital.
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CONSUMERS’ EXPERIENCE ON INDONESIAN AND WESTERN RESTAURANT

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ABSTRACT

The competition of restaurant business is very high because of plenty of new players both local and foreign, especially from the numerous of foreign investors that are willing to invest in Indonesia (Fitch Ratings in 2011, cited by Sup, 2011). This matter also encourages the development of the western restaurant in Indonesia. Therefore, the objective of this research was to analyze the positive effect of Consumer’s restaurant experience dimensions on electronic word of mouth (eWOM) motivations, as media of marketing communications, and it will have effect on purchase intention. Research survey design is implemented by self-administered questionair with Regression analysis model. The questioners are distributed by online in the form of google docs and disseminated through social media. The results of the research show that consumers’ experience dimensions have a positive effect on eWOM in choosing Indonesian Restaurant and Western Restaurant, and also it has an impact toward purchase intention. If compared to Western Restaurant, Indonesian consumers prefer to Indonesian restaurants because of the tasty and delicious taste of the food. However, Indonesian Restaurant should continue to innovate the product performance and quality in order to compete with Western Restaurant, so that the food products from Indonesian Restaurant will be continued to be in high demand by local or foreign consumers because of the possession of taste and high quality.

Keywords: Restaurant Experience, eWOM, Purchase intention
THE RELATIONSHIP BETWEEN INFLATION AND ECONOMIC GROWTH AND THE ESTIMATION OF INFLATION THRESHOLD IN NORTH MALUKU

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ABSTRACT

The Economists stated that the relationship between inflation and economic growth is not linear until a certain inflation point (threshold). Inflation has a positive relationship with economic growth and after threshold value, it turns to be a negative relationship. This study aims to reveal the relationship between inflation with economic growth in North Maluku in 2006 to 2016 (after the Inflation Targeting Framework, ITF) which is done in Indonesia including North Maluku, and to estimate the inflation threshold point. Causality Granger test proves that there is a one-way relationship that inflation affects the economic growth in North Maluku, but not vice versa. The linear regression model shows that the inflation rate negatively affects the economic growth in North Maluku. The estimation of the inflation threshold point is conducted using quadratic regression and finds that the inflation threshold point in North Maluku is at 3.73 percent. Bank Indonesia, especially North Maluku Representative Office, should be alerted when the inflation rate in North Maluku is higher than 3.73 percent, because it will affect the economic growth.

Keywords: Inflation, economic growth, quadratic regression, granger causality
ACHIEVEMENTS AND DETERMINANTS OF INCLUSIVE GROWTH IN ASEAN COUNTRIES

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__________________________________________________________

ABSTRACT

In ASEAN, the economy is growing positively and poverty continues to decline which raises the problem of income inequality. Therefore, the ASEAN countries to shift the focus of development on achieving inclusive growth. Measurement of inclusive growth coefficient in this study using Poverty- Equivalent Growth Rate (PEGR) method, whereas the factors that influence the growth of inclusive obtained from panel data model. The result, Cambodia and Vietnam have improved the inclusive growth progress, while 5 other countries worsened. Panel data setimation result is that credit to private sector has negative impact because credit more allocated to capital-intensive sectors.

Keywords: inclusive growth, inequality, PEGR, panel data, ASEAN

JEL classification: D63, O10, O53
THE EFFECT OF MENTAL ACCOUNTING ON STUDENT’S INVESTMENT DECISIONS; A STUDY AT INVESTMENT GALLERY (GI) FEB UNIVERSITY OF BENGKULU AND SYARIAH INVESTMENT GALLERY (GIS) FEB IAIN BENGKULU

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ABSTRACT

Our study tries to explore the existence mental accounting phenomena amongst the investors at Investment Gallery FEB University of Bengkulu and the investors at Sharia Investment Gallery (GIS) FEB IAIN Bengkulu, and to test its influences on the stock investment decision. We use 100 investors of the two investment gallery as our sample respondents. The sampling method is convenience sampling. We collect data using questioner which consists of 4 questions for mental accounting variable and 3 questions for investment decisions variable. This study uses simple linear regression analysis to test the hypothesis. The results show that investors do have mental accounting thinking in their minds. This is evidenced by the average respondents' answers which indicate that they treat monthly money with bonus money differently in investing. When using monthly money as the capital, they averagely use a smaller portion of their monthly money for investment, but when the capital is their bonus money, then they use more portion of the money for the investment. For the respondents, their monthly money is much more important than the bonus money, and they are also more afraid of the risks when investing the monthly money than when investing the bonus money, and when there is a loss, the regret level of losses from investing monthly money is higher than regret level of losses from investing bonus money. The result shows that; (i) mental accounting exists amongst the investors; and (ii) mental accounting does have a significant effect on the stock investment decisions.

Keywords: mental accounting; stock investment decision
THE IMPACT OF IMPORT COMPETITION ON INDONESIAN LOCAL FRUITS PRODUCTION PERFORMANCE

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ABSTRACT

Since the introduction of AFTA, followed by various trade area agreements with various ASEAN trading partners, Indonesian fruit imports have been increasing with import growth reaching 67% in the last ten years. This is inevitable impact of trade liberalization as a result of trade barriers removal. In the same period the growth of fruit imports was followed by a decreasing number horticulture farmers, which fall to 34% in decade. The question that arises is whether the change is entirely affected by import competition? This study was conducted (1) to know how the production perform in response to Import fruit competition and, (2) how fruits based food industries perform to import competition. The importance of this research is its ability to provide answers to the relation between import competition with local fruit production and trade and its impacts to fruits based food industry. The answer of this research will be playing an important foundation to establishing pro-trade policies for local producers, as well as the basis for alternative direction and strategy of producers to deal with import competition. This study data specifically based by 4 (four) FTAs (ACFTA, AANZFTA, AFTA and AKFTA) with 5 FTA partner countries (China, Australia, Vietnam, Thailand and Korea) and 1 non- an FTA partner transaction who became the main fruit supplier for Indonesia. The data derived from various institutions that have records of international trade, domestic trade and domestic production data. The data collected are panel data sets covering 2009-2015 and cross section of 6 (six) main imported fruits commodities. The method of analysis used refers to the gravity model applied by Susanto, et al (2007) and regression analysis method applied by Arita et al (2014).

Keywords: import competition, production, productivity, fruits based food processors industry, Indonesian fruit

JEL classification: Q17, F02, F15, F17, F18
INTRODUCTION

Free Trade Agreement (FTA) is one of the stages towards economic integration. Defined as the cooperation of two or more countries, to reduce trade barriers and increase the flow of trade in goods and services to each other. Trade barriers are policies established and built by governments to restrict trade between countries. Trade barriers can appear in two major forms of tariff and non-tariff barriers. Non-tariff barriers can have various forms namely; licenses, quotas, subsidies, local content obligations, embargoes, currency devaluation and various forms of trade restrictions (Sullivan and Sheffrin 2003).

The Free Trade Agreement (FTA) is part of the trade liberalization process that leads to changes in trade performance. Elimination of any of the instruments in tariff components and import duties as an essential part of the trade agreement will increase the volume of imports. Various products will enter and change the composition of economic activity and will further impact on changes in production and consumption techniques. In addition, trade agreements will also lead to an increasingly tight competition between imported products and local products (Van Reenen, 2011).

Some cases indicate that the market has a significant positive impact as a result of consumption growth, which in turn increases market growth and economic growth. Free trade agreements can also have a negative impact. The abolition of trade barriers provides an opportunity for foreign products to enter the domestic market, increasing competition between imported and local products resulting in decreased demand for local products.

Indonesia horticulture products, recorded a major impact due to free trade. The quantity of fruits imports has grown rapidly over the last 10 years as an implication of free trade. FAO data indicate that the quantity of imports of four main fruit types increased by 15% during 1995-2005 (Annonymous, 2007). The data is supported by Ministry of Agriculture data, which noted an increase in the number of imported fresh fruits by about 24% in the period 1996-2003 (Annonymous, 2004).

The table below shows changes in the value of imported products for vegetable commodities (HS-07) and fruit (HS-08) imported from around the world and from five partner countries. The data show very high volume growth over the period 2003 to 2013.

In contrast to the facts of rapidly growing fruit and vegetable imports, the 2013 Agricultural Census actually notes different things about the condition of horticultural agriculture. The result of complete enumeration of Agricultural Census in 2013 obtained the number of agricultural subsector of Indonesian horticulture subsector amounted to 10,602,147 household heads. decreased by 6,335,470 households or decreased by 37.40% compared to 2003. The number of agricultural enterprises incorporated in the agricultural subsector of horticultural crops in 2013 by 191 companies, decreased by 15.11% compared to 2003. (BPS, 2014).
This situation illustrates, in part, that imports as part of the domestic supply-making process, with the effect of import competition contributing negatively to the decline in the number of horticultural production units. Theoretically, the elimination of tariff and non-tariff barriers will form the integration of market prices, however, production costs do not readily adapt to price changes because most agricultural resources are immobile (land, water, weather and climate, labor). The next question is how local farming can remain economically viable in a market filled with cheaper imported products. Arita dkk (2014) states that in responding to highly competitive markets, some producers can divert their production to other possible markets, or produce products that can compete or remain in production despite financial losses.

This study was conducted (1) to know how the production perform in response to Import fruit competition and, (2) how fruits based food industries perform to import competition. The importance of this research is its ability to provide answers to the relation between import competition with local fruit production and trade and its impacts to fruits based food industry. The answer of this research will be playing an important foundation to establishing pro-trade policies for local producers, as well as the basis for alternative direction and strategy of producers to deal with import competition.

FTA, IMPOR COMPETITION AND ITS IMPLICATION

Competition is one side of the situation caused by FTA implementation, where the elimination of tariffs, providing space for foreign products to fill the domestic market demand. Partial balance statically as a result of the abolition of tariff commonly stated at the Custom Union agreement stage will encourage import competition in the domestic market. Empirically the import competition has an impact in accordance with the above theorem. Some of the impacts that have been studied are as follows. Increased import competition has negatively impacted efforts to diversify industrial products. In the face of import competition, companies tend to increase the focus on strategy (Bowen and Wiersema 2005), avoiding basic product research (Liu and Rosell 2013), Increased competition in manufactured products imports positively impact job losses in the manufacturing sector (Cooke et al. 2013), (Freeman 1995), (Mandel and Carew 2012) and (Edwards and Jenkins 2015).

Increased import competition, negatively affecting industries that have differentiated products, and the impact is more severe on heterogeneous markets (Ding et al. 2013). Increased competition has a negative effect on domestic prices (Edwards and Jenkins 2015). Increased import competition encourages the company's response to substantial investments to increase Productivity. This means that investment is not driven by the possibility of a larger market(Holmes and Schmitz 2010). China's import competition against middle-income countries such as Mexico has proven to lead to: (a) changes in sales for small-scale enterprises, (b) Input reallocation and (c) Market Reallocation (share and distribution) (Iacovone et al. 2013) (Autor et al. 2013).

Competition is also proven to cause changes in reallocation of production in food products. A study to measure the impact of import competition on the reallocation of production in France proves that there is a significant relationship between import competition and changes in the location of food production. the response of food production reallocation in every region of France is different in the face of import competition. The results also show that increased food imports have no implications for increasing food production and
Several studies have also discussed the effects of trade liberalization and FTA on the agricultural sector. Many of them stated that FTA with import impact has been able to encourage farmers to act more efficiently in their farming system. Ashok Gulati and Anil Sharma (1997) argue that the abolition of zero tariff rates in India has markedly had a significant impact on increasing the benefits of trade. In addition, imports also provide a boost in resource use efficiency (RUE) in domestic cropping patterns. Despite the impact of liberalization, the growth of the production area of some commodities decreased (especially the commodities that partly fulfill the domestic market was obtained by imports), overall trade liberalization would lend the Indian agricultural sector

METHODOLOGY

The data used in this study are secondary data derived from various sources, namely (1) Trademap ITC, (2) ASEANStat, (3) World Bank (World Development Indicators, WDI 2015), (4) International Monetary Fund (International Financial Statistics 2015), (5) Agricultural Census 2013, (6) Central Bureau of Statistics, and other sources.

The data collected are panel data which contains:

- time series data year of 2009 to 2015
- cross section data of imports transaction come from 6 (six) top origin countries ie : China, Australia, Thailand, Vietnam, South Korea and United States. And 6 (six) top fruits ie ; Citrus (HS-080520), Apple (HS-080810), Mango (HS-080450), Grapes (HS-080610), Water Melon (HS-080711) dan Durian (HS-081060).
- To analyze the impact of import competition from 6 major imported fruits commodities to the growth performance of production area, production, productivity and reallocation of local fruit market to the processing industry, referring to more or less the same model stated in Arita et al (2014). Used Linear regression model, as follows:

To measure the impact of import competition on Area :

\[
\text{AREA}_{it} = \delta_0 + \delta_1 \text{H/VICOMP}_{it} \tag{2.1}
\]

To measure the impact of import competition on Production :

\[
\text{PROD}_{it} = \delta_0 + \delta_2 \text{H/VICOMP}_{it} \tag{2.2}
\]

To measure the impact of import competition on Productivity :

\[
\text{PROTAS}_{it} = \delta_0 + \delta_3 \text{H/VICOMP}_{it} \tag{2.3}
\]

Which :

\[\text{H/VICOMP}_{it} : \text{Competition Rates (Horisontal and Vertical) I commodity by t years}\]

\[\text{AREA}_{it} : \text{Planted area of I commodities at the year of t}\]

\[\text{PROD}_{it} : \text{Production of I commodities at the year of t}\]

\[\text{PROTAS}_{it} : \text{Productivity of I commodities at the year of t}\]
To analyze the influence of import competition on the performance of fruit processing industry referring to research of Arita et al (2014), used linear regression model as follows:

To measure the impact of import competition on micro scale industry:

$\text{MICRO}_{it} = \gamma_0 + \gamma_1 \text{H/VICOMP}_{it}$  .......................................................... (3.1)

To measure the impact of import competition on small scale industry:

$\text{SMALL}_{it} = \gamma_0 + \gamma_2 \text{H/VICOMP}_{it}$  .......................................................... (3.2)

To measure the impact of import competition on medium high scale industry:

$\text{MEDH}_{it} = \gamma_0 + \gamma_3 \text{H/VICOMP}_{it}$  .......................................................... (3.3)

Which:

MICRO$_t$ : Number of micro scale fruit processing business in year t
SMALL$_t$ : Number of small-scale fruit processing business in year t
MEDH$_t$ : Number of medium and large scale fruit processing business in year t

**RESULTS AND DISCUSSION**

**Indonesia’s fruits imports**

Indonesia with more than 240 million population is a huge market for fruits products. With consumption level less than 40 kg / capita / year Indonesia needs supply of at least 4 million tons / year. Figures per capita consumption of Indonesian society is still far below the FAO standard of 75 kg / capita / year. This indicates the potential for an increasing demand for fruits in the future.

Along with the increase in per capita income, Indonesia's fossil imports tend to increase. Volume The import of Indonesian fruit commodities as a whole fluctuates, with an average increase of 7% per year during the period 2001 to 2016. By that volume Indonesia has spent the foreign exchange between 144 million US $ to 848 million US $ every year or equivalent to 1, 8 to 11 trillion rupiah every year during 2001-2016. Based on its value, Indonesian fruit imports grew at an average of 15% per annum during the 2001-2016 period.

Based on import volume, the most imported fruits entering Indonesian market are apple and pear type in HS 0808 code group with an average import volume of 214,000 tons per year. The apple and pear in HS 0808 is mainly supplied by the Chinese state with an average supply of 147,627 tons per year, with this number controlling 72% of all fruit supply in HS 0808 code to Indonesia. The next country that supplies apples and pear in the Indonesian market is the United States with 19% share.

Subsequently, the most imported fruits in Indonesia are Orange (HS 0805) with an average supply of 119,000 tons per year, followed by HS 0801 group dominated by longan commodities with an average supply of 75,000 tons per year and group the wine commodity (HS 0806) supplied an average of 36,000 tonnes per year (Appendix - Table 1).

**Indonesia Fruit Market Import Competition**

Competition is one side of the situation caused by FTA implementation, where the elimination of tariffs, providing space for foreign products to fill the domestic market...
demand. Partial balance statically as a result of the abolition of tariff commonly stated at the Custom Union agreement stage will encourage import competition in the domestic market.

In this study, import competition is measured by the following formula:

\[
\text{Import Competition Rates} = \frac{\text{Total Import}}{\text{Domestic Production} - \text{Export} + \text{Import}}
\]

Based on the above formula obtained the value of import competition from various import commodities as follows:

Table 1 Measured Import Competition of 6 (six) Fruit Commodities

<table>
<thead>
<tr>
<th>Years</th>
<th>Competition of Citrus HS-080520</th>
<th>Competition of Apple HS-080810</th>
<th>Competition of Mango HS-080450</th>
<th>Competition of Grape HS-080610</th>
<th>Competition of Watermelon HS-080711</th>
<th>Competition of Durian HS-081060</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>0.5419</td>
<td>0.0002</td>
<td>1.0391</td>
<td>0.0003</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2002</td>
<td>0.6826</td>
<td>0.0006</td>
<td>1.0036</td>
<td>0.0008</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2003</td>
<td>0.0362</td>
<td>0.5367</td>
<td>0.0002</td>
<td>1.0094</td>
<td>0.0003</td>
<td>-</td>
</tr>
<tr>
<td>2004</td>
<td>0.5240</td>
<td>0.0006</td>
<td>1.0063</td>
<td>0.0019</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2005</td>
<td>0.0367</td>
<td>0.2565</td>
<td>0.0006</td>
<td>1.0017</td>
<td>0.0006</td>
<td>-</td>
</tr>
<tr>
<td>2006</td>
<td>0.0471</td>
<td>0.2742</td>
<td>0.0006</td>
<td>1.0075</td>
<td>0.0005</td>
<td>-</td>
</tr>
<tr>
<td>2007</td>
<td>0.0417</td>
<td>0.5128</td>
<td>0.0006</td>
<td>1.0020</td>
<td>0.0007</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>0.0532</td>
<td>0.4247</td>
<td>0.0005</td>
<td>1.0001</td>
<td>0.0005</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>0.0895</td>
<td>0.3710</td>
<td>0.0004</td>
<td>1.0000</td>
<td>0.0013</td>
<td>0.0000</td>
</tr>
<tr>
<td>2010</td>
<td>0.0868</td>
<td>0.5090</td>
<td>0.0009</td>
<td>1.0000</td>
<td>0.0013</td>
<td>0.0000</td>
</tr>
<tr>
<td>2011</td>
<td>0.1070</td>
<td>0.5152</td>
<td>0.0005</td>
<td>1.0000</td>
<td>0.0006</td>
<td>0.0000</td>
</tr>
<tr>
<td>2012</td>
<td>0.1181</td>
<td>0.4267</td>
<td>0.0004</td>
<td>1.0000</td>
<td>0.0006</td>
<td>0.0000</td>
</tr>
<tr>
<td>2013</td>
<td>0.0552</td>
<td>0.3374</td>
<td>0.0001</td>
<td>1.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>2014</td>
<td>0.0674</td>
<td>0.3662</td>
<td>0.0001</td>
<td>0.8233</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>2015</td>
<td>0.0541</td>
<td>0.3186</td>
<td>0.0000</td>
<td>0.8076</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>2016</td>
<td>0.0299</td>
<td>0.4273</td>
<td>0.0000</td>
<td>0.8738</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Average</td>
<td>0.0633</td>
<td>0.4390</td>
<td>0.0004</td>
<td>0.9734</td>
<td>0.0005</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Data Analysis

The above table clearly shows the high competition power of imported fruit products shown by the wine commodity (0.974) and Apple (0.439). The high competition tends to be shown by a commodity that is a sub-tropical fruit.
The Impact of Import Competition on Production Performance

The linkage between import competition to production performance can be shown in Table 2.

Table 2 Import Competition impact to Fruit Production Performance

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>t-sign</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Apple</td>
<td>3815.46</td>
<td>ns</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Durian</td>
<td>13242393.93</td>
<td>ns</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Water Melon</td>
<td>-394297.80</td>
<td>ns</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>Grapes</td>
<td>275.58</td>
<td>ns</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>Mango</td>
<td>-75596402.00</td>
<td>ns</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Citrus</td>
<td>-72075.32</td>
<td>ns</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>Produksi</td>
<td>-290332.20*</td>
<td></td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>Durian</td>
<td>-3746807858.61</td>
<td>ns</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Water Melon</td>
<td>-292883510.14*</td>
<td>ns</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Grapes</td>
<td>-40679.55</td>
<td>ns</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>Mango</td>
<td>-720005468.19</td>
<td>ns</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>Citrus</td>
<td>-270226.40</td>
<td>ns</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Produktivitas</td>
<td>-144.92</td>
<td>ns</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>Durian</td>
<td>-14941.24</td>
<td>ns</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>Water Melon</td>
<td>-6125.36</td>
<td>ns</td>
<td>0.41</td>
</tr>
<tr>
<td></td>
<td>Grapes</td>
<td>-74.63</td>
<td>ns</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>Mango</td>
<td>359.05</td>
<td>ns</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>Citrus</td>
<td>30.48</td>
<td>ns</td>
<td>0.17</td>
</tr>
</tbody>
</table>

Source: Data analysis
*) : significant at α = 0.05
**): significant at α = 0.01

In the case of 6 (six) commodities experiencing horizontal import competition, only apple commodity and commodity group melon-papaya-watermelon whose production is affected by the competition level of imported products. The results show that the production of apple and group of melon-papaya-watermelon has an inverse relationship with import competition. The higher the import competition, the production of these two commodity groups tends to decline.

The negative response of apple commodity to the existence of import competition only occurs in the aspect of production, and productivity and does not occur on the land area aspect. This is probably due to the impact of apple rejuvenation and rehabilitation programs in some apple production centers. The high competition encourages BALITJESTRO research center (Citrus and Subtropical Crop Research Institute), develops new varieties and rejuvenates the apple production area.
The Amiti and Khandelwal (2007), research on import and quality improvement relationships states that in the long run, greater import competition tends to encourage quality improvement measures. The quality indicator used by Amiti and Kandelwal is innovation. In the context of the Indonesian apple commodity. The degree of competition of imported apples appears to encourage the improvement of the quality of local apples.

Improving the quality of local apples is done through the development of Apple cultivation area. In 2015 Balejestro undertook the apple plantation area in East Java. This activity is intended to map the appropriate apple cultivation area and prepare a new area for apple cultivation. This activity encourages the wide growth of apple cultivation area in the following years.

In addition to quality improvement through the development of competitiveness. Pressure Competition imports are also recognized to encourage product diversification. Claudia Steinwinder (2015), states that import competition pressure tends to push the technical changes that become the basis of product diversification. Technical changes in handling local apple production are expressed by the emergence of a variety of processed products based on apples, such as apple cider, apple dodol and others.

In this study, there are results that show the low influence of import competition on the performance of Indonesian fruit crop production. The import competition does not seem to encourage the growth of area, production and productivity of fruit crops. It is too early to conclude the decline in the number of horticultural farmers during the period 2003-2013 as a result of competition and import penetration of horticultural products. In the period 2003-2013 in line with the increase of import value of various Indonesian fruits commodities which reached 15.45% growth, there was also a decline in the number of households of horticultural farmers which reached 37.4%. In the same period there was also a decline in horticultural cultivation of 15.11%.

This situation indicates that import competition does not encourage changes in the production performance and productivity of horticultural agriculture. This can be attributed to the wide vertical differentiation of the diverse products of domestic fruit products and there are marked differences in segmented quality in the market. The same analogy occurs in the case of imported competition relations with the productivity of processed agricultural products traded in Europe. Melitz and Ottaviano (2008), research, states that the relationship between import competition and exclusive productivity growth in food products from developing countries does not provide a significant pro-competitive effect. This is because the effects of price competition are suppressed by the vertical differentiation of quality differences and cultural bias (mostly European consumers) to high-quality food, which is a kind of natural protection against the competition of third countries.

The same circumstances obtained in this study indicate that Indonesia does not have to worry about the adverse impacts of competition in influencing the performance of horticultural agriculture production (such as decreasing the number of businesses and unemployment) - as a result of fruit imports.
The Impact of Import Competition on Processing Industry

The impact of competition on technical changes in commodity management and product verification will be measured by analyzing the relation of import competition level with the growth of food and beverage processing business. The food and beverage industry group is governed by industry classification used in the survey of the processing industry. This classification is based on the revised 4 Standard International Industrial Engineering (ISIC), which has been adapted to conditions in Indonesia under the Indonesian Standard Classification of Business Class (KBLI) in 2009.

- 10311 Fruit and vegetable marinating / sweetening industry
- 10312 Fruit and vegetable lubrication industries
- 10313 Fruit and vegetable drying industries
- 10314 Frozen fruits and vegetable industries
- 10320 Industry for processing and preserving fruits and vegetables in cans
- 10330 Fruit and vegetable processing industries
- 10399 Other processing and preserving industries of fruits and vegetables

Knowing the relation of import competition level with the development of fruit and vegetable beverage based fruit industry, will give a picture of diversification, quality improvement and technical change in the processing of Indonesian local fruit commodities. This link will illustrate how the fruit production sector responds to import competition.

Table 1 Import Competition impact to Fruit Processors Performance

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>t-sign</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Fruit Processors Micro Scale</td>
<td>Apple Competition of Apple</td>
<td>-0.56</td>
<td>ns</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Durian Competition of Durian</td>
<td>0.43</td>
<td>ns</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>Water Melon Competition of Water Melon</td>
<td>-0.13</td>
<td>ns</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Grapes Competition of Grapes</td>
<td>0.18</td>
<td>ns</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Mango Competition of Mango</td>
<td>-0.30</td>
<td>ns</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td>Citrus Competition of Citrus</td>
<td>-0.69</td>
<td>ns</td>
<td>0.14</td>
</tr>
<tr>
<td>Number of Fruit Processors Small Scale</td>
<td>Apple Competition of Apple</td>
<td>-0.73</td>
<td>ns</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>Durian Competition of Durian</td>
<td>-0.16</td>
<td>*)</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>Water Melon Competition of Water Melon</td>
<td>-0.06</td>
<td>*)</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>Grapes Competition of Grapes</td>
<td>-1.77</td>
<td>**)</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>Mango Competition of Mango</td>
<td>-0.09</td>
<td>**)</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Citrus Competition of Citrus</td>
<td>-0.49</td>
<td>*)</td>
<td>0.63</td>
</tr>
<tr>
<td>Number of Fruit Processors Medium and High Scale</td>
<td>Apple Competition of Apple</td>
<td>-0.28</td>
<td>*)</td>
<td>0.65</td>
</tr>
<tr>
<td></td>
<td>Durian Competition of Durian</td>
<td>-0.06</td>
<td>*)</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>Water Melon Competition of Water Melon</td>
<td>-0.02</td>
<td>*)</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>Grapes Competition of Grapes</td>
<td>-0.51</td>
<td>*)</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>Mango Competition of Mango</td>
<td>0.03</td>
<td>**)</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>Citrus Competition of Citrus</td>
<td>-0.15</td>
<td>ns</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Source: Data analysis

*) : significant at $\alpha = 0.05$

**) : significant at $\alpha = 0.01$
The result of regression analysis to correlate the degree of competition with the growth of food and beverage industry shows that import competition does not affect the performance of micro industry. This indicates that the micro industry sector does not make an important contribution in the processing of fruit.

In contrast, the number of small industries tends to show a significant response to import competition pressure for durian, melon, aggr, mango and orange products. While the competition of imported products such as apples, tend not to show significant impact. The growing number of medium and large scale processing and processing industries is influenced by the degree of competition for import of apple commodity, durian, melon, grape and mango.

In various references there are several different viewpoints on the impact of import competition on productivity. Some references in theoretical point of view, suggesting a positive effect of trade liberalization and trade on productivity growth. While some other references suggest that the growth of import competition that increases market competition will encourage companies to reduce inefficiency and cause some companies that are even the main companies in the industry to leave the market (Melitz 2003)(Melitz and Ottaviano 2008).

Other references suggest that trade liberalization has an impact in encouraging increased import supply of lower-priced or higher-quality intermediate input products(Autor et al. 2013) and impacts on the application of higher technological innovations (Iacovone et al. 2013) (Autor et al. 2013). Other references also suggest the dynamism of industry as a result of larger market size and because of economies of scale and selection effects characterized by free markets (Melitz and Ottaviano 2008).

Compared to the impact of import competition on fruit production performance, different circumstances are indicated by the impact of import competition on the performance of the fruit processing industry. In this research, it is found that import competition, although not significantly affect the micro food processing business, but significantly affect the processing of small, medium and big business. The results of the analysis also show a negative relationship between import competition with the growth of small, medium and large food processing industries.

The negative relationship indicates that the growth of import competition encourages a decrease in the number of businesses. This suggests that more small, medium and large scale food processing businesses are unable to develop more efficient systems to compete, thus responding to import competition out of the market. This reinforces the same thing that Melitz has proposed, (2003); Melitz dan Ottaviano, (2008).

Such a situation is a picture of the capacity of the small-to-large food processing industry in responding to the competition of imported fruit products as raw materials. The exit of some industries from the market can be due to the low ability to produce efficiently. Melitz and Ottaviano(2008) argue that higher competition conditions will drive the market lower average mark-ups and increase aggregate productivity. This means that industries that can not change the structure of the industry and adapt to the potential of cheaper raw materials, will be difficult to compete and cause forced to leave the market.
CONCLUSION

This study has attempted to answer how the response of Indonesian fruit farming in the face of import competition from 6 major imported fruit commodities. The result of analysis shows that there is no significant influence between import competition with performance of wide growth of production area, production, productivity of Indonesian fruit commodity. This shows that there is a clear vertical differentiation between Indonesian fruit products and imported fruits. The same is true for the performance of micro scale fruit processing business, which also does not have a significant pro-competitive impact as a result of penetration of imported fruit products.

Meanwhile, the fruit import competition showed significant negative effect on the performance of small to medium-sized fruit processing business. This demonstrates the ability of the Indonesian processing industry to reduce inefficiency, adapt to the potential of cheaper imported raw materials and increase productivity.

This Research has known to have large aggregation, this condition has driven to condition that has not been able to detail the impact of import competition on production and trade performance. In addition, the availability of data within sufficient timeframe becomes an obstacle to obtain a feasible result to be used to predict the quantification of import competition impact on production performance.
REFERENCES


APPENDIX

Table 2. Import Volume of top ten highest imported fruits by Indonesia 2001-2016 (tons)

<table>
<thead>
<tr>
<th>HS Code</th>
<th>'0808</th>
<th>'0810</th>
<th>'0805</th>
<th>'0806</th>
<th>'0804</th>
<th>'0801</th>
<th>'0802</th>
<th>'0811</th>
<th>'0813</th>
<th>'0809</th>
<th>'08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups of Product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples, pears and quinces, fresh</td>
<td>137.455</td>
<td>17.256</td>
<td>75.606</td>
<td>11.378</td>
<td>11.569</td>
<td>11.569</td>
<td>207</td>
<td>621</td>
<td>412</td>
<td>1.010</td>
<td>336</td>
</tr>
<tr>
<td>Fresh strawberries, raspberries, black, white or red currants, gooseberries and currants</td>
<td>127.296</td>
<td>30.108</td>
<td>77.088</td>
<td>17.547</td>
<td>1.274</td>
<td>496</td>
<td>304</td>
<td>231</td>
<td>437</td>
<td>266.893</td>
<td></td>
</tr>
<tr>
<td>Grapes, fresh or dried</td>
<td>104.081</td>
<td>26.057</td>
<td>57.454</td>
<td>15.847</td>
<td>901</td>
<td>456</td>
<td>142</td>
<td>2.892</td>
<td>482</td>
<td>221.214</td>
<td></td>
</tr>
<tr>
<td>Dates, figs, bananas, mangoes and mangoes, fresh or dried</td>
<td>188.307</td>
<td>47.239</td>
<td>95.159</td>
<td>30.153</td>
<td>1.169</td>
<td>760</td>
<td>166</td>
<td>1.158</td>
<td>343</td>
<td>379.439</td>
<td></td>
</tr>
<tr>
<td>Apricots, cherries, peaches incl. nectarines, plums and sloes, fresh</td>
<td>207.368</td>
<td>54.678</td>
<td>84.357</td>
<td>26.445</td>
<td>994</td>
<td>650</td>
<td>274</td>
<td>1.001</td>
<td>360</td>
<td>390.364</td>
<td></td>
</tr>
</tbody>
</table>
ABSTRACT

In line with the Mission of the Ministry of health of Indonesia which is "Manifest the human quality of life high, Indonesia advanced and prosperous" (Moeloek, 2016:1). Regulation of the Ministry of health no: HK. 02/MENKES/391/2014, that standard class to Reference Regional Hospital is located in class B, while for the Hospital District or city class C and D. In this research design used was the design of the eksplanatori by using the Mixed Method Research. The data for this study were gathered during February-June 2017 through questionnaires in regional referral hospital at 5 provinces in Indonesia. Variables used in this study were structural capital, and entrepreneurial orientation and performance regional referral hospital in Indonesia. We found that Structural Capital significantly influence the Orientation of Entrepreneurial at Regional Referral Hospital in Indonesia. Then the implementation of the entrepreneurial orientation have influence significantly on the performance of Regional Referral Hospitals in Indonesia. Structural Capital significantly influence the Hospital Performance at Regional Referral Hospital in Indonesia. The results of this study the performance of Regional Hospital in Indonesia has not been optimal. One measure in entrepreneurship orientation is independence. Independence from hospitals in the territory of Indonesia, in this case has gone well. This can be seen from the ability to obtain operational funds by the Ministry of Health through fixed ceiling.

Keywords: Structural capital, Entrepreneurial Orientation, Performance Regional Referral Hospitals
DOES INCOME SMOOTHING IMPROVES INFORMATIVENESS OF STOCK PRICES?

Shinta Ningtiyas Nazar
Universitas Pamulang, Indonesia

ABSTRACT

The purpose of this research is to get empirical evidence from effect Income smoothing to Informativeness of Stock Prices in Indonesian Stock Exchange (IDX). Population from this research is take from companies that have been listing Index LQ 45 in IDX form 2003 until 2015. Income Smoothing is measured by Jones’s Model which have been modified by Kothari et. all (2005). Informativeness of stock price using Zarowin and Tucker Model (2006) Future Earnings Response Coefficient, and the relations to earnings persistence, which is can been seen from relation from current earnings dan future earnings. The research is using data from year 2003 until 2015 period, and year 2014 used as terminal year. That found income smoothing have a negative effect to informativeness of stock price and also found the managers’ income smoothing action always decreases earnings from 2013 to 2015. Current earnings have related to future earnings.

Keywords: Pre-Discretionary Income; Future Earnings Response Coefficient; Earnings Persistence; Index LQ 45
FOREIGN DIRECT INVESTMENT AND INTER PROVINCE CONVERGENCE OF INCOME IN INDONESIA: SPATIAL AUTOREGRESSIVE APPROACH

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Tony Irawan  
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ABSTRACT

Foreign Direct Investment (FDI) has attracted more attention among policymakers including Indonesia. This is because FDI is believed to be able to accelerate economic growth in host country. Although its value continues to increase, the inequality of FDI between provinces in Indonesia is still quite high. In fact, this could increase the inequality of inter province income. The dynamics of this kind of inequality could be analyzed by convergence concept. Therefore, the analysis in this study uses β-convergence model which added the FDI variable, human capital investment, and interaction among region spatially (spillover effect). This study uses provincial-level annual data during 2010-2015 which is obtained from several agencies of the Republic of Indonesia. The analysis shows that there is a convergence of income in Indonesia, although it happened very slowly. In addition, it was also found that FDI has no effect on economic growth. The convergence of income occurs faster after FDI and human capital investment are considered in the model, but the magnitude has been corrected to be smaller after inter regional interactions are also considered.

Keywords: convergence, FDI, spatial
THE INFLUENCE OF FISCAL DECENTRALIZATION DEGREES, FISCAL SPACE, AND SILPA FINANCING RATE TOWARDS THE EXPENDITURE ALLOCATION OF LOCAL GOVERNMENT

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ABSTRACT

The purpose of this study is to analyze the influence of degree of fiscal decentralization, fiscal space, and financing SILPA rate. This study uses secondary data with 346 district and city are selected to be used as sample for five years with multiple linear regression analysis. The results showed that fiscal decentralization, fiscal space, and financing SILPA rate simultaneously affect capital expenditure allocation. Partially, degree of fiscal decentralization, fiscal space, and financing SILPA rate affect positively to capital expenditure allocation.

Keywords: capital expenditure allocation, degree of fiscal decentralization, fiscal space, financing SILPA rate
INTRODUCTION

Regional autonomy in Indonesia began since January 1, 2001. Firstly, it started with the legalization of Law No. 22/2004 concerning Financial Balancing between the Central and the Local Government. Secondly, that law has been revised several times until Law No. 33/2004 concerning Local Government and Law No. 33/2004 concerning Financial Balancing between the Central and the Local Government were released.

Essentially, the Government carry three main functions namely distribution, stabilization, and allocation. Distribution and stabilization are generally more effective and precisely implemented by the Central Government, while allocation is implemented by the Local Government who are more aware of their local community’s needs, condition, and situation (Law No.33/2004).

The main purpose of the local government is to provide services to its community. They allocate financial sources they have into their expenditure to meet public needs for public facilities and infrastructures. Mardiasmo (2002) stated that government expenditure could bolster public welfare and increase public services. In addition, expenditure that the local government spends has a significant influence on the economic growth of the region. The realization of the expenditure will have multiplier effect to make the regional economy run well. Therefore, the higher the expenditure, hopefully, the better impact on economic growth (Ministry of Finance, 2014).

The allocation of expenditure of local governments between 2010 and 2014 has not been in accordance with the mandate of Presidential Regulation No. 5/2010 concerning the National Medium Term Development Plan for 2010-2014, Minister of Home Affairs Regulation No. 37/2010, Regulation of the Minister of Home Affairs No. 22/2011, Regulation of the Minister of Home Affairs No. 37/2012, and Regulation of the Minister of Home Affairs No. 27/2013 concerning a Guidelines for the Preparation of APBD. Regulation of the President of the Republic of Indonesia No.5/2010 concerning the National Medium Term Development Plan for 2010-2014 stated that in terms of increasing the quality of expenditure in APBD where the amount of expenditure that was allocated in APBD Fiscal Year 2010-2014 was at least equal to 26% in 2010, 27% in 2011, 28% in 2012, 29% in 2013, and 30% in 2014. In fact, the average allocation of local governments’ expenditure was only 21.24% in 2010, 21.23% in 2011, 22.96% in 2012, 24.71% in 2013, and 24.93% in 2014. Table 1.1 shows the average allocation of local governments’ expenditures in 2010-2014.

Table 1.1 Allocation of local governments’ expenditures in 2010-2014.

<table>
<thead>
<tr>
<th>Komponen Belanja Daerah</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Expenditure</td>
<td>52,57%</td>
<td>51,88%</td>
<td>51,77%</td>
<td>48,83%</td>
<td>47,55%</td>
</tr>
<tr>
<td>Goods &amp; Service Expenditure</td>
<td>16,51%</td>
<td>18,64%</td>
<td>18,20%</td>
<td>19,29%</td>
<td>20,90%</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>21,24%</td>
<td>21,23%</td>
<td>22,96%</td>
<td>24,71%</td>
<td>24,93%</td>
</tr>
<tr>
<td>Other Expenditure</td>
<td>9,68%</td>
<td>8,25%</td>
<td>7,08%</td>
<td>7,17%</td>
<td>6,61%</td>
</tr>
<tr>
<td>Total local Expenditure</td>
<td>100,00%</td>
<td>100,00%</td>
<td>100,00%</td>
<td>100,00%</td>
<td>100,00%</td>
</tr>
</tbody>
</table>
“Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives”
Data from the Ministry of PPN / Bappenas indicated that before the reformation of local government, the expenditure compared to GDP was much higher than the allocation of expenditure after the reformation in local government. Chart 1.1 shows that before the reformation of local government, expenditure compared to GDP was much higher than the allocation of expenditure after the reformation of local government. The proportion of expenditure allocation compared to GDP before 1999 was from 3 to 5.6 percent. After 1999, the proportion of expenditure allocated compared to GDP was only from 1.2 to 3.4 percent.

Source: The data is adopted from Ministry of PPN/Bapenas
Figure 1.1 The Comparison of Expenditure/GDP

As a consequence of the broad autonomy authority, local governments have an obligation to improve the services and welfare of society fairly, equitably and sustainably (Halim, 2001). Furthermore, Halim (2001) stated that the obligation can be fulfilled if local governments are able to manage the potential of their region which is the potential of natural resources, human resources and potential financial resources optimally.

Studies concerning the allocation of expenditure had been done several times, but there were inconsistency conclusions. Sularso and Restianto (2011) conducted a research concerning influences of financial performance on expenditure allocation and economic growth of regencies in Central Java. The result of the research which collected the data from 2006-2009 showed that the dependency of regional finance, regional financial independence, PAD effectiveness, and the contribution of BUMD had positive and significant impact on expenditure allocation, while the degree of fiscal decentralization has no influence on expenditure allocation.

Suwandi and Tahar (2015) conducted a study on the influences of financial performance toward regional economic growth with the allocation of expenditure as an intervening variable at the local governments in D.I. Yogyakarta in 2003-2012. The result of the research discovered that the degree of fiscal decentralization and regional financial dependency had negative and significant influences on expenditure allocation, PAD effectiveness has positive and significant influence to expenditure allocation, while the contribution of BUMD did not affect the allocation of expenditure.
Gerungan, Saerang, and Pontoh (2015) conducted a research concerning the influences of financial performance toward North Sumatra Province’s expenditure allocation in 2007-2011. The results showed that the effectiveness of PAD and the accord of expenditure had a positive and significant influence on expenditure, regional financial independence and local financial efficiency had a negative and significant influence on expenditure. Meanwhile, financial dependency and capital expenditure effectiveness had no significant influence on expenditure. Simultaneously, these variables had a significant influence.

Huda, Herawanti, and Pancawati (2015) conducted a research concerning the influences of financial performance, fiscal stress, and population density on the allocation of expenditure in West Nusa Tenggara in 2010-2014. The results showed that the degree of fiscal decentralization and fiscal space had a positive and significant impact on capital expenditure, while financial dependence and population density had a negative and significant influence on capital expenditure. Meanwhile, financial independence, fiscal stress and SILPA financing rate had no significant effect on expenditure.

Arsa and Setiawina (2015) conducted a research on the influence of financial performance on expenditure allocation and economic growth of local government in Bali Province in 2006-2013. The results showed that the degree of fiscal decentralization and effectiveness of PAD had a positive and significant impact on expenditure, while financial dependence had a negative and significant influence on capital expenditure. Meanwhile, the contribution of BUMD and financial independence had no significant influence on expenditure.

A research conducted by Martini and Dwirandra (2015) research the influence of regional financial performance on expenditure allocation in Bali Province 2007-2012 showed that regional finance dependence, SILPA financing rate and local financial efficiency had a negative and significant influence on expenditure allocation, fiscal space had positive and significant to the allocation of expenditure, while the effectiveness of PAD and BUMD contribution did not affect the allocation on expenditure.

In order to increase expenditure allocation, it is necessary to understand the variables that affect the allocation of capital expenditure. Based on the previous researches, the local government's financial capacity had proven to influence the allocation of the expenditure, but there were inconsistency results in the previous researches related to the influence of local government's financial capability on expenditure allocation. The inconsistency of research results in the previous researches was related to the influence of the fiscal decentralization degree, regional financial dependency, and SILPA financing rate. Therefore, the researcher tried to strengthen the conclusions generated by the previous researches and develop other variables based on the theory used.

Another possible factor affecting the funding requirement related to the allocation of expenditure is fiscal space. The fiscal space measures the flexibility of local governments in allocating APBD to fund activities that are regional priorities. The bigger the fiscal space owned by a region, the bigger the flexibility of its government to allocate their expenditure on activities that become regional priorities such as infrastructure development of the region. Based on the background of the study above, it is conducted a research entitled "The Influence of Fiscal Decentralization Degrees, Fiscal Space, And Silpa Financing Rate Towards the Expenditure Allocation of Local Government". This study aimed to examine the influence the degree of fiscal decentralization, regional financial dependence, fiscal space, and the SILPA financing rate on capital expenditure allocation.
THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Agency Theory

Agency theory is explained by Jensen and Meckling (1976) that agency relationships are a contract that occurs when a person or more (principal) employs another agent to provide a service while authorizing the principal's interest in decision-making. The principal-agent theory analyzes the contractual arrangements between two or more individuals, groups, or organizations (Halim and Abdullah, 2006). One party (principal) makes a contract, either implicitly or explicitly, with the other party (agent) in the hope that the agent will act/do the job as the principal wishes.

The problem of the agency arises because of a conflict of interest between the shareholder and the manager, because of the absence of maximum utility between them (Jensen and Meckling, 1976 in Lisa, 2012). As an agent, managers are morally responsible for optimizing the benefits of the principal, but on the other hand, managers also have an interest in maximizing their welfare. So there is a possibility that agents will not always act in the best interests of the principal.

Local Government Financial Statements

The local government as one of the reporting entities is obliged to inform the financial condition through the Local Government Financial Report (LKPD). The financial statements are a form of responsibility from the central government regarding the enactment of regional autonomy which also includes regional finance.

Based on Government Regulation No. 71 on Government Accounting Standards (SAP), the components contained in a set of accrual basis financial statements consist of budgetary reports and financial statements, which, if described, are as follows: Budget Realization Report, Report on Changes in the More Budget Balance, Operating Statements, Statements of Changes in Equity, Balance Sheet, Statements of Cash Flows and Notes to Financial Statements.

Regional Budget (APBD)

According to Permendagri No. 13 of 2006, the Regional Revenue and Expenditure Budget (APBD) is defined as an annual financial plan of local governments discussed and mutually agreed upon by the local government and DPRD and established by local regulations. APBD is the basis of local government in managing local finances to provide services to the public within a budget year. Based on Permendagri No.13 of 2006 on Guidelines for Regional Financial Management, stated that the structure of APBD consists of income, expenditure, and financing.
Regional Income

Regional revenue is the right of local government to be recognized as an increase in net worth value in the period of the year (Law No. 33 of 2004). Regional revenues in the APBD structure are grouped into the Local Revenue (PAD), balance funds, and other legitimate income. In the Elucidation of Law no. 33 of 2004 states that the Regional Original Income (PAD) is regional income derived from the results of local taxes, regional retributions, separated regional wealth management, and other legitimate local revenue, which aims to provide flexibility to the region in to explore funding in the implementation of regional autonomy as a manifestation of the principle of decentralization. Indigenous revenue groups are divided by type of income consisting of: local taxes, regional levies, separated regional wealth management results, and other legitimate local revenue.

Regional Expenditure

In Law no. 33 Year 2004, regional expenditure is all regional obligations recognized as deduction of net worth value in the period of the relevant fiscal year. Regional expenditure is used in the framework of financing the execution of governmental affairs under the jurisdiction of provinces / districts / municipalities comprising mandatory affairs, matters of choice, and matters handling them in certain sections or fields which may be undertaken with the central and local governments or between specified local governments with the provisions of legislation. The classification of expenditure under Government Regulation No. 71 of 2010 on Government Accounting Standards for financial reporting purposes are: Operating expenditures, Capital expenditures Other expenditures / unexpected expenditures, and Shopping transfers.

Regional Financing

According to Law no. 33 In 2004, financing is any revenues that need to be refinanced and / or expenditures to be reimbursed both in the relevant fiscal year as well as in subsequent fiscal years. Regional financing comes from: more last year's budget calculations, transfers from reserve funds, disbursed property sales proceeds, and local loans.

Regional Financial Capability

Local government as the party given the task of running the government, development and public services must report the accountability of regional finances as a basis for the assessment of financial capacity. In Government Regulation no. 105 year 2000, states that the regional finance is all the rights and obligations of the region in the framework of the implementation of local government which can be assessed with money including all other forms of wealth related to the rights and obligations of the region within the framework of APBD. One tool to analyze the ability of local governments in managing their regional finances is to carry out a ratio analysis to the APBD that has been established and implemented.
In the framework of transparent, honest, democratic, effective, efficient and accountable financial management, the analysis of financial ratios to regional expenditures needs to be implemented (Mardiasmo, 2002). Some financial ratios that can be used to measure the financial capacity of local governments are regional financial self-sufficiency, fiscal decentralization degree, effectiveness towards local revenue, regional financial efficiency and harmonization of spending (Halim, 2001). According to Tangkilisan (2005), the financial capacity of local government can be seen from the degree of fiscal decentralization, fiscal needs, fiscal capacity, fiscal effort, standard PAD level, and PAD elasticity.

**Degree of Fiscal Decentralization**

The degree of fiscal decentralization is the level of regional capability in fiscal self-reliance. The degree of fiscal decentralization shows the degree of contribution of local revenues to total local revenue (Mahmudi, 2007). In addition, the degree of fiscal decentralization is also interpreted as the ability of local governments in order to increase local revenues to finance regional development. The higher the degree of fiscal decentralization means that local governments are better able to implement autonomous regional administrations as part of decentralization. PAD is revenue derived from local taxes, regional levies and other legitimate income (Mahmudi, 2007).

**Fiscal Space**

Fiscal space is a concept to measure the flexibility that local governments have in allocating APBDS to finance activities that are priority areas (Ministry of Finance, 2013). The greater the fiscal space owned by a region will be the greater the flexibility of local governments to allocate their spending on activities that become regional priorities such as the development of regional infrastructure. The calculation of fiscal space of the region is the total of regional income minus the grant income, the earmarked income is DAK, special autonomy fund and adjustment fund and emergency fund, and the binding expenditure of employee and interest expense (Ministry of Finance, 2014).

**SILPA Financing Rate**

The remainder of the Budget Financing according to Statement of Government Accounting Standard (PSAP) 02 in Government Regulation (PP) 71 Year 2010 in Paragraph 7 represents the excess difference between LRA revenue realization and expenditure, as well as revenue and expenditure of financing in APBD for one period. The level of SILPA financing is the ratio between SILPA and total expenditure last year (Huda et al., 2015).

SILPA previous budget year includes exceedance of PAD revenue, exceedance of receipt of balancing fund, exceedance of acceptance of other valid regional income, exceedance of financing receipt, expenditure savings, obligations to third party up to the end of the year not yet settled, and remaining fund of follow-up activities.

Abdullah and Rona (2014) stated that, the remaining budget over the previous year which became revenue in the current year is a source of local government revenue that can be used to finance the activities of the current year. Local governments tend to budget the deficit due to the existence of SILPA in their APBD, meaning that in general the regions are not in real deficit condition, the regions budgeted deficit due to absorbing SILPA the previous year (Ministry of Finance, 2013).
Capital Expenditure

Based on PSAP 02 in PP no. 71 Year 2010, capital expenditure is the expenditure of the budget for the acquisition of property and equipment and other assets that benefit more than one accounting period. Capital expenditures include capital expenditures for land acquisition, buildings and buildings, equipment, intangible assets.

According Sularso and Restianto (2011), capital expenditures are classified into two groups. The first group is public expenditure, i.e. the expenditures that the benefits can be directly enjoyed by the community, such as the construction of bridges, the purchase of ambulances for public etc. The second group is the expenditure of the apparatus that is the benefit that is not enjoyed directly by the community but can be felt directly by the apparatus such as the construction of the council building, the purchase of official cars and others.

Hypothesis Formulation

The Effect of Fiscal Decentralization Degrees on Capital Expenditure Allocation

The degree of fiscal decentralization shows the degree of contribution of the original revenues to total local revenue. In addition, the degree of fiscal decentralization is also defined as the ability of local governments in order to increase local revenues to finance regional development (Mahmudi, 2007). PAD as a component of calculating the degree of fiscal decentralization is an important source of income to be allocated in the development of regional infrastructure (Kusnandar and Siswantoro, 2012). The higher the PAD obtained, the higher the funds the government can use in building public services for the community.

Research conducted by Arsa and Setiawina (2015) and Gerungan et al. (2015) indicates that the degree of fiscal decentralization has a positive influence on the allocation of capital expenditure. Unlike Suwandi and Tahar (2015), however, the degree of fiscal decentralization has a negative impact on the allocation of capital expenditures. While research with Sularso and Restianto (2011) shows no effect of fiscal decentralization degree has a negative effect on the allocation of capital expenditure. From some previous research, there are still findings of inconsistent research results so that researchers need to do a test again to know the consistency of research findings allocation of capital expenditure into the hypothesis as follows:

H1: the higher the degree of fiscal decentralization of local governments, the greater the allocation of capital expenditure.

Influence of Fiscal Space on Capital Expenditure Allocation

The greater the fiscal space owned by a region will be the greater the flexibility of local governments to allocate their spending on activities that become regional priorities such as the development of regional infrastructure. Enlarging the fiscal space of the regions for capital expenditure is very important because it can be a stimulus of the regional economy (Ministry of Finance, 2014). Research conducted by Martini and Dwirandra (2015) and Huda et al. (2015) stated that last year's fiscal space had a positive effect on capital expenditure allocation. A positive relationship means the greater the fiscal space of last year, the greater the allocation of capital expenditure in the next year. According to Sandri et al. (2015) fiscal space can play a role to encourage the development and provision of regional infrastructure so that it is expected to improve the welfare of the community. Based on the description above, it can be developed the hypothesis:
H2: the greater the fiscal space of local government, the greater the allocation of capital expenditure.

**Effect of SILPA Financing Rate on Capital Expenditure Allocation**

According to PSAP 02 in Government Regulation no. 71 Year 2010, SILPA represents the difference between LRA-revenue realization and expenditure, as well as revenues and expenditure of financing in APBN / APBD during one reporting period. SILPA is an indicator that describes the efficiency of government spending. SILPA is actually an indicator of efficiency, because SILPA will only be formed when there is a surplus in the APBD and at the same time there is a positive net financing, where the revenue component is greater than the component of financing expenditure (Balai Litbang NTT, 2008 in Kusnandar and Siswanto, 2012).

Research conducted by Kusnandar and Siswanto (2012) and Sugiarthi and Supadmi (2014) shows that the SILPA financing rate positively affects the allocation of capital expenditure. A positive relationship means that the greater the level of SILPA financing last year, the greater the capital expenditure in the next year. However, unlike research conducted by Martini and Dwirandra (2015) which shows that SILPA financing rate negatively affect the allocation of capital expenditure. While research conducted by Huda et al. (2015) shows that SILPA financing rates have no effect on capital expenditure allocation.

From some previous research, there are still findings of inconsistent research results so that researchers need to do a test again to know the consistency of research findings allocation of capital expenditure into the hypothesis as follows:

H3: the higher the level of local government SILPA financing, the greater the allocation of capital expenditure.

**FRAMEWORK**

This study will examine the effect of the degree of fiscal decentralization, fiscal space, and SILPA financing rates on the allocation of capital expenditure to districts in Indonesia. Dependent variable is the allocation of capital expenditure in districts / cities in Indonesia 2011 to 2015. Independent variables used include the degree of fiscal decentralization, fiscal space, and financing level of SILPA kabupaten / kota in Indonesia 2010 to 2014.

Based on the above conceptual framework, it can be described as follows:

1. the higher the degree of fiscal decentralization of regional governments, the greater the allocation of capital expenditures;
2. the greater the fiscal space of local government, the greater the allocation of capital expenditure; and
3. the higher level of local government SILPA financing, the greater the allocation of capital expenditure.

**METHODOLOGY**

Population in this research is all district/city in Indonesia that is 508 districts/ cities. The sample of the research is the district/city government within five years. Hypothesis testing is done by using multiple linear regression model with SPSS statistical application as statistical data processing tool. This study uses the realization of APBD 2010 to 2014 as
well as data on allocation of capital expenditures of local governments districts/cities in 2011 until 2015 contained in the website of Directorate General of Regional Fiscal Balance (DJPK) Ministry of Finance and Audit Result Report BPK.

This research regression equation model is as follows:

\[
\text{Ln}_\text{BM} \, it = \alpha_0 + \beta_1 \text{DDF} \, it + \beta_2 \text{RF} \, it + \beta_3 \text{SILPA} \, it + \varepsilon \, it
\]

- \( \text{BM} \) : capital expenditure allocation
- \( \text{DDF} \) : degree of fiscal decentralization
- \( \text{RF} \) : fiscal space
- \( \text{SILPA} \) : financing SILPA rate
- \( \alpha, \beta_1, \beta_2, \beta_3, \beta_4 \) : regression coefficient
- \( \varepsilon_1, \varepsilon_2 \) : standard error

Dependent variable in this research is capital expenditure allocation, while the independent variable is the degree of fiscal decentralization, fiscal space, and financing SILPA rate. The operational definition describing the variables used in this study is as follows.

1. Capital expenditure allocation
   According to Governmental Regulation No. 71 of 2010, capital expenditure is the expenditure of the budget for the acquisition of property and equipment and other assets that provide benefits over one accounting period. The value of capital expenditure allocation is derived from the capital expenditure budget presented in APBD in the following year \( (t + 1) \).

2. Degree of fiscal decentralization
   The degree of fiscal decentralization is the level of regional capability in fiscal self-reliance (Mahmudi, 2007). An area is said to be eligible to become an autonomous region if one of its conditions has a financing capability derived from its own potential. The higher the contribution of PAD, the higher the ability of local governments in the implementation of decentralization, and vice versa. The degree of fiscal decentralization is calculated based on the ratio between the amount of Local Own-source Revenue (PAD) with total regional revenue (Mahmudi, 2007).

3. Fiscal space
   Fiscal space according to the Ministry of Finance (2013) is a concept to measure the flexibility of local governments in allocating APBD to finance activities that are priority areas. The calculation of regional fiscal space ratio is the total regional income less the grant income, the earmarked income, and the binding expenditure of personnel expenditure and interest expenditure, then divided by total revenue (Ministry of Finance, 2013).

4. Financing SILPA Rate
   According to PSAP 02 in Government Regulation No. 71 Year 2010, SILPA represents the difference between LRA-revenue realization and expenditure, as well as revenues and expenditure of financing in APBN / APBD during one reporting period. According to Huda et al. (2015) the SILPA financing rate demonstrates the ability of local governments to absorb the remainder of the previous year's budget used to cover the
APBD deficits. The level of SILPA financing is the ratio between SILPA and total expenditure last year (Huda et al., 2015).
The calculation formula is as follows.

\[
\text{Financing SILPA Rate} = \frac{\text{SILPA}}{\text{Total Regional Expenditure}}
\]

RESULT

The study sample consist of 346 district / municipal governments with 1,730 observations. The results of the selection of research samples are presented in the table as follows:

Table 4.1 Number of Data Sample Research

<table>
<thead>
<tr>
<th>No.</th>
<th>Kriteria Sampel</th>
<th>Jumlah</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of district / city governments in Indonesia</td>
<td>508</td>
</tr>
<tr>
<td>2.</td>
<td>Number of district / municipal governments with incomplete data available for five years</td>
<td>(131)</td>
</tr>
<tr>
<td>3.</td>
<td>Number of district / municipal governments that have no local revenue / transfer funds / SILPA</td>
<td>(31)</td>
</tr>
<tr>
<td>4.</td>
<td>Number of district / municipal governments used as research samples</td>
<td>346</td>
</tr>
<tr>
<td>5.</td>
<td>Number of years research</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>The amount of sample research data</td>
<td>1,730</td>
</tr>
</tbody>
</table>

Table 4.2 Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDF</td>
<td>1730</td>
<td>.44</td>
<td>54.64</td>
<td>8.3677</td>
<td>6.97387</td>
</tr>
<tr>
<td>RF</td>
<td>1730</td>
<td>5.12</td>
<td>76.38</td>
<td>32.1550</td>
<td>12.85970</td>
</tr>
<tr>
<td>SILPA</td>
<td>1730</td>
<td>.00</td>
<td>79.40</td>
<td>12.7530</td>
<td>9.38279</td>
</tr>
<tr>
<td>BM</td>
<td>1730</td>
<td>.00</td>
<td>2154123.71</td>
<td>249280.3159</td>
<td>225140.75695</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>1730</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above shows the number of observations in the study (N) of 1,730 district / city governments. The fiscal decentralization degree variable has an average of 8.36%. The highest degree of fiscal decentralization is 54.64%, while the lowest degree of fiscal decentralization is 0.44%. The highest degree of fiscal decentralization is found in the Surabaya City Government in 2014, while the lowest fiscal decentralization degree is in the South Buru District Government in 2010. The standard deviation of the fiscal decentralization degree is 6.97%.

The fiscal space variable has an average of 5.12%. The highest fiscal space is 76.38%, while the lowest fiscal space is 32.15%. The highest fiscal space is in the Government of North Penajam Paser District in 2012, while the lowest fiscal space is found in Agam Regency Government in 2011.
The standard deviation of fiscal space is 12.85%. The variable rate of SILPA financing has an average of 0.10%. The highest SILPA financing rate was 79.40%, while the lowest SILPA financing rate was 12.75%. The highest SILPA financing rate is available to Kolaka Regency Government in 2013, while the lowest SILPA financing rate is available to the Government of Banyuasin Regency in 2010. The standard deviation of SILPA financing rate is 9.37%.

Based on table 4.1 it can be seen that the average capital expenditure of district / city governments in Indonesia in 2011-2014 is Rp249,375,61 million. The highest capital expenditure is Rp2,154,123,71 million at Bengkalis Municipal Government in 2013, while the lowest capital expenditure is Rp20,434.10 million at Tebing Tinggi Municipal Government in 2011.

Table 4.3 Coefficient of Determination Test (R2)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adj. R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.613(^{a})</td>
<td>.375</td>
<td>.374</td>
<td>178121.40949</td>
<td>.613</td>
</tr>
</tbody>
</table>

\(^{a}\) Predictors: (Constant), SILPA, DDF, RF

The table above shows that the adjusted R-square value is 0.375 (37.5 percent). Based on the test it can be said that the research model is able to explain the dependent variable by 37.5 percent while the rest of 66.5 percent is explained by other variables outside the research model that affect the allocation of capital expenditure of the district / city government in Indonesia.

Table 4.4 Simultan Test (Test F)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>32878964966754.797</td>
<td>3</td>
<td>10959654988918.266</td>
<td>345.434</td>
<td>.000(^{b})</td>
</tr>
<tr>
<td>Residual</td>
<td>54761210230342.516</td>
<td>1726</td>
<td>31727236518.159</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>87640175197097.310</td>
<td>1729</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{a}\) Dependent Variable: BM
\(^{b}\) Predictors: (Constant), SILPA, DDF, RF

Based on F test results in the table above shows that the value of F arithmetic is 345,434 with a significance value of 0.000. The significance value is less than 0.05 or 5 percent so it can be said that the degree of decentralization, fiscal space, and the remaining financing rate of the budget calculations together influence the dependent variable with a 95% confidence level.
Table 4.5 Partial Test (t-Test)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-92723.728</td>
<td>12333.589</td>
<td>-7.518</td>
<td>.000</td>
</tr>
<tr>
<td>DDF</td>
<td>13529.422</td>
<td>624.305</td>
<td>.419</td>
<td>21.671</td>
</tr>
<tr>
<td>RF</td>
<td>6317.777</td>
<td>369.639</td>
<td>.361</td>
<td>17.092</td>
</tr>
<tr>
<td>SILPA</td>
<td>2010.951</td>
<td>513.349</td>
<td>.084</td>
<td>3.917</td>
</tr>
</tbody>
</table>

Description: DDF = Degree of Fiscal Decentralization, RF = Fiscal Space, SILPA = Financing Rate of SILPA
Dependent Variable: BM

The table above shows the significance value of each independent variable research. Based on the value of significance, the variable of decentralization degree, fiscal space, and financing rate of SILPA have significant influence to capital expenditure allocation.

**DISCUSSION**

**Effect of Fiscal Decentralization Degrees on Capital Expenditure Allocation**

Partial test results show that the degree of fiscal decentralization has a significance value of 0.0000. This value is less than 0.05 or 5 percent, which means that the degree of fiscal decentralization has a significant effect on capital expenditure allocation. The regression coefficient for fiscal decentralization degree of 0.419 shows the effect of positive relationship to capital expenditure allocation. Based on the above test results it can be concluded that the first hypothesis (H1) accepted that the higher the degree of fiscal decentralization of local governments, the greater the allocation of capital expenditure.

These results are consistent with previous research conducted by Arsa and Setiawina (2015), and Huda et al. (2015) that the degree of fiscal decentralization has a positive effect on capital expenditure. According to Huda et al. (2015), with fiscal decentralization, local governments have wider powers in local financial management, so that local governments can increase local government capital expenditure allocations. The fiscal decentralization degree variable in this study is proxied as the ratio of total local revenue (PAD) to total local revenue. PAD is regional income derived from local taxes, regional retributions, separated regional wealth management results, and other legitimate local revenue, which aims to provide flexibility to regions in exploring funding in the implementation of regional autonomy as a manifestation of the principle of decentralization (Elucidation of Law Number 33 Year 2004). This means that PAD is a means for local governments to explore the potential revenue from their respective regions. Local governments are given the freedom to use PAD to finance programs and activities that are the focus of each local government. The results of this study indicate that the increasing degree of fiscal decentralization shown by increasing PAD to total revenue will increase the allocation of local government capital expenditure.
Influence of Fiscal Space on Capital Expenditure Allocation

Partial test results show that the fiscal space has a significance value of 0.000. This value is greater than 0.05 or 5 percent, indicating that the fiscal space significantly affects the allocation of capital expenditure. The regression coefficient for the fiscal space of 0.361 shows the effect of positive relationship to the allocation of capital expenditure. Based on the above test results, it can be concluded that the third hypothesis (H3) accepted that the greater the fiscal space of local governments, the greater the allocation of capital expenditure.

This result is in line with research conducted by Huda et al. (2015) and Martini and Dwirandra (2015) which stated last year's fiscal space had a significant effect on the direction of positive relationship to capital expenditure allocation. Fiscal space measures the flexibility that local governments have in allocating APBDs to finance activities that are regional priorities. The greater the fiscal space owned by a region, the greater the flexibility of local governments to allocate their spending to activities that are priority areas such as the development of regional infrastructure (Ministry of Finance, 2014). According to Huda (2015) local governments need to enlarge fiscal space because the fiscal space of the region is currently very limited because most of the budget is used for routine expenditure.

The Effect of SILPA Financing Rate on Capital Expenditure Allocation

The partial test results show that the SILPA financing rate has a significance value of 0.000. This value is greater than 0.05 or 5 percent, indicating that the SILPA financing rate significantly affects capital expenditure allocation. The regression coefficient for financing rate of SILPA of 0.084 indicates the effect of positive relationship to capital expenditure allocation. Based on the above test results it can be concluded that the fourth hypothesis (H4) accepted that the higher level of local government SILPA financing, the greater the allocation of capital expenditure.

The results of this study support research conducted by Kusnandar and Siswantoro (2012), Sugiarthi and Supadmi (2014) stating that the level of SILPA financing has a positive and significant impact on capital expenditure allocation. SILPA is actually an indicator of efficiency, because SILPA will only be formed if there is a surplus in the APBD and at the same time become a positive net financing, where the revenue component is greater than the component of financing expenditure (Balai Litbang NTT, 2008 in Kusnandar and Siswantoro, 2012). According to Martini and Dwirandra (2015) stated that other funding sources for the allocation of capital expenditure for the provision of public facilities are regional revenues sourced from the previous Budget Funding Over Time (SILPA) of the previous fiscal year. SILPA in the previous year may be used by local governments as additional source of financing for the next period. Abdullah and Rona (2014) state that the remaining budget over the previous year (SILPA), which became revenue in the current year, is a source of local government revenue that can be used to finance the activities of the current year.
CONCLUSION

Based on the results of the tests that have been done, jointly the degree of fiscal decentralization, fiscal space, and the financing SILPA rate have a significant effect on the allocation of capital expenditure. Partially, the results of research indicate that the higher the degree of fiscal decentralization of local governments, the greater the allocation of capital expenditure. The greater the fiscal space of local government, the greater the allocation of capital expenditure. The higher the level of local government SILPA financing, the greater the allocation of capital expenditure.

Research conducted is inseparable from some limitations. Here are some of the limitations:

1. This study can not cover all district/city governments in Indonesia which amounts to 508 districts/cities. This is due to the availability of data obtained incomplete. The data of APBD realization used in this study is data derived from the Audit Result Report of BPK and Directorate-General of Regional Fiscal Balance.

2. The data used in this study is the data from 2010 to 2014 so that the trend in the longer term is not visible

3. From the results of the tests that have been done, the independent variables selected in the research that the degree of fiscal decentralization, fiscal space, and financing SILPA rate only able to explain the dependent variable allocation of capital expenditure of 37.4 percent. The authors hope that further research can add other variables or periods studied to obtain a better regression model.

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“Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives”

PRICE DISCRIMINATION ANALYSIS OF BUTTER IN THE GERMAN MARKET

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ABSTRACT

Germany is the largest producers of butter among other countries in the EU. The trend of butter production in Germany increase steadily during 2010 – 2013. In 2013, butter production in Germany reach to 491,460 tons and German’s butter production amounted to 25% of the EU butter production. However, there were fluctuations in the average price of butter in Germany during 1999-2010 and it was occurred from year to year. Fluctuation of butter prices can affects business risk, the competition of butter producers, and economic surplus of consumers in the German butter market. The main objective of the study is to analyze butter price discrimination in German market. In detail, objectives of this study are: first, to analyze the necessary conditions (market power) of occurrence in price discrimination of butter products in the German market through structure analysis, second, to analyze price discrimination of butter products based on regions in Germany, and three, to analyze price difference of butter products across types of retail store in Germany. The result shows that the three necessary conditions (market power, different demand elasticity, and preventing arbitrage) for the occurrence of butter price discrimination in the German retail market are fulfilled. The butter industry in Germany has an HHI value of 1.635 and the four-firm concentration ratio (CR4) index reached 71%, which indicates that the German butter industry has either a moderate level of market concentration and an oligopoly market structure with some dominant firms. We also can conclude that on the demand side, butter consumption is not discriminating along the demand curve (price and quantity) across regions in Germany. On the supply side, producers and retailers are not discriminating in regards to butter prices across regions in Germany. The mean price of butter in Germany, throughout different regions, remained relatively similar at a range of between € 5.02/kg - € 5.20/kg between 2005 and 2010. Based on semi – log model regression, the price of butter sold at a DM store is approximately 27% higher than the same butter sold at a supermarket store. Prices are approximately 8% lower at a discounter, on average, than the same product at a supermarket store, while butter sold at a hypermarket store is approximately 1.75% lower than the same butter sold at a supermarket store, on average. In other words, there is evidence of butter price difference across types of retail store in Germany.
THE FACTORS CONTRIBUTING TO ECONOMIC GROWTH IN MALAYSIA

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ABSTRACT

The main purpose of this paper is to find and analyze the factors of gross fixed capital formation, exports and foreign direct investments (FDI) contributing to economic growth in Malaysia over the period from 1985 – 2015. Methods that are used for this purpose are regression analysis, correlation coefficient and Pearson correlation. By using these tests, we found out that FDI and gross fixed capital formation are positively effecting the economic growth as compared to other variables which are showing negative trends such as exports. An important essence of this paper is the requirement of policy reformulation and implication by the government of Malaysia that can be drawn from this paper’s finding. The government should take solid steps in order to increase foreign as well as domestic investments and protect industries that would benefit the country’s economic condition instead of totally relying on foreign investments and aids. Besides, the government should take measures in order to stabilize the exchange rate that may attract more investors for the sake of higher profits.

Keywords: Foreign Direct Investment, Gross Domestic Product, Gross Fixed Capital Formation, Exports, Economic Growth of Malaysia
IMPACT OF INCREASING OF FREQUENCY OF TRANSACTION IN BRANCHLESS BANKING PROGRAM TOWARDS HOUSEHOLDS BUSINESS ACTIVITIES
(Case Study in Bogor District, West Java, Indonesia)

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ABSTRACT

This study aims to analyze the economic behavior of business activities of household business actors who conduct their financial transactions through Agent in the branchless banking program, namely how the impact of changes in frequency and value of transactions on economic behavior. The model of the household economic behavior of business activities on a branchless banking system is based on a dynamic household economic model. A sample of BB Agent and the business household is determined by using purposive sampling method. Data collected from Bogor District, consist of 13 Sub-districts. Data were analyzed by the 2SLS method. The results indicate that the increase in frequency and value of transactions at BB Agent has a negative impact on investment, size of business, and credit. Therefore, it can be concluded that if a branchless banking program focuses only on increasing the frequency of transactions, it will have an impact on the sustainability of household business in the long term.

Keywords: Branchless banking, Financial transaction, Information Technology, Household economic behavior

JEL classification: G20, O12, O30, R20
HIDDEN COST OF UPLAND POTATO FARMING PRACTICES IN PANGALENGAN BANDUNG

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ABSTRACT

The objectives of study are (a) to measure the hidden costs which induced by potato farm practices, and (b) to analyze the impact of soil erosion on profitability of potato farming in upland region. Data are collected from field survey by interviewing 180 potato’s farmers, and data from secondary sources, such as state own enterprise and local climate station, and from literatures. SCUAF (Soil Change Under Agriculture and Forestry) model was used to predict the amount of soil nutrients eroded. The results of study shows that the amount of hidden costs of potato farming practices are quite significant compare to explicit costs borne by the farmers. When hidden costs are taken into the calculation of total costs, the potato farming is still profitable. There is an ample room to formulate the agricultural policy in order to improve the sustainability of farming practices, especially in environmentally sensitive upland region.

Keywords: on-site and off-site costs, upland critical area, farm profitability
INTRODUCTION

Many areas in upland Java experienced land conversion from forest land changes into land for food crops and agricultural purposes. At first, food crop cultivated unintensively to produce product for household subsistence. But, the development of infrastructure which open the areas and made the farmers better accessibility to the market have made possible food crops cultivation become more intensive and spreading to the wider area. Subsistence or semi-subsistence agriculture gradually changes into commercial agriculture with the objective to make profit from cultivating the land. At the same time, the pattern of cultivation changes from producing subsistence food such as paddy, cassava, corn, and tubers into cash crops such as potato, carrot, cabbage, chilli, or other vegetables. Land use change in upland area may bring negative impacts to the sustainability of the area and its surrounding. If a rapid transfer of forest or plantation into food crops in upland region does not manage properly, it will cause land degradation and endangering the sustainability of farming areas itself.

Pangalengan area is characterised by its sloping lands, hills, and narrow valleys. The highland of Pangalengan is part of Citere catchment area and known as be part of watershed region of Citarum. Catchment area of Citere has an important role in supplying water to 3 major dams, Cirata, Saguling, and Jatiluhur. Any land use changes in these areas affect not only the people, physical and biological environments on-site, but also influence a large area of the Bandung Regency, particularly South Bandung.

Based on research by Hidayat and Mulyani (2002), upland area of Pangalengan is more suitable for tree cultivation than for food crops. The fact is Pangalengan is known as an important vegetables producing area, especially potato and cabbage. Soil in Pangalengan is characterised by ordo Andisol which rich in organic matters and suitable for agriculture. Potatoes and cabbage grow productively and bring profits to the farmers. However, Andisol soil in sloping upland areas have low stability and prone to erosion. Furthermore the rain intensity in Pangalengan is comparatively high which may make the soil erosion become more severe.

Soil erosion resulting from improper farming practices on sloping lands has been known to be a serious problem in Pangalengan. Soil erosion causes loss of soil nutrients. At farm level, decline in crop productivity due to soil erosion will result in low income. Off-site consequences of soil erosion place pressure on the environment in terms of sedimentation and silt that can clog up irrigation channels and lower the water storage capacity of dams. This decreases water supply and increases government expenditure on infrastructure and conservation measures (Magrath and Arens, 1989). The economic valuation of soil erosion produced by upland farming practices is, therefore, urgently needed.

STUDY OBJECTIVES

The objectives of study are to measure the hidden costs which induced by potato farm practices, and to analyze the impact of soil erosion on profitability of potato farming in upland region. Hidden costs in this study appear in the form of ineffective works of fertilizer in producing output because of soil erosion. Hidden cost is the potential revenue not materialized because of soil erosion has made some part of fertilizer missing. The fertilizer added by the farmer to the soil partly washed away and can not be fully available to the crops. Off site costs of soil erosion such as irrigation channels sedimentation or lower
water storage capacity of dams, are not included in the calculation of hidden costs in this study.

Results of this study hopefully help farmers and the public become more aware of the hidden cost of farming practices in upland region. The importance of this study lies in linking bio-physics studies to economic analysis in order to identify ways of enhancing soil conservation practices, and assist policy-makers in selecting farm methods for optimizing soil conservation efforts for upland areas.

METHODOLOGY

Potato farmers in upland Pangalengan have three choices of method in cultivating the crops. Those are planting the crops by (a) slope wise, (b) contour wise, or (c) bench terrace. In slope wise method, the farmer makes crops beds in line with the slope of land. This is different with contour wise method where the farmer builds crops beds crossing the slope or in line with the contour. In bench terrace method, the farmer cut the land contour wise in order to get a flat surface where the farmer can form crops beds. Each of those methods has different implication for potato farm productivity and the severity of soil erosion. Soil erosion is a physical process and refers to the losing away of the land surface by water and/or wind as well as to the reduction in soil productivity due to physical loss of topsoil, removal of soil nutrients, and loss of organic matters.

Calculation of on site cost of soil erosion in this study employed replacement cost approach as suggested by Barbier (1995). Other methods commonly use in measuring on site cost of soil erosion are cost benefit analysis (Bizoza and De Graaff, 2012; Mishra and Rai, 2014) and productivity change analysis (Erkossa et al., 2015). The replacement cost approach calculates the cost that would be incurred in order to replace a damaged soil. There are often nutrients and organic matters losses associated with soil erosion. Therefore, the on-site cost is sometimes measured in terms of the loss in marginal productivity of crop output from incremental changes in inputs, multiplied by the unit price of the crop and less the costs of foregone inputs. Figure 1 presents the framework used in this study.

![Figure 1. Replacement cost approach to measure hidden on site cost of land erosion in Upland Potato Farming in Pangalengan Region (adapted from Barbier, 1995)]
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If the soil erosion does not happen when the farmer cultivated the land, the total revenue of employing $X_1$ input is equal to area A+B+C+D. Soil erosion makes some of input available to the crops reduced, and only $X_0$ quantity of input left and ready for production process. The depletion of quantity of input makes quantity of output produced become less than it should be. The actual income received by the farmer reduced into the area A+B. The income of the farmer lost consisting of two part, that is the value of soil nutrient or input washed away (area D) and the value of potential profit unrealized (area B).

In order to predict the rate of soil nutrient depletion resulting from potato farm activities in Pangalengan, this study employ SCUAF (Soil Changes Under Agro-Forestry) model. SCUAF model was developed according to Universal Soil Loss Equation (Young et al., 1998). SCUAF is an easy-to-use computer model which predicts the effects of specific land use system under given environmental conditions. SCUAF be able to predict the rate of soil nutrients eroded per hectare yearly. Potato cultivation needs 120 days or 4 months to produce output since the first day of planting. Farmers in Pangalengan cultivate potato in their land two times each year. Therefore, the result of SCUAF in the form of rate of soil nutrient (Nitrogen, Phosphorus) and organic matters (Carbon) losses needs to be converted into the quantity of fertilizer which sold in the market, to come up with their monetary value or area D in Figure 1.

Parameters needed to be enter into SCUAF program were derived from field survey and from secondary sources and from the past research and literatures. All of bio-physics information, primary data and secondary data, are resulted from field research conducted in Pangalengan area. Table 1 shows the data collected for SCUAF program.

Table 1. Parameters for SCUAF and source of data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description or value</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Pangalengan (Ds. Margamulya)</td>
<td>Field survey</td>
</tr>
<tr>
<td>Land use system</td>
<td>Agriculture-Horticulture</td>
<td>Field survey</td>
</tr>
<tr>
<td>Soil class</td>
<td>Andisols</td>
<td>Field survey</td>
</tr>
<tr>
<td>Rainfall</td>
<td>2324 mm</td>
<td>Local climate station at Plengan</td>
</tr>
<tr>
<td>Slope</td>
<td>15% (moderate)</td>
<td>Field survey</td>
</tr>
<tr>
<td>Drainage</td>
<td>moderate</td>
<td>Field survey</td>
</tr>
<tr>
<td>Soil texture:</td>
<td>- Sand 24%</td>
<td>Field survey</td>
</tr>
<tr>
<td></td>
<td>- Dust 37%</td>
<td>Field survey</td>
</tr>
<tr>
<td></td>
<td>- Clay 39%</td>
<td>Field survey</td>
</tr>
<tr>
<td>pH</td>
<td>5.8</td>
<td>Field survey</td>
</tr>
<tr>
<td>Bulk density</td>
<td>0.58g/cc</td>
<td>Field survey</td>
</tr>
<tr>
<td>Soil pore total</td>
<td>78%/volume</td>
<td>Field survey</td>
</tr>
<tr>
<td>Soil permeability</td>
<td>11cm/hour</td>
<td>Field survey</td>
</tr>
<tr>
<td>C organic</td>
<td>2.37%</td>
<td>Soil and Agroclimate Research Center (2003)</td>
</tr>
</tbody>
</table>
SCUAF not only predicts the rate of soil nutrient loss in farm cultivation but also the quantity of output produce. Prediction of the level of production in this study is not base on SCUAF program but deriving from econometric production function instead. A production function is defined as a quantitative relationship between input and output of production. In this study, the Cobb-Douglas production function was employed. This is an appropriate function when many input variables are included. Based on production function, value of marginal product of inputs can be computed and after reduced by the value of soil nutrients lossed, the value of of profitability loss (area B in Figure 1) can be found. The Cobb-Douglas production function employed in this study is:

$$Q = \beta_0 N_{total}^{\beta_1} P_{total}^{\beta_2} K_{total}^{\beta_3} F_{organic}^{\beta_4} L_{total}^{\beta_5} S_{total}^{\beta_6} A_{total}^{\beta_7}$$

Where,

- $Q$ = quantity of potato produced (ku)
- $N_{total}$ = quantity of nitrogen (kg)
- $P_{total}$ = quantity of phosphorus (kg)
- $K_{total}$ = quantity of kalium (kg)
- $F_{organic}$ = quantity of organic fertilizer (kg)
- $L_{total}$ = quantity of labour used (man days)
- $S_{total}$ = quantity of potato seeds (kg)
- $A_{total}$ = area of land (ha)

From the Cobb-Douglas production function, the value of marginal products with respect to each input loss was derived as follows:

$$VMP_i = \beta_i AP_i P_Q$$

Where, $VMP_i$ is the value of marginal product of input $i^{th}$, $\beta_i$ is the coefficient of production function for input $i^{th}$, $AP_i$ is average product input $i^{th}$, and $P_Q$ is the the price of potato for each kilogram.

Population of the study is potato farmers in Pangalengan area. The name of farmers, address, and their farm location collected from local cooperatives and from agriculture extension workers in Pangalengan. From 1148 farmers available in sampling list were chosen 180 farmers by simple random sampling method.
An Abney level and clinometers is used to calculate directly the slope of land cultivated by potato farmers. Soil samples were also taken from the farmer’s land and brought to soil laboratory at Bogor Agricultural University in order to get information of soil characteristics. Soil bio-physic characteristics data from laboratory and from secondary sources then put into SCUAF model. Farming system chosen by farmers were categorize into three distinct methods, that are planting the crops by (a) slope wise, (b) contour wise, or (c) bench terrace. Hidden cost of potato farming using bench terrace hypothesized is the lowest between three farming methods. On the contrary, the potato farming applying slope wise method will find the highest hidden cost.

RESULTS AND DISCUSSION

SCUAF program predicted that the rate of the depletion of soil nutrients due to erosion tend to decrease over time for 20 years of time span chosen in each category of potato crops cultivation methods. Median value of soil erosion and nutrient loss in potato farming system was presented in Table 2. Bench terrace potato cultivation method brings the least of soil erosion and nutrient loss compare to other two methods. Bench terrace method can reduce 60 percent of soil erosion in potato farming compare to slope wise method, or reduce 46 percent of soil erosion compare to contour wise method. Projection results of soil erosion from three methods are 2.9 to 7.25 ton per one season of cultivation or 5.8 ton to 14.5 ton per hectare per year (two cultivation seasons). The results of soil erosion from this study are similar with the results found by Sutono et al. (2003) from the field experiment. Sutono et al found that soil loss due to erosion in different types of land cultivation are 5.7 ton to 16.5 ton per hectare per year.

The approach developed by Nye and Greenland (1960) and modified by Young et al (1997) was used in the calculation of soil cycle of C and in predicting the cycle of N and P nutrients in SCUAF model. However, SCUAF model does not provide the calculation formula to predict the rate of K nutrients losses. The amount of K (potassium) nutrients losses in Table 2 was derived from the field experiment study conducted by Banuwa (1994) in Pangalengan.

Table 2. The rate of soil erosion and the losses of C component, N, P, and K nutrients in one potato growing season

<table>
<thead>
<tr>
<th>Method of farming</th>
<th>Soil erosion (ton/ha)</th>
<th>C losses (kg/ha)</th>
<th>N losses (kg/ha)</th>
<th>P losses (kg/ha)</th>
<th>K losses (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope wise</td>
<td>7.25</td>
<td>285.62</td>
<td>18.58</td>
<td>2.85</td>
<td>14.31</td>
</tr>
<tr>
<td>Contour</td>
<td>5.42</td>
<td>216.05</td>
<td>14.05</td>
<td>2.13</td>
<td>6.56</td>
</tr>
<tr>
<td>Bench terrace</td>
<td>2.90</td>
<td>116.85</td>
<td>7.56</td>
<td>1.16</td>
<td>2.27</td>
</tr>
</tbody>
</table>

The rate of soil erosion and soil nutrients losses tend to decline overtime but never become zero, especially in steep land area. The maximum amount of soil losses has to be less, or at least the same, in order to keep the productive land capacity to remain or better. Soil erosion will reduce soil capacity to produce crops. The depletion of top soil components can be substituted by adding bigger quantity of fertilizers, which means cost per unit output produce also increase. Soil erosion has made income of the farmer lower than it should be, and at the same time the farmer facing the higher risk from farm failure.
The amount of C (carbon) component, N, P, and K nutrients of soil loss due to potato farm cultivation can be converted into the quantity of fertilizer loss. The first step to convert amount of C into the quantity of organic fertilizer is to find C content in humus. The content of C in humus is 58 percent. Quantity of humus therefore equals to 100/58 x quantity of C loss (Soil Quality Institute, 2001). To calculate how much organic fertilizer needed to replace component C in humus, one also needs to know the C/N ratio of manure and organic matter contained in organic fertilizer. In this study, ratio C/N in manure is chosen as conversion factor from quantity of C losses to the quantity of organic fertilizer. Average ratio C/N and quantity of N nutrients in manure used by potato farmers in Pangalengan is 18 and 0.13 respectively. Potato farmers in Pangalengan mostly employed organic fertilizer from manure. Manure easily be found in Pangalengan because Pangalengan areas also well known as a production center for milk cow in West Java.

The conversion factor for N, P, and K nutrients available in the form of ingredient list printed in each bag of fertilizer sold in the market. Urea fertilizer and SP36 fertilizer can be categorized as a single ingredient fertilizer. Urea fertilizer contains 46 kg N (nitrogen) in every 100 kg, and SP 36 fertilizer contains 36 percent of P (phosphorus) nutrients. Compare to Urea and SP36, Phonska fertilizer is a compound fertilizer contains N, P, and K and also S (sulfur) nutrients. The composition of active ingredients of Phonska fertilizer is N (15%), P (15%), K (15%), and S (10%).

Table 3 provides the results of conversion component C and N, P, and K nutrients into type of fertilizer available in the market after multiplied by each market price at the time of study. Market prices per kilogram of Organic fertilizer, Urea fertilizer, SP36 fertilizer, and Phonska fertilizer are Rp500, Rp1050, Rp1400, and Rp1600 respectively.

<table>
<thead>
<tr>
<th>Method of farming</th>
<th>Organic fertilizer (Rp)</th>
<th>Urea fertilizer (Rp)</th>
<th>SP36 fertilizer (Rp)</th>
<th>Phonska fertilizer (Rp)</th>
<th>Total value (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope wise</td>
<td>2 570 625</td>
<td>42 336</td>
<td>11 193</td>
<td>27 472</td>
<td>2 651 626</td>
</tr>
<tr>
<td>Contour wise</td>
<td>1 944 450</td>
<td>32 018</td>
<td>8 365</td>
<td>12 600</td>
<td>1 997 433</td>
</tr>
<tr>
<td>Bench terrace</td>
<td>1 051 650</td>
<td>17 225</td>
<td>4 564</td>
<td>4 368</td>
<td>1 077 807</td>
</tr>
</tbody>
</table>

Cobb-Douglas model of production function employed in order to identify the effect of each component of soil nutrient loss to the production of potato farming. The Cobb-Douglas production function needs to be converted into logistic form to make it possible to be estimated using ordinary least square method (OLS). To make sure the model is feasible for prediction purposes, the test of OLS classical assumption to diagnose the existence of multicollinierity, autocorrelation, and heteroscedasticity being taken.

The results of assumption test suggest that the initial model needs to be modified. Independent variable total labor used in initial production function was converted into total labor used per hectare of area cultivated (L_{total}/ha), because of high degree of collinierity present between variable total labour used (L_{tot}) and variable area of land (A_{tot}). Variable quantity of seed used also discarded from the model. The data about the quantity of seed employed by the farmers available in financial term (Rp) and not in physical term (kg). The Farmers in Pangalengan may not only buy the sertified potato seed in the market, but sometimte they also used and mixed a part of potato they produce as a seed.
To test the significance of the estimation model and the significance of individual coefficients of the model, the $F$ test and $t$ test were applied respectively. The results of the estimation of modified model are presented in Table 4. To find the value of $t$ test, one needs to divide coefficient ($\beta$) in Table 4 with its standard error.

Table 4. Predicted results of potato farm production function in Pangalengan

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficient ($\beta$)</th>
<th>Standard Error</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.865</td>
<td>0.512</td>
<td>0.000</td>
</tr>
<tr>
<td>$N_{total}$</td>
<td>0.193</td>
<td>0.088</td>
<td>0.030</td>
</tr>
<tr>
<td>$P_{total}$</td>
<td>0.084</td>
<td>0.112</td>
<td>0.453</td>
</tr>
<tr>
<td>$K_{total}$</td>
<td>0.105</td>
<td>0.080</td>
<td>0.192</td>
</tr>
<tr>
<td>$F_{organic}$</td>
<td>0.244</td>
<td>0.050</td>
<td>0.000</td>
</tr>
<tr>
<td>$L_{total}/ha$</td>
<td>0.386</td>
<td>0.095</td>
<td>0.000</td>
</tr>
</tbody>
</table>

$R^2 = 0.710$
$R^2\text{ Adj.} = 0.699$
$F$ test = 66.145 (sig. 0.000)

The value of $R^2$ and Adjusted $R^2$ in Table 4 indicate that Cobb-Douglas model used in this study explain powerfully the variability of quantity of potato produced. The $F$ test is highly significant, thus indicate the model explain a significant amount of the variance in potato production. As can be seen from the results, organic fertilizer, nitrogen ($N$), phosphorus ($P$), and potassium ($K$) used by farmers were important factors affecting potato production. The signs of these coefficients were positive, but not all are significant with a high level of confidence. The elasticity of these three variables implies that on an average, a 1 percent increase in organic fertilizer, N, P, and K will result in an increase in the yield of potato by 0.244, 0.193, 0.084, and 0.105 percent respectively.

The elasticity of the labour/hectar variable was the largest at 0.386 and significant. It suggests that an increase in labour will lead to an increased potato production substantially. In potato production, pre-harvest labour, especially for weeding and mending the crops bed, plays an important role in determining the yield.

The quantity of potato produced loss resulted from potato farm cultivation was derived from combining data in Table 1 (the results of Cobb-Douglas production function) and data in Table 2 (the results of SCUAF model). Then, the value of potential revenue loss can be calculated by multiplying the quantity of potato produced loss by its market price. The price of potato in the local market at the time field survey being conducted is Rp2000 per kilogram. Table 5 presents the predicted revenue loss due to potato farming in upland area of Pangalengan.

Table 5. The total revenue loss per hectare in different farming methods due to soil erosion

<table>
<thead>
<tr>
<th>Method of farming</th>
<th>Revenue loss of C (Rp)</th>
<th>Revenue loss of N (Rp)</th>
<th>Revenue loss of P (Rp)</th>
<th>Revenue loss of K (Rp)</th>
<th>Total loss (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope wise</td>
<td>3 225 800</td>
<td>869 500</td>
<td>109 600</td>
<td>406 400</td>
<td>4 556 500</td>
</tr>
<tr>
<td>Contour wise</td>
<td>2 477 700</td>
<td>657 800</td>
<td>82 000</td>
<td>186 400</td>
<td>3 362 900</td>
</tr>
<tr>
<td>Bench terrace</td>
<td>1 340 000</td>
<td>353 800</td>
<td>44 800</td>
<td>64 600</td>
<td>1 780 800</td>
</tr>
</tbody>
</table>
The loss of potential revenue of potato farming in Pangalengan is substantial. The biggest losses happened in potato farming using slope wise method, and the least is in bench terrace method. Bench terrace potato farming revenue loss is only 39 percent compare to revenue loss of potato farming slope wise method. If total revenue loss in Table 5 was deducted by the total value of fertilizer loss from Table 3, one can derived the potential profit of potato farming loss due to soil erosion. Table 6 presents the percentage of fertilizer value loss compare to actual total cost of potato farming. Table 6 also shows the ratio between profits gone because of soil erosion compare to actual profits in potato farming.

Table 6. The value of fertilizer loss and the potential profits loss compare to actual total cost and actual profit respectively

<table>
<thead>
<tr>
<th>Method of farming</th>
<th>Actual total cost of potato farming per hectare (Rp)</th>
<th>Value of fertilizer loss per hectare compare to actual total cost (%)</th>
<th>Actual total profit of potato farming per hectare (Rp)</th>
<th>Potential profit loss per hectare compare to total actual profit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope wise</td>
<td>25 083 610</td>
<td>10.57</td>
<td>13 270 920</td>
<td>14.35</td>
</tr>
<tr>
<td>Contour</td>
<td>28 246 488</td>
<td>7.07</td>
<td>8 568 532</td>
<td>15.93</td>
</tr>
<tr>
<td>Bench terrace</td>
<td>27 113 240</td>
<td>3.97</td>
<td>5 966 276</td>
<td>11.78</td>
</tr>
</tbody>
</table>

The value of fertilizer loss in upland potato farming in Pangalengan area is significant compare to the actual total cost. The percentage loss of fertilizer due to soil erosion is range from 10.57 in slope wise method to 3.97 in bench terrace method. However, potato farming using slope wise method brings the biggest actual profitability compare to two other method of farming. High profitability derived from slope wise potato farming method has put the biggest obstacle to government effort to improve soil conservation in Pangalengan area. At least in the short run, farmers more care to their purse than to sustainability of their land.

CONCLUSION

1. Hidden cost in the form of revenue loss due to soil erosion in upland potato farming may be categorize into two parts, that are the total value of fertilizer loss and the potential profit not materialized. The value of fertilizer loss is 4 to 11 percent of total cost of potato farming, and it depends on the farming method employed. While the amount of profit unearned because of soil erosion is 12 to 16 percent of actual profit.

2. Bench terrace method of potato farming cultivation gave the lowest hidden cost in the form of total revenue loss compare to slope wise and contour wise methods. On the other side, slope wise potato farming method resulted in the highest hidden cost of soil erosion. Slope wise farming method in upland Pangalengan brings the fastest depletion of soil nutrients and soil components compare to contour wise and bench terrace methods of farming. From the perspective of profitability however, the farmers tend to chose slope wise method of farming because the slope wise potato farming method contributes the highest profit compare to two other methods.
REFERENCES


COST AND PROFIT COMPARATIVE OF FISH MARKETING IN WEST AND SOUTH COAST OF ACEH

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ABSTRACT

One of the obstacles in the fishermen’s welfare is high cost of marketing and low profit received by the small fishermen. This research aims to analyze and to map the cost and profit of stakeholders in the fish marketing in West and South Coast of Aceh. By using marketing efficiency analysis and doubled regression of the stakeholders’ income of 152 fishermen in three coastal areas found that the most efficient of fish marketing is in South Aceh, then in Aceh Jaya, and in West Aceh. The fish retailers get the highest profit share and the fishermen and the bench owner get the lowest, at the other hand, the fishmongers outside the city and the retailers carry on the the highest cost share. High cost share of stakeholders is influenced by the transportation and the storage cost. Fish marketing efficiency is influenced by the marketing patterns and the number of the marketing stakeholders.

Keywords: Cost, Profit, and Fisherman’s Income
INTRODUCTION
The fishery sector gives big contribution to Aceh Gross Domestic Income and high development of fish production in Indonesia is not followed by the fishermen’s welfare as the main stakeholder and supplier of the raw materials for the fishery industry in the exporting market. Some studies show that fishermen’s low income is due to low of technology used and skill, lack of access to the need of working capital, inefficient of the fish marketing system, and low of bargaining position and market integration.

This research will analyze the fishermen’s social economy condition, cost and profit share comparative of the fish marketing stakeholder and the fishermen’s share in the West and South Coast of Aceh. By analyzing the comparative of fish catch location with the level of fishermen’s share as well as cost and profit share allocation among the stake holder; the increasing of the marketing efficiency need to be done in order to increase the fishermen’s welfare.

LITERATURE REVIEW AND HYPOTHESIS
The potency of Indonesian Fishery and Marine sector with 70% of its area consist of ocean contributes US $ 82 billion per year to the Indonesian economy (Iqbal 2017). However, the implementation of the contribution has not yet able to increase the fishermen’s income and welfare. According to Sexton, at al (1991) and Jabri, et al (2014), the fishermen’s low income due to the connection between the market structure and the market behavior has not yet optimum.

The research of Patrianti (2016) shows that generally middlemen (sales agent) do not convey information perfectly to all the market stakeholder to increase the bargaining position, profit, and marketing margin as well as to stress the cost, and as a consequence price share received by the fishermen is still low. Besides, the transmission elasticity conveyed by the mongers is always less than 1, so the increase of price at the fishermen’s level is alway less than the price change at the consumer’s level. Further, Firdaus (2013) and Patrianti (2016) said that the fishermen’s low income is due to low productivity and business efficiency, low skill and business management, as well as low of capital access and fish market integration in Indonesia.

Koeshandoko (2006); Adeokum, et al (2006); Acquah, et al (2011) and Daniel (2013) said that to analyze the fish marketing efficiency through the market integration can be done through the market behavior and structure, market performance covers marketing, marine, and fishermen’s share through the primary data and result of interviews. The secondary data in form of the institution data is used to analyze the macro condition of the observed area.

RESEARCH METHODOLOGY
The research was conducted at the area of West and South Coast of Aceh with total samples of 152 fishermen, consist of 87 fishermen in the West Coast, 30 fishermen in the West Coast, and 35 fishermen in the Aceh Jaya District. Besides the fishermen, the research samples also cover the gatherer mongers, big mongers, outside - city mongers, and retailers. Data collection was structurely conducted by observation and interview of some involved stakeholders.
Data analysis was done with marketing efficiency analysis and doubled regression to the factors that influence the fishermen’s income. The analysis approach used the comparison between the fishermen’s location and the fishermen’s share, margin, profit, and cost share.

RESULT AND DISCUSSION

Respondents’ Characteristic

Fishermen’s respondents’ characteristic describe the social economy condition of the fishermen covers age, number of dependents, experience, education, motorcycles title status, and income. The following table shows the fishermen’s characteristic in West and South Coast of Aceh.

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age (year)</td>
<td>42</td>
</tr>
<tr>
<td>2.</td>
<td>Number of dependents (person)</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>Experience (year)</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Education (year)</td>
<td>7</td>
</tr>
<tr>
<td>5.</td>
<td>Motor title status (%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Private</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>b. Share profit</td>
<td>38</td>
</tr>
<tr>
<td>6.</td>
<td>Income (Rp/month)</td>
<td>7.000.000</td>
</tr>
</tbody>
</table>

On table 1 can be seen that the Aceh’s fishermen have: low education, productive age, good experience, and most of them have private motor with relatively good income. With those mentioned social economy, Acquah and Isaac Abunyuwah (2011) said that, “the fishermen have some obstacles namely: no storage facility, no credit access, no training and facing extreme climate change”. This condition will worsen the social economy condition of the fishermen. The fishermen also have difficulty to apply innovation in catching fish, because they have limited working capital and support from the government. The same problems also occur in Nigeria where 71.7% of Nigeria’s fishermen still use canoe with attached machine (Odeokum, et al.; 2006).

Cost and Profit Analysis of Fish Marketing in West and South Coast of Aceh.

Cost and profit analysis is to measure the result of the total cost and the total profit in one of the production process. This analysis aims to measure the cost expenditure and profit got by the involved stakeholders in catching and fish marketing based on the marketing patterns. The patterns of fish marketing and the value of the fishermen’s share can be seen on Table 2 as follow.
Table 2 Fisherman’s Share Based on Marketing Pattern in West and South Coast of Aceh

<table>
<thead>
<tr>
<th>No</th>
<th>Marketing Pattern</th>
<th>Value of Fisherman’s share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South Aceh District</td>
<td>WestAceh District</td>
</tr>
<tr>
<td>1</td>
<td>Fishermen – Gatherer Mongers – Retailers – Consumers</td>
<td>66</td>
</tr>
<tr>
<td>2</td>
<td>Fishermen – Gatherer Mongers – Big Mongers – Outside-RegionMongers</td>
<td>77</td>
</tr>
<tr>
<td>3</td>
<td>Fishermen – Gatherer Mongers – Outside-RegionMongers</td>
<td>83</td>
</tr>
<tr>
<td>4</td>
<td>Fishermen – Gatherer Mongers – Big Mongers</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Fishermen – Retailers – Consumers</td>
<td>77</td>
</tr>
<tr>
<td>6</td>
<td>Fishermen – Consumers</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>Average:</td>
<td>80.6</td>
</tr>
</tbody>
</table>

On Table 2 there are 5 patterns of fish marketing in West and South Coast of Aceh, where the most marketing patterns and the highest value of fisherman’s share is in the South Aceh District and the lowest is in West Aceh District. The average value of the fisherman’s share is 72.3% which is high enough because it is above 50%. The shorter is the marketing chain; the highest is the fishermen’s share (Fajarwulan, 2008). Further Ahmad Bangun (2010) said that, “it is more profitable for the windu shrimp farmer to sell their shrimp to the gatherer mongers than to the exporter”. Fish marketing margin among the stakeholders based on location can be seen as follow.

Table 3 Margin among Stakeholders Based on Fish Catch Location

<table>
<thead>
<tr>
<th>No</th>
<th>Location of Fish Catch</th>
<th>Margins (Rupiah/Kg)</th>
<th>Fishermen</th>
<th>Gatherer Mongers</th>
<th>Retailers</th>
<th>Big Mongers</th>
<th>Outside-Region Mongers</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>District of South Aceh</td>
<td>2.667</td>
<td>1.500</td>
<td>4.833</td>
<td>3.000</td>
<td>3.000</td>
<td>3.000</td>
<td>3.000</td>
</tr>
<tr>
<td>2</td>
<td>District of West Aceh</td>
<td>2.667</td>
<td>1.667</td>
<td>5.700</td>
<td>2.600</td>
<td>-</td>
<td>-</td>
<td>3.158</td>
</tr>
<tr>
<td>3</td>
<td>District of Aceh Jaya</td>
<td>1.500</td>
<td>1.500</td>
<td>6.167</td>
<td>3.000</td>
<td>-</td>
<td>-</td>
<td>3.041</td>
</tr>
<tr>
<td>4</td>
<td>Average</td>
<td>2.278</td>
<td>1.555</td>
<td>5.583</td>
<td>2.868</td>
<td>3.000</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Based on Table 3, the average of fish marketing margin is Rp.3000/kg with the highest marketing margin is in the region of West Aceh, and the lowest is in the region of South Aceh. Among the stakeholders, the highest marketing margin is the retailers and the lowest is the gatherer mongers. It means, the retailers do more of the marketing’s role compared to the gatherer mongers. Marketing performance will increase marketing efficiency (Adida, et al; 2014). Profit share and cost share can be seen based on the total margin as shown on Table 4.

Table 4 Profit Share among Stakeholders Based on FishCatch Location

<table>
<thead>
<tr>
<th>No</th>
<th>Location of Fish Catch</th>
<th>Profit Share (%)</th>
<th>Fisher men</th>
<th>Gatherer Mongers</th>
<th>Retailers</th>
<th>Big Mongers</th>
<th>Outside-Region Mongers</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>District of South Aceh</td>
<td>26</td>
<td>20</td>
<td>34,5</td>
<td>22,0</td>
<td>33,0</td>
<td>27,0</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>District of West Aceh</td>
<td>23</td>
<td>15</td>
<td>47,0</td>
<td>22,0</td>
<td>-</td>
<td>26,9</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>District of Aceh Jaya</td>
<td>12</td>
<td>20</td>
<td>65,0</td>
<td>34,0</td>
<td>-</td>
<td>32,8</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Average</td>
<td>20,3</td>
<td>18,3</td>
<td>48,8</td>
<td>26,0</td>
<td>33,0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On Table 4 can be seen the highest profit share of fish marketing based on location is in the region of Aceh Jaya. Whereas the profit share in the region of West and South Aceh is relatively the same. Aceh Jaya has more profit share because it is close to the capital city of Banda Aceh. Based on the stakeholders, the retailers and the outsideregion mongers have the highest profit share, whereas the gatherer mongers have the lowest. It shows that the inefficient marketing system. The same problem occurs in Ogun State of Nigeria, where the declining of the marketing cost can be done through the transportation facility improvement and provide credit access to the fishermen (Folodun, dkk; 2011). The following table will show cost share among locations in fish marketing in Aceh.

Table 5 Cost Share among Stakeholders Based on FishCatch Location

<table>
<thead>
<tr>
<th>No</th>
<th>Fish-Catch Location</th>
<th>Cost Share (%)</th>
<th>Fisher men</th>
<th>Gatherer Mongers</th>
<th>Retailers</th>
<th>Big Mongers</th>
<th>Outside-Region Mongers</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>District of South Aceh</td>
<td>8</td>
<td>14</td>
<td>48,5</td>
<td>44</td>
<td>67</td>
<td></td>
<td>36.2</td>
</tr>
<tr>
<td>2.</td>
<td>District of West Aceh</td>
<td>9</td>
<td>11</td>
<td>17</td>
<td>21</td>
<td>-</td>
<td></td>
<td>14.5</td>
</tr>
<tr>
<td>3.</td>
<td>District of Aceh Jaya</td>
<td>8</td>
<td>13</td>
<td>15</td>
<td>33</td>
<td>-</td>
<td></td>
<td>17.3</td>
</tr>
<tr>
<td>4.</td>
<td>Average</td>
<td>8,3</td>
<td>12,7</td>
<td>26,8</td>
<td>32,7</td>
<td>67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 5, the highest cost share in the fish marketing is in the district of South Aceh and the lowest is in the West Aceh. It is because West Aceh is a coastal area so that the marketing cost is low compared to the District of South Aceh which is a mountainous area and farther from the shore. Omar et al (2015) said that, “in Bangladesh, the increase of the marketing integration can happen with the infrastructure improvement of the
Table 6 Comparative of Margin, Profit Share, Cost Share, and Fisherman’s Share

<table>
<thead>
<tr>
<th>No</th>
<th>Location of Fish Catch</th>
<th>Margin</th>
<th>Profit Share</th>
<th>Cost Share</th>
<th>Fisherman’s Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>District of South Aceh</td>
<td>3,000</td>
<td>27.0</td>
<td>36.2</td>
<td>80.6</td>
</tr>
<tr>
<td>2.</td>
<td>District of West Aceh</td>
<td>3,158</td>
<td>26.9</td>
<td>14.5</td>
<td>70.8</td>
</tr>
<tr>
<td>3.</td>
<td>District of Aceh Jaya</td>
<td>3,041</td>
<td>32.8</td>
<td>17.3</td>
<td>75.0</td>
</tr>
<tr>
<td>4.</td>
<td>Average</td>
<td>3,066</td>
<td>28.9</td>
<td>22.7</td>
<td>75.5</td>
</tr>
</tbody>
</table>

Table 6 shows that profit share of the fish marketing in the West and South coast of Aceh is bigger than the cost share which is profitable for the fish marketing stakeholders in those areas. Nevertheless, the fish marketing is inefficient, because the cost is bigger than the profit. The marketing facilities should be improved physically and institutionally in order to make them efficient (Aswathy and Abdu Samad, 2008). The most efficient fish marketing based on the cost and profit share comparative is the region of South Aceh, then Aceh Jaya and West Aceh.

Factors analysis influence the Fishermen’s Income

Factors influence the fishermen’s income is the fishing distance, fishing time, total capital, experience, and kinds of boat. The result of data regression process to the factors that influence the fishermen’s income as shown by Table 7 as follow:

Table 7 Factors Influence the Fishermen’s Income

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Constanta</td>
<td>3,162</td>
<td>1,056</td>
<td>2,996</td>
<td>0,003</td>
</tr>
<tr>
<td>2.</td>
<td>Fishing Distance (X1)</td>
<td>0,002</td>
<td>0,001</td>
<td>0,096</td>
<td>1,941</td>
</tr>
<tr>
<td>3.</td>
<td>Fishing Time (X2)</td>
<td>0,0004</td>
<td>0,000</td>
<td>0,059</td>
<td>1,143</td>
</tr>
<tr>
<td>4.</td>
<td>Total Working Capital (X3)</td>
<td>0,828</td>
<td>0,067</td>
<td>0,722</td>
<td>12,295</td>
</tr>
<tr>
<td>5.</td>
<td>Experience (X4)</td>
<td>0,008</td>
<td>0,005</td>
<td>0,056</td>
<td>1,739</td>
</tr>
<tr>
<td>6.</td>
<td>Kind of Boat (X5)</td>
<td>0,413</td>
<td>0,196</td>
<td>0,133</td>
<td>2,103</td>
</tr>
</tbody>
</table>

Table 7 shows that there are three factors significantly influence the fishermen’s income namely; working capital, kind of boat, and fishing distance, whereas two other factors are; fishing time and experience do not influence the fishermen’s income. It is in accordance with the opinion of Al Jabri et al (2014) who said that “among the four factors that supposed to influence the fishermen’s income, the catching tools factor and the training from the government really influence the level of fishermen’s income in Oman, whereas two other factors like geography and social economy condition have no significant influence. Daniel Halim and Y Sri Susilo (2013) also found that working capital variable, fishing time, and
fishing distance are significant factors that positively influence the level of fishermen’s income in the district of Bantul, Yogyakarta.

CONCLUSION AND SUGGESTIONS

Based on the discussion result, here are some conclusions:

1. Fish marketing efficiency is mostly influenced by the marketing patterns and the number of involved stakeholders, where the more marketing pattern and the smaller number of middlemen, the more efficient is the marketing pattern.

2. Fish marketing in West and South Coast of Aceh has good value of the fishermen’s share because most of the fishermen are the canoe owners, but the marketing efficiency is relatively low, because the profit and cost share is not equal.

3. The best marketing efficiency is in the district of South Aceh, than followed by Aceh Jaya and the district of West Aceh because the value of the profit share and the cost share is equal as well as many marketing patterns and the value of the fishermen’s share is high.

4. Outside region and big mongers are relatively efficient marketing stakeholders, because they have the highest profit share and cost share. The retailers are the inefficient stakeholders, because the profit share is bigger than the cost share. Fishermen and the gatherer mongers are efficient because they are the owner of boat and capital who have big authority in making decisions.

5. Total working capital, kind of boat, and fishing distance are the factors that significantly influence the fishermen’s income in West and South Coast of Aceh. Whereas the factor of fishing time and experience has no significant influence.

Based on the conclusions of the discussion result, here are some suggestions:

1. Increasing of the marketing patterns and the decreasing of the involved middlemen need to be done to increase the marketing efficiency.

2. Additional working capital and fishing time, as well as use of canoe with attached machine better than 21 GT need to be done to increase the fishermen’s income.

3. The government should provide the fishermen with more access to the need of the working capital.

REFERENCES


Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives


ANALYSIS OF COMPETITIVENESS AND FACTORS THAT INFLUENCE LAMPUNG COFFEE EXPORT

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________________________________________________________________________

ABSTRACT

Lampung coffee is the main commodity in Lampung and contributes a high value of national export. Lampung coffee has a comparative advantage but is still less competitive with the large exporting countries such as Brazil, Vietnam and Colombia. It is a question that what factors influence Lampung coffee export. This research uses an RCA competitiveness analysis to determine the competitiveness of Lampung coffee on coffee export commodities world and applies a regression model using a multiple linear regression analysis. This research concludes that volume of Lampung coffee export, world coffee consumption, world coffee price, and Lampung coffee production influence positively and significantly on the value of Lampung coffee export. Meanwhile, world tea price and exchange rate have negative impact on the value of Lampung coffee export.

Keywords: coffee export, competitiveness, RCA (Revealed Comparative Advantage)

JEL classification: F13, J51
THE EFFECT OF PLANNED BEHAVIOR ON STRATEGIC THINKING BEHAVIOR THROUGH THE INTERMEDIATION OF KNOWLEDGE SHARING BEHAVIOR OF LOCAL GOVERNMENT OFFICERS IN BENGKULU CITY

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ABSTRACT

This study attempts to test the effect of theory of planned behavior towards the knowledge sharing behavior and its implication on the strategic thinking behavior. In this research, the theory of planned behavior employs multi-dimension measures comprising of attitude, subjective norm, and the behavior control. Researcher uses three of these dimensions to investigate their effects on the knowledge sharing behavior. In this study, knowledge sharing behavior is also believed in playing a role as the mediating variable since it is mediating the association among attitude, subjective norm, and behavioral control on the strategic thinking behavior. This study will examine the association model which is proposed in the local government of Bengkulu city as the research object. The sample used in this study included the officers in the Food and Agriculture Institution in Bengkulu city. The method of data generation is conducted through self-administered questionnaire. The obtained data which is appropriate to be analyzed is determined as 61 respondents. The analysis is done by employing the software of Amos 16.0. The outputs of study show that there are only two among the proposed five hypotheses are statistically supported. Meanwhile, the other three hypotheses are unsupported. The results of study proof that the knowledge sharing intention contributes to the knowledge sharing behavior. Knowledge sharing behavior also contributes to the strategic thinking behavior.

Keywords: Attitude, subjective norm, behavioral control, knowledge sharing intention, knowledge sharing behavior, strategic thinking behavior
ENTREPRENEURIAL MARKETING APPROACH TO EMPOWER THE AGRO-BASED INDUSTRY CLUSTER TO FACE THE ASEAN ECONOMIC COMMUNITY (AEC)

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ABSTRACT

Agro industry is one of the national priority industry clusters targeted to bring into reality government programs in making Indonesia a formidable industrial country by 2025. The development of Micro, Small and Medium enterprises (MSMEs) in agro industry clusters in potential areas of Indonesia will increase the added value of local wisdom that will increase revenue and the welfare of the surrounding community, thereby eventually building a better national economy. This research in the long run has a goal in terms of empowering and enhancing the competitiveness of agro-based industries in order to survive and compete against global marketing challenges such as the implementation of ASEAN Economic Community (AEC). Agro-based industry in this research includes milk processing, fruit processing and fish processing. The data was collected from two regencies (Bandung and Pekalongan) whereas acknowledge as the centers of agro-based industry. There were 100 respondents collected purposively from two regencies. The Structural Equation Modelling (SEM) by Partial Least Squares (PLS) technique was employed to analyze the data. The result of the research shows that the business characteristic is dominated by productive age which is generally graduated from SMA/SMK/MA. The MSMEs profile of agro based industry cluster is included in micro business with a turnover of less than Rp. 25,000,000 per month. Despite the limitations of capital, production equipment and human resources, this effort has become the main source of family income, especially in the milk processing cluster. The development model of agro based industry cluster toward the AEC market shows that government policy support has direct effect to entrepreneurial marketing ability (0.452) and business development (0.509). In addition, entrepreneurial marketing shows a positive effect on business development (0.264) and the ability to competitiveness (0.336). By implementing a good business development, it will improve the ability of competitiveness (0.412) which ultimately increases the preparedness of the AEC (0.614).

Keywords: agro based industry cluster, entrepreneurial marketing, MSMEs, PLS
ABSTRACT

The multidimensional construct of organizational justice and organizational commitment has attracted longstanding attention and debate among managers, researchers and academicians. To achieve significant progress, studies in this area should be directed to investigate the two sides simultaneously, construct validity and substantive validity. So that the progress achieved can be balanced between the conceptualization and definition of the construct itself as well as the relationship and its effect on other constructs. Therefore, current study intend to test the validity dan reliability of five-factors of organizational justice (FFOJ) construct, and to test its effect on organizational commitment dimensions. Survey technique employed to 264 private employees and civil servants who were studying in 3 graduate programs at University of Bengkulu, choosen using stratified random sampling. Two-hundred-and-fifty-seven respondents participated in the study. Data analysis used Factor Analysis, reliability test, and Hierarchical Regression Analysis (HRA). The conclusions of this study provide strong support for the FFOJ conceptualization. Of the 20 items questionnaire included in factor analysis, 19 items loaded in 4 dimensions, which is distributive justice (4 items), procedural justice (6 items), interactional justice (4 items), and informational justice (5 items). The reliability of all dimension are good, with Cronbach 'Alpha (α) score greater than 0.7. Almost all dimensions of FFOJ affect the dimensions of organizational commitment, except the interactional justice that has no effect on the affective commitment. Further investigation is highly recommended so that organizational justice measurement becomes more workable in explaining the phenomena of justice in the daily life of the organization. The empirical evidence also further emphasized the important role of organizational justice in order to foster, enhance, and maintain organizational commitment. Attempts to acquire employees with high organizational commitment will face serious obstacles when the employees still perceive there is no fairness in their organization.

Keywords: distributive justice; procedural justice; interactional justice; informational justice; affective commitment; continuance commitment; normative commitment
THE EFFECT OF ENVIRONMENTAL PERFORMANCE ON FINANCIAL PERFORMANCE AND THE IMPLICATIONS ON FIRM VALUE

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Email: khairiyani94@gmail.com

ABSTRACT

This research aimed to examine the effect of environmental performance on financial performance and the implications on firm value. Environmental performance was measured by PROPER. PROPER was assessed by Ministry of Environment that conducting development of environmental performance in Indonesia. Financial performance was reflected by ROA (Return On Assets), ROE (Return On Equity) and NPM (Net Profit Margin). Firm value was reflected by the stock price, PBV (Price to Book Value) and Tobin’s Q. This study used 12 mining companies as a sample is consistently listed in Indonesian Stock Exchange and followed PROPER program during 2013-2015. The sample was determined by using purposive sampling. Analysis of data in this study used Structural Equation Modeling-Partial Least Square (SEM-PLS) with Smart-PLS version 3. The result showed that environmental performance was reflected by PROPER had no effect on financial performance (ROA, ROE and NPM). Environmental performance was reflected by PROPER had no effect on firm value (stock price, PBV and Tobin’s Q). Financial performance (ROA, ROE and NPM) had effect on firm value (stock price, PBV and Tobin’s Q). It means that financial performance was not able to mediate environmental performance and firm value.

Keywords: Environmental performance, financial performance, firm value, Indonesian Stock Exchange, PROPER

JEL Codes: M41, Q51, Q56, Q58
INTRODUCTION

A company listed in Indonesian Stock Exchange is a go public company. The company is always does the best in their operations. Mukhtaruddin, Relasari & Felmania (2014) stated that every company will try to do the best to improve the company's value. To increase company value in long-term is one of company goals. Increase in the value of the company will be reflected in the market price of the stock. Investors will be watching the movement of shares in companies that are listed on the Indonesia Stock Exchange (IDX). Khairiyani, Rahayu & Herawaty (2016) explained that the firm value become very important, because it relates to the firm’s survival. Firm’s survival is certainly related to one of the postulates of accounting that is a going concern. Going concern expressed that the objective of the establishment of a company is not to be dispersed, but is expected to continue to be sustainable (Harahap, 2011). Good company is a company that does not give bad impact to the environment around. If the company provides to the environment impact well, then the company would maintain its survival and be able to increase firm value.

There were several cases that reflected environmental damage is caused by mining companies in Indonesia, such as about 70 percent of Indonesia's environmental damage caused by mining operations. The extractive industry with easily outsmart the rules that are contrary to its interests, include Law No. 32 of 2009 on Pengelolaan dan Perlindungan Lingkungan Hidup (PPLH). Likewise, our forests, at least 3.97 million hectares of protected areas threatened by mining, did not escape the biodiversity in it. Not only forests, our rivers was sacrificed. Number of damaged watersheds increased in the last 10 years (http://regional.kompas.com). In addition, Environmental conditions in southern Sulawesi deteriorated. In Gowa, stone quarries in the village Bontosunggu and Salajangki District of South Bontonompo, has sparked protests from the public. Mining is considered to have caused the problem on water resources, agriculture and socio-economic life of the surrounding community (http://www.mongabay.co.id).

Mining company is a company whose main activities are in the context of search efforts, mining (excavation), processing, utilization and sale of minerals (minerals, coal, geothermal, oil and gas). Of course all of its activities have an impact on the environment. Based on the case, in 2002 Ministry of Environment in Indonesia has created a program to measure the level of compliance was based on state laws regarding corporate activities related to environmental management that is referred to as PROPER (Program Penilaian Perikat) under Law No. 3/1997 and Ministerial Decision 127 / MENLH / 2002 (Kementerian Lingkungan Hidup & Kehutanan, 2015). The plan is to create a company ranked from best to worst in terms of obedience in environmental performance.

PROPER is one of form of legitimacy theory. The use of color in the form of communicative PROPER ratings deliver performance to the public, ranging from the best, gold, green, blue, red, up to the worst, black. In simple terms the public can determine the level of compliance with environmental management in the company with only look at the ratings of existing colors. Therefore, PROPER was measured with an ordinal scale. The gold color is given a rating of 5, green = 4, blue = 3, red = 2 and black = 1.
There were several indicators to indicate the firm value. The higher price of the stock means the higher firm value (Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim, 2014). Market value of stock and book value or usually called by PBV (Price to Book Value) also be used to measure the firm value, the higher of PBV means the higher firm rated by investors (Husnan, 2006). The firm value as measured by Tobin's Q which is a description of firm value. The higher Tobin’s Q showed that a company has good growth prospects and generally illustrate that it has a very strong brand image (Hariaty & Rihatiningtyas, 2015). Khairiyani, Rahayu & Herawaty (2016) and Khairiyani & Rahayu (2016) had used all three of these measurements to reflect firm value.

The average of firm value listed on mining company in Indonesian Stock Exchange and followed PROPER program during 2013-2015 are as follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Stock price</td>
<td>4,884.67</td>
<td>3,657.17</td>
<td>1,454.58</td>
</tr>
<tr>
<td>2.</td>
<td>Price to Book Value</td>
<td>1.74</td>
<td>1.60</td>
<td>1.29</td>
</tr>
<tr>
<td>3.</td>
<td>Tobin’s Q</td>
<td>1.18</td>
<td>1.14</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 1 showed the fluctuation of average of firm value listed on mining company in Indonesian Stock Exchange and followed PROPER program during 2013-2015. In 2014 stock price decreased by 25.13% from 2013. In 2015 stock price decreased by 60.23% from 2014. In 2014 Price to Book Value decreased by 8.03% from 2013. In 2015 Price to Book Value decreased by 19.69% from 2014. In 2014 Tobin's Q decreased by 3.32% from 2013. In 2015 Tobin's Q decreased by 18.83% from 2014. Based on the table above, we expect that the firm value in table 1 show increase continuously, but these results showed that there was gap between expectation and reality (phenomena gap).

Tjahjono (2013) and Widhiastuti, Suputra & Budiasih (2017) showed that environmental performance had effect on financial performance, but Ramanathan & Akanni (2015) showed that environmental had no effect on financial performance. Hariaty & Rihatiningtias (2015) showed that environmental performance had effect on firm value, but Tjahjono (2013) showed that environmental performance had no effect on firm value. All of previous research showed inconsistent conclusion with each other (research gap). This prompted the researchers to conduct further studies about the effect of environmental performance on financial performance and the implications on firm value. It relates to theory that linking environmental performance on financial performance, and financial performance on firm value. Khairiyani, Rahayu & Herawaty (2016), Khairiyani & Rahayu (2016) and Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim (2014) showed that financial performance had effect on firm value.

The difference of this research with previous research is population in this study is a mining company in Indonesian Stock Exchange and followed PROPER, because there ware gap between expectation and reality (phenomena gap) about firm value in mining companies. In addition, mining company is a company that susceptible to damage environment. Period of 2013 to 2015. The analysis method used is Structural Equation Modeling (SEM). This research aims to prove empirically the effect of environmental performance on firm value directly and indirectly.
LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Legitimacy theory
Legitimacy theory states that the organization continually tries to ensure that its operations comply with the limits acceptable and the norm by society, so they try to convince that its activity is accepted by outsiders (Deegan & Unerman, 2006). This means that, where the organization will be able to continue if the value system that is used to run its operations in accordance with the value of community-owned system. The failure of the organization to fulfill the social contracts will make a threat to the business sustainability (going concern) of the organization.

Signal theory
Signal theory comes from the positive accounting theory that focuses on the influence of information on recipient behavior change information in accordance with their understanding of the information. Signal theory also proposed by Ross (1977) when the company's managers have better information then would be compelled to provide such information to prospective investors in the hope of increasing the company's stock price.

Hypothesis development
Hypothesis in this research are as follows:

The effect of environmental performance on financial performance
Environmental performance affect on financial performance. This statement is supported by Widhiastuti, Suputra & Budiasih (2017) stated that environmental performance is expected to have a positive influence on financial performance in a company. A company with PROPER will be better to get a positive reaction and the legitimacy of the environment, so that it can increase its profit. Tjahjono (2013) and Widhiastuti, Suputra & Budiasih (2017) showed that environmental performance had effect on financial performance.

H2. Environmental performance affect on financial performance

The effect of environmental performance on firm value
Legitimacy theory states that organization continually tries to ensure that its operations comply with the limits acceptable and the norm by society, so they try to convince that its activity is accepted by outsiders (Deegan & Unerman, 2006). It means that the organization will be able to continue, if the value system that is used to run its operations in accordance with the value of community-owned system. The failure of the organization to fulfill the social contracts will make a threat to the business continuity (going concern) of the organization. Based on the explanation, we can say that environmental affect on firm value. Hariaty & Rihatiningtias (2015) showed that environmental performance had effect on firm value.

H2. Environmental performance affect on firm value
The effect of financial performance on firm value

Financial statements were published, and public companies are a form of accountability to the company's internal and external parties. Every stakeholder usually makes an analysis in decision making. One of financial statement analysis is profitability. Profitability is the company's ability to earn a profit. Based on this information, investors can assess the company's financial performance and determine which stocks are going to be used as an investment option. Of course, more investors are investing, the stock price will increase. Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim (2014) stated that the higher the profitability, the higher the firm value. Khairiyani, Rahayu & Herawaty (2016), Khairiyani & Rahayu (2016) and Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim (2014) showed that financial performance had an effect on firm value.

H3. Financial performance affect on firm value

The effect of environmental performance on firm value through financial performance

Based on the explanation above that environmental performance affects financial performance theoretically. As we know that profitability is an important indicator in assessing the financial performance because it shows the company's ability to earn a profit. Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim (2014) stated that the higher the profitability means the higher firm value. Therefore, we can conclude that theoretically environmental performance affects firm value through financial performance.

H4. Environmental performance affect on firm value through financial performance

METHODOLOGY

Population and sample

The population of this research was the mining companies in Indonesian Stock Exchange and followed PROPER.

Table 2 Purposive sampling process

<table>
<thead>
<tr>
<th>No.</th>
<th>Purposive sampling</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mining companies listed consistently in Indonesian Stock Exchange during 2013-2015</td>
<td>41</td>
</tr>
<tr>
<td>2.</td>
<td>Less the companies has not annual report completed</td>
<td>(9)</td>
</tr>
<tr>
<td>3.</td>
<td>Less the companies did not follow PROPER</td>
<td>(20)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12</td>
</tr>
</tbody>
</table>

This study uses period of 2013-2015. Therefore, the sample for 3 (three) years is 12 companies x 3 years namely 36 companies. The companies in this research are presented in Table 3.
Table 3 List of sample

<table>
<thead>
<tr>
<th>No.</th>
<th>Code</th>
<th>Company’s name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>ITMG</td>
<td>Indo Tambangraya Megah Tbk.</td>
</tr>
<tr>
<td>3.</td>
<td>PTBA</td>
<td>Tambang Batu Bara Bukit Asam Tbk.</td>
</tr>
<tr>
<td>4.</td>
<td>PTRO</td>
<td>Petrosea Tbk.</td>
</tr>
<tr>
<td>5.</td>
<td>SMMT</td>
<td>Golden Eagle Energy Tbk.</td>
</tr>
<tr>
<td>6.</td>
<td>TOBA</td>
<td>Toba Bara Sejahtera Tbk.</td>
</tr>
<tr>
<td>7.</td>
<td>BIPI</td>
<td>Benakat Integra Tbk.</td>
</tr>
<tr>
<td>8.</td>
<td>MEDC</td>
<td>Medco Energi Internasional Tbk.</td>
</tr>
<tr>
<td>9.</td>
<td>ANTM</td>
<td>Aneka Tambang (Persero) Tbk.</td>
</tr>
<tr>
<td>10.</td>
<td>INCO</td>
<td>Vale Indonesia Tbk.</td>
</tr>
<tr>
<td>11.</td>
<td>PSAB</td>
<td>J Resources Asia Pasifik Tbk.</td>
</tr>
<tr>
<td>12.</td>
<td>TINS</td>
<td>Timah (Persero) Tbk.</td>
</tr>
</tbody>
</table>

Data collecting method

The data collection began with the study of literature by studying books, journals and other references related to this research. Furthermore, the researchers collected data on company’s annual report.

Variable measurement

The variables used in this study consisted of the exogenous variables and endogenous variables. Cooper & Pamela (2006) stated that the exogenous variables are variables that affect the dependent variable, while the endogenous variable is a variable that affected or become due for their independent variable. Exogenous latent variable in this research is environmental performance, while the endogenous latent variables are financial performance and firm value. Both exogenous latent and endogenous latent has indicators, because latent variable is a variable that can’t be measured directly. This requires indicator to measure it. Environmental performance was reflected by PROPER. Financial performance was reflected by ROA, ROE and NPM. Firm value was reflected by stock price, PBV and Tobin’s Q. Measurement for all of indicators are as follows:
Table 4 Indicators of exogenous and endogenous latent variables

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Indicator</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Environmental performance</td>
<td>PROPER</td>
<td>Environmental is measured by a PROPER value published in company’s annual report is a number 1-5. (Ministry of Environment in Indonesia, 2015)</td>
</tr>
<tr>
<td>2.</td>
<td>Financial performance</td>
<td>Return On Assets (ROA)</td>
<td>Earnings after tax = [\frac{\text{Total assets}}{\text{Total assets \times 100%}}] (Kasmir, 2012)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return On Equity (ROE)</td>
<td>Earnings after tax = [\frac{\text{Total equity}}{\text{Total equity \times 100%}}] (Kasmir, 2012)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Net Profit Margin (NPM)</td>
<td>Earnings after tax = [\frac{\text{Net sales}}{\text{Net sales \times 100%}}] (Kasmir, 2012)</td>
</tr>
<tr>
<td>3.</td>
<td>Firm value</td>
<td>Stock price</td>
<td>Closing price per 31st December (Debby, Mukhtaruddin, Yuniarti, Saputra &amp; Abukosim, 2014)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price to Book Value (PBV)</td>
<td>Market price per share (Husnan, 2006)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tobin’s Q</td>
<td>[\frac{\text{(CP x number of shares outstanding) + TL + I}}{\text{TA}} - CA] TA</td>
</tr>
</tbody>
</table>

Explanations:
- CP: Closing Price
- TL: Total Liabilities
- I: Inventory
- CA: Current Assets
- TA: Total Assets

Data analysis method

The analysis method used is Structural Equation Modeling (SEM). Researchers using SEM-PLS to make it easier to analyze and perform statistical calculations, because these analysis methods can be used for the analysis of complex causal-predictive and fixed models can be estimated with a small sample size. In conducting the test, the researchers used Smart-PLS software Version 3. Ghozali & Latan (2015) stated that evaluation model of PLS by assessing outer and inner models. Evaluation of outer models aims to assess the validity and reliability of the model. Evaluation of inner models aims to predict the relationship between the variables of latent.
RESULT AND DISCUSSION

Result of evaluation for outer model

Figure 1 showed that the PROPER has a loading value of 1.000. Financial performance consists of three indicators namely NPM, ROA and ROE with loading value respectively 0.566; 0.973 and 0.983. Firm value consists of three indicators namely the stock price, PBV and Tobin’s Q with loading value respectively 0.701; 0.851 and 0.769. All of indicators have met the convergent validity test, because the value respectively above 0.50.

Table 5 Results of evaluation for Average Variance Extracted (AVE)

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>AVE</th>
<th>√AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental performance</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Financial performance</td>
<td>0.744</td>
<td>0.863</td>
</tr>
<tr>
<td>Firm value</td>
<td>0.602</td>
<td>0.776</td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 5 showed that the roots of AVE for environmental performance, financial performance and firm value are respectively 1.000; 0.863; 0.776.

Table 6 Results of evaluation for correlation among latent variables

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>Environmental performance</th>
<th>Financial performance</th>
<th>Firm value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Performance</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>0.263</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Firm Value</td>
<td>0.086</td>
<td>0.633</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Secondary data was processed
Table 5 and 6 showed that the roots of AVE each latent variable is higher than the correlation between the latent variables with each other latent variables, it means that our model had good value in discriminant validity test.

Table 7 Results of evaluation for composite reliability

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>Composite reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental performance</td>
<td>1.000</td>
</tr>
<tr>
<td>Financial performance</td>
<td>0.892</td>
</tr>
<tr>
<td>Firm value</td>
<td>0.819</td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 7 showed that the value of all the latent variables above 0.70. It means that the latent variables in this research had good reliability.

Table 8 Results of evaluation for crobanch’s alpha

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>Crobanch’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental performance</td>
<td>1.000</td>
</tr>
<tr>
<td>Financial performance</td>
<td>0.820</td>
</tr>
<tr>
<td>Firm value</td>
<td>0.679</td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 8 showed that the value of all the latent variables above 0.70. It means that the latent variables in this research had good reliability too.

**Result of evaluation for inner model**

Table 9 Results of R-square adjusted

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>R-square adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial performance</td>
<td>0.042</td>
</tr>
<tr>
<td>Firm value</td>
<td>0.372</td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 9 showed that the variability in financial performance (ROA, ROE and NPM) can be explained by the variability of environmental performance (PROPER) was only 4.2%, while the remaining is explained by other variables outside this research model. Variability firm value (stock price, PBV and Tobin's Q) can be explained by the variability of performance (PROPER) and financial performance (ROA, ROE and NPM) of 37.2%, while the remaining is explained by other variables outside this research model.
Table 10 Direct effect

<table>
<thead>
<tr>
<th>The effect</th>
<th>Original Sample</th>
<th>Sample Mean</th>
<th>Standard error</th>
<th>T-stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental performance →</td>
<td>0.263</td>
<td>0.251</td>
<td>0.165</td>
<td>1.595</td>
<td>0.111</td>
</tr>
<tr>
<td>financial performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental performance →</td>
<td>-0.086</td>
<td>-0.048</td>
<td>0.142</td>
<td>0.611</td>
<td>0.542</td>
</tr>
<tr>
<td>firm value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial performance → firm</td>
<td>0.656</td>
<td>0.672</td>
<td>0.089</td>
<td>7.374</td>
<td>0.000</td>
</tr>
<tr>
<td>value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 10 showed that the testing of environmental performance on financial performance (ROA, ROE and NPM) had a coefficient of 0.263 and p-value of 0.111 (greater than 0.05), then H1 rejected, it means environmental performance had no effect on financial performance. Environmental performance on firm value (stock price, PBV and Tobin's Q) had a coefficient of -0.086 and p-value of 0.542 (greater than 0.05), then H2 rejected, it means environmental performance had no effect on firm value. Financial performance (ROA, ROE and NPM) on firm value (stock price, PBV and Tobin's Q) had a coefficient of 0.656 and p-value of 0.000 (less than 0.05), then H3 received and means financial performance had effect on firm value. This result indicates that the increase in ROA, ROE and NPM in financial performance can increase the firm value was reflected by the stock price, PBV and Tobin's Q.

Table 11 Indirect effect

<table>
<thead>
<tr>
<th>The effect</th>
<th>Original Sample</th>
<th>Sample Mean</th>
<th>Standard error</th>
<th>T-stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental performance → firm</td>
<td>0.173</td>
<td>0.170</td>
<td>0.114</td>
<td>1.518</td>
<td>0.130</td>
</tr>
<tr>
<td>value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Secondary data was processed

Table 11 showed that environmental performance on firm value was reflected by the stock price, PBV and Tobin's Q through financial performance was reflected by ROE, ROA and NPM had a coefficient of 0.173 and p-value of 0.130 (greater than 0.05), then H4 rejected and means environmental performance had no effect on firm value indirectly.

**DISCUSSION**

*The effect of environmental performance on financial performance*

Table 10 showed that environmental performance had no effect on the financial performance. These results indicate that the environmental performance (PROPER) has not been able to improve financial performance (ROA, ROE and NPM). It means that information about environmental performance from ministry of environment has not been affect financial performance in mining companies listed in listed in Indonesian Stock Exchange, although the companies had followed PROPER program during 2013-2015. The results of this study were supported by Ramanathan & Akanni (2015) showed that environmental performance had no effect on financial performance.
Table 10 showed that environmental performance had no effect on firm value. These results indicate that the environmental performance was reflected by the PROPER has not been able to increase the firm value was reflected by the stock price, PBV and Tobin's Q. This is due to the market response to the implementation of environmental performance does not directly, but takes a time. The effect of environmental performance on performance of the market tends to be viewed in the long term, because it is associated with a confidence level of government especially ministry of environmental, investors and society. In addition, investors are still less attention to PROPER survey results in making investment decisions to determine which stocks will be selected. Although, we know that environmental performance is very important for sustainability in a company. Tjahjono (2013) showed that environmental performance (PROPER) had no effect on financial performance.

The effect of financial performance on firm value

Table 10 showed that the financial performance (ROA, ROE and NPM) had effect on firm value (stock price, PBV and Tobin's Q). It means that the higher NPM, ROA and ROE in financial performance, the higher the firm value was reflected by stock price, PBV and Tobin's Q. These results indicate that the actually profit from the use of assets, equity and net sales of mining companies followed PROPER program during 2013-2015 has been able to increase firm value. The results are consistent with the statement by Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim (2014) that the higher the profitability, the higher firm value. The results is supported by Khairiyani, Rahayu & Herawaty (2016), Khairiyani & Rahayu (2016) and Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim (2014) showed that financial performance had effect on firm value.

The effect of environmental performance on firm value through financial performance

The result of hypothesis test in table 11 showed that the hypothesis of environmental performance affected on firm value through financial performance was rejected. Based on table 10, environmental also did not affect on firm value directly. It means that environmental performance had no effect on firm value both directly and indirectly.

CONCLUSION AND SUGGESTION

Environmental performance was reflected by PROPER had no effect on financial performance was reflected by ROA, ROE and NPM. Environmental performance (PROPER) had no effect on firm value was reflected by stock price, PBV and Tobin’s Q. Financial performance (ROA, ROE and NPM) had effect on firm value (stock price, PBV and Tobin’s Q). It means that financial performance (ROA, ROE and NPM) was not able to mediate environmental performance (PROPER) and firm value (stock price, PBV and Tobin’s Q).

The result in this research can’t be generalized, because the sample is only includes mining companies. The period used in this research is only three years. Recommendation for future research is to add or change other indicators that reflect financial performance and firm value and then make a research in other country. Future research should to add the period of research. Future research also should change analysis method like path analysis. Ministry of Environment in Indonesian and mining companies should be more attention about environmental performance.
REFERENCES


ABSTRACT

This study aims to determine the effect of corporate social responsibility on financial performance and state ownership as moderate variable. Corporate responsibility used that GRI (global reporting Initiatives), financial performance used ROA and ROE and ownership proxied as state owned enterprises, than study also investigates size and type industry as control variable. The method used is quantitative methods to the type of survey of secondary data. The population of this research is all companies listed in Indonesia Stock Exchange 2008-2015, sample of the research are 99 firms in Indonesia, which selected by purposive sampling method. By using multiple regression analysis as the research method and result from this research show that is csr significant with financial performance and ownership proxied as state owned enterprises failed to be moderation variable between CSR and financial performance.

Keywords: CSR, financial performance and state ownership
THE INFLUENCE OF ORGANIZATIONAL COMMITMENT, JOB SATISFACTION, AND LOCUS OF CONTROL ON EMPLOYEE PERFORMANCE IN THE HEALTH SECTOR INDUSTRY

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ABSTRACT

Government regulation No.25 in year of 2000 explain decentralisation in the health sector, it propose that excellence health services to the public community have to be well implemented. To provide the excellence service in the health sector industry a company should have competent human resources as an important factor to increase organization performance. The objective of this research is to examine the influence of organizational commitment, job satisfaction, and locus of control on employee performance on health department. We use survey method to distribute the questionnaire. The sample size in this study was 100 respondents. We operate multiple linear regression to analyze the data statistically. The result reveals that organizational commitment, job satisfaction, and locus of control simultaneously and partially. The statistical test results show that organizational commitment, job satisfaction and locus of control simultaneously have a significant effect on the performance of health service employee. Partially statistical test result shows Organizational Commitment has a significant positive effect on the performance of Health Department employees. Job Satisfaction and Locus Of control have a significant positive effect on the performance of Health Department employees. In general, the response of health department employees to each variable has a fairly good response.

Keywords: Organizational commitment, job satisfaction, locus of control, Performance
INTRODUCTION

Health development is a part of national development that aims to increase awareness, willingness and ability to live healthy for everyone, in order to realize the highest degree of public health. The health development is the effort of the entire potential of the Indonesian people both society and government. In the implementation of decentralization and regional autonomy in the field of health based on PP. 25 Year 2000, then public health service in autonomous region, of course require good performance from organization personnel to be able to provide excellent service to society. In this case human resources (human resources) will be a critical success factor in every health program. Health Office of Central Bengkulu Regency is a government agency or SKPD within the Government of Central Bengkulu Regency which has the main duty of implementing government authority in health sector.

In order to support and carry out the main tasks and functions of Health Office of Central Bengkulu Regency, of course, must be supported by human resources that have high performance. Performance according to Mangkunegara (2007) is the work of quality, and the quantity and responsibility by an employee in performing the tasks assigned to him. Employee performance is important to achieve organizational goals. In accordance with that proposed by Rivai (2005) that "Employee performance is a very important thing in the company's efforts to achieve its goals". Of course performance does not form by itself, but there are other factors that influence it including organizational commitment, job satisfaction and locus of control.

At the Health Office of Central Bengkulu Regency, based on preliminary observations made by the researchers, the performance of Health Agency staff of Central Bengkulu Regency at this time there are still things that are less than the maximum because some employees can not complete the number of jobs assigned to him on time. This is due to the number of jobs quite a lot, while personnel serving the limited serving, for field duty officers who must distribute the drug to health centers and pustu located in remote areas where roads and terrain are difficult to reach. Sometimes employees are still asking for advice, guidance and improvement from superiors, because they are doing new jobs differently than before because they move from other agencies that are different types of jobs and duties.

Furthermore, organizational commitment has an effect on to the performance of health officer of Central Bengkulu Regency Health Office. Employees with organizational commitment tend to feel proud to be members of the organization, and have thoughts of staying within the organization, feeling they will find problems and obstacles if they leave the organization. But at the Health Office of Central Bengkulu Regency there are still employees who prefer to be in the Health Office of Central Bengkulu Regency, because there is a mutation of employees, and moved to other agencies at the request of the employees themselves for various reasons.

In addition to organizational commitment, employee job satisfaction affects the performance of health personnel of Central Bengkulu Regency. Public health improvement activities will work well if employees get job satisfaction from their daily work. The frequency and opportunities for promotion of structural positions for employees are not frequent because they have to meet the criteria set by the National Personnel Board (BKN) and also through the Baperjakat process. But permanent employees get promoted periodically.
Performance is also influenced by the locus of control. At the Health Office of Central Bengkulu Regency there are still employees who feel like what happens in work is largely determined by others who have the power of their superiors. This is because the limitations of the authority of the employees, and the right to make decisions are the boss. In addition, there is no forward planning work because it is considered a futile job. This is because all activities and work at the Health Office of Central Bengkulu Regency is determined by the strategic plan (Renstra) and the work plan (Renja) set by the supervisor, and the employees do the routine work only.

**LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

**Job Performance**

According to Schuller (1999) performance is what people do not what is produced. Good performance is a step towards achieving company goals. The performance of the organization is a description of the level of achievement of the goals or objectives of the organization as a description of the vision, mission, indicating the level of success and failure of the implementation of activities in accordance with the program and policy set.

According to Wright and Bonett (2002) organizational commitment affects the business of employees in work and this business is a factor that has an influence on the performance of these employees. Brown (1996) suggests that there is a correlation relationship between organizational commitment and other work related to overall job satisfaction, performance, stop working, with an employee's personality. As stated by Luthans (2006) and Robbins (2006) which states that job satisfaction affects the performance of employees in particular there are productivity, absenteeism and level of employee turnover (turn over). The correlation of satisfaction with performance is stronger for higher level employees, in other words relationships will be more relevant for individuals in professional positions, providers and managers. Bello (2001) states that one of the important variables that become the output of the locus of control is organizational performance. Employees with high internal locus of control, will strive to achieve high learning achievement so as to be able to apply training outcomes to work that affect performance (Kustini, 2005). Patten (2005) stated that the locus of control has a significant effect on the achievement of a performance within the organization.

**Organizational Commitment**

Buchanan (1997) defines commitment as employee acceptance of organizational values (identification), psychological involvement (psychological immerson), and loyalty (affection attachment). Employees who commit to the organization will show positive attitudes and behaviors towards their institution, employees will have a soul to keep defending their organization. Allen and Meyer (1997) faced organizational commitment consisting of three distinct components:

1. Commitment as affective attachment to the organization (Affective Commitment / AC). Affective components relate to emotional, employee identification and involvement within an organization.

2. Commitment as perceive cost associated with leaving the organization (Continuance Commitment / CC). The continuance component means a component based on the employee's perception of the disadvantage he will face if he leaves the organization.
3. Commitment as a conviction to remain in the organization (Normative Commitment / NC). The normative component is the employee's feelings about the obligations he has to give to the organization.

From the above description can be formulated hypothesis:

**H1**: Organizational commitment has a positive effect to the performance of employees of Central Bengkulu District Health Office.

**Job Satisfaction**

Job satisfaction reflects a person's feelings toward his work is visible in the employee's positive attitude with work, and everything he faces in his work environment. Furthermore, according to Hasibuan (2006) job satisfaction is the job satisfaction enjoyed in the work by obtaining praise of the work, placement, treatment, equipment, and atmosphere of a good working environment.

There are several determinants of job satisfaction proposed by Celluni and Devries (Mas'ud, 2004). Among these are 1) Work it self, 2) Relationship with supervisor, 3) Worker's partner, 4) Promotion and 5) Salary or wages (pay).

**H2**: Job satisfaction has a positive effect to the performance of employees of Central Bengkulu District Health Office.

**Locus of Control**

Locus of control shows the level of individual belief about the extent to which they can control events that affect their lives (Rotter, 1990). As for employees of locus of control as a belief of each individual employee about his ability to be able to affect all events related to himself and his work. Individuals who have confidence that the fate or events in his life are under his control, said the individual has an internal locus of control. While individuals who have the belief that the environment that has control over the fate or events that occur in his life said the individual has an external locus of control. According to Crider (2003) the characteristic differences between internal and external locus of control are as follows:

1. Locus of internal control consists of 1) hard work, 2) high initiative, 3) always trying to find problem solving, 4) always try to think as effectively as possible, 5) always have perception that effort must be done if want successful

2. Locus of external control consists of 1) lack of initiative, 2) easily give up, less like trying because they believe that outside factors that control, 3) lack of information, 4) have hope that there is little correlation between effort and success, 5) It is easier to be influenced and dependent on the instructions of others.

**H3**: Locus of control has a positive effect to the performance of employees of Central Bengkulu District Health Office.

**RESEARCH METHOD**

We organize the survey method in our research. Data used in this research are: 1) Direct interview with employees about organizational commitment, job satisfaction, locus of control and influence on performance of health officer of Central Bengkulu Regency. 2) Questionnaires that are logically related to the research problem.
RESULT

Respondent Characteristic

Characteristics of respondents in this study, among others, by sex, age, education, employment and rank / class as shown in the following Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Demography</th>
<th>Interval</th>
<th>Respondent</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td>Male</td>
<td>68</td>
<td>68,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>32</td>
<td>42,00</td>
</tr>
<tr>
<td></td>
<td><strong>Jumlah</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>21-30 years old</td>
<td>29</td>
<td>29,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31-40 years old</td>
<td>46</td>
<td>46,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41-50 years old</td>
<td>25</td>
<td>25,00</td>
</tr>
<tr>
<td></td>
<td><strong>Jumlah</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>3</td>
<td>Educational Background</td>
<td>DIII/DIV</td>
<td>63</td>
<td>63,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SI</td>
<td>35</td>
<td>35,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S2</td>
<td>2</td>
<td>2,00</td>
</tr>
<tr>
<td></td>
<td><strong>Jumlah</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>4</td>
<td>Tenure</td>
<td>1-10 years</td>
<td>35</td>
<td>35,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11-20 years</td>
<td>45</td>
<td>45,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 20 years</td>
<td>20</td>
<td>20,00</td>
</tr>
<tr>
<td></td>
<td><strong>Jumlah</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>5</td>
<td>Group/Class</td>
<td>Class IV</td>
<td>9</td>
<td>9,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class III</td>
<td>50</td>
<td>50,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class II</td>
<td>41</td>
<td>41,00</td>
</tr>
<tr>
<td></td>
<td><strong>Jumlah</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Based on the data obtained from questionnaires distributed to employees, it can be seen the demographic characteristics of respondents in this study as many as 68 male respondents (68%), and female respondents as many as 32 people (32%), berdasarkan age most respondents are in the age range 31-40 years old as many as 46 people (46%), based on education most of the respondents are Diploma (DIII / DIV) that is as many as 63 people (63%), based on years of service, most respondents are in the range of 11-20 years 45 people (45%) and based on the rank / group, most of the respondents are as many as 50 people (50%) are in the rank / class III.

Linear Regression Analysis

The regression model is a model used to analyze the effect of various independent variables on one dependent variable (Ferdinand, 2006). The results of data processing are summarized as follows:
Table 2 Result of Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>15.253</td>
<td>7.773</td>
<td>1.962</td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td>.299</td>
<td>.129</td>
<td>.234</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>.325</td>
<td>.155</td>
<td>.244</td>
</tr>
<tr>
<td></td>
<td>Locus of Control</td>
<td>.480</td>
<td>.219</td>
<td>.223</td>
</tr>
</tbody>
</table>

Dependent Variable: performance.

\[
Y = a + b1X1 + b2X2 + b3X3
\]

Employee Performance = 15.253 + 0.299KO + 0.325KK + 0.480LOC

Where:

- \( a \) = Constants
- \( b1 = \) Beta1, \( b2 = \) Beta2, \( b3 = \) Beta3
- \( Y = \) Employee Performance (KP)
- \( X1 = \) Organizational Commitment (KO)
- \( X2 = \) Job Satisfaction (KK)
- \( X3 = \) Locus Of Control LOC)

The interpretation of the regression equation can be explained as follows:

1) The constant (\( \alpha \)) indicates a constant value, where if the value of the independent variable is equal to zero, then the Health Service Performance of Central Bengkulu Regency = 15 (Y).

2) Regression Coefficient of Organizational Commitment (KO) of 0.299; meaning that if other independent variables are fixed and Organizational Commitment (KO) increases, employee performance increases. Coefficient of positive value means there is a positive relationship between Organizational Commitment with the Performance of Health Officials of Central Bengkulu Regency, the higher the Organizational Commitment, the Performance of Health Officials of Central Bengkulu Regency is increasing. \( H_0 \) is not supported, means organizational commitment has an effect on the real performance of employees. \( H_a \) is Supported.

3) Regression coefficient of Job Satisfaction (KK) of 0.325; meaning that if other independent variables are fixed and KK increases, then Employee Performance increases. Coefficient of positive value means there is a positive relationship between Job Satisfaction with Employee Performance, Increasing Job Satisfaction, Performance of Health Officials of Central Bengkulu Regency is increasing. \( H_0 \) is not supported, means that job satisfaction significantly effect the performance of employees. \( H_a \) is Supported.
4) The regression coefficient of Locus Of Control (LOC) of 0.480; meaning that if other independent variables are fixed and Locus Of Control (LOC) increases, then Employee Performance increases. Coefficient of positive value means there is a positive relationship between Locus Of Control with the Performance of Health Service Official of Central Bengkulu Regency, the increase of Internal Locus Of Control, the Performance of Health Official of Central Bengkulu Regency is increasing. H0 is not supported, it means locus of control significant effect on employee performance. Ha3 is Supported

The result of hypothesis is assumed in the models of organizational commitment, job satisfaction, and locus of control influence to performance of health officer of Central Bengkulu Regency. F test results are conducted to test whether the variable of organizational commitment, job satisfaction and Locus of control are as a predictors of the Performance of Health Service Officers of Central Bengkulu Regency, in the context of Goodness of Fit Models.

Table 3 F test for Goodness of Fit Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>8569.226</td>
<td>3</td>
<td>2856.409</td>
<td>15.144</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>18107.284</td>
<td>96</td>
<td>188.618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26676.510</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Locus of Control, Commitment, Satisfaction
b. Dependent Variable: Peformance

Based on the above table the value of F arithmetic = 15.144 and F table 2.70, with a significant level of 0.05. Thus, it can be concluded that the model are Fit and has a significant F test to Performance of Health Service Officer of Central Bengkulu. We conclude that the model of this reach has a significant goodness of fit.

DISCUSSION

To support and be upgraded from organizational commitment include employee willingness to plunge and engage in organization, work and strive for organizational progress, provide energy, thoughts, ideas, time for the organization to grow and achieve progress, provide positive information about the organization to others outside the organization, highlight the organizational advantages and feel proud to be a member of the organization, and have thought to remain in the organization, feeling that they will find problems and obstacles if they leave the organization. Efforts that can be done Health Office of Central Bengkulu Regency is to put the profession in accordance with the education that has been obtained. This means that the health service is able to place people according to their own bidan's expertise.
Some variables that should be improved in job satisfaction is maintaining good relationships between employees with superiors and between employees with co-workers so that what will be achieved by the District Health Office Bengkulu can be realized with the support of all elements of the organization. Employee satisfaction can be realized with the achievement of each goal of the organization. To fulfill job satisfaction, a person performs activities or activities, and to work according to the needs they want to fulfill in their life. Job satisfaction has an important role for every organization. Job satisfaction will contribute to the effort to improve performance in the Health Office of Central Bengkulu Regency.

The locus of control of the Central Bengkulu District Health Office is the employee's belief about the extent to which they can control the events affecting their work as employees. Some things that still need to be improved by the Health Officer of Central Bengkulu Regency from the locus of control is to increase the sense of responsibility for the work he has to accomplish to achieve the desired goals and always be grateful for what he has accomplished even though it is a disadvantage in accordance with the foundation vision and mission of the Health Office of Central Bengkulu Regency.

**CONCLUSION**

In this case, some variables need to be improved from the performance among others. Employees in completing the work still ask for advice, direction, and improvement from superiors. Efforts that can be done by the Health Office of Central Bengkulu Regency is to include employees in Bimtek and Diklat related to the field of work so that employees understand and master the field of work in the field of health, so that later able to work independently, do not ask for advice, direction, and improvement from superiors. Furthermore, encourage employees to study the operational guidelines and juknis associated with employee tupoksi. Subsequently sanctioned at puskesmas, posyandu, pustu, postkesdes which submitted late report, because so far there is no sanction late report for puskesmas, posyandu, pustu, poskesdes. In addition, the Health Office of Central Bengkulu District commissioned employees to collect data and reports from health centers, posyandu, pustu, poskesdes, in order to quickly be done and made a report by the Health Office of Central Bengkulu Regency.

Result of analysis of frequency distribution of employee response to job satisfaction variable in the Health Service of Regency of Bengkulu Tengah categorized good enough. The result of distribution analysis of frequency of employee response to Locus Of Control (LOC) variable at the Health Office of Central Bengkulu Regency is quite good. Result of analysis of frequency distribution of employee response to employee performance variable in the Health Service of Regency of Bengkulu Tengah categorized good enough. Organizational commitment, job satisfaction, and locus of control simultaneously have a significant effect on the performance of health personnel of Central Bengkulu Regency. This means that increasing the Organizational Commitment, job satisfaction, and locus of control together will improve employee performance.
It is suggested for Health Office of Central Bengkulu Regency, the result of this research can be as an input in order to make better efforts to increase organizational commitment, job satisfaction, locus of control and performance of employees for the achievement of organizational objectives and implement the authority of regional autonomy in the field of health. For Health Department employees are expected to make efforts to improve and improve organizational commitment, job satisfaction, and employee performance. For academics and other researchers can be additional reading material and references. As well as for further research, it is hoped that the results of this study can provide an overview of the effect of organizational commitment on job satisfaction and locus of control on the performance of health personnel of Central Bengkulu Regency.

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HUMAN CAPITAL ARCHITECTURE AND MANPOWER PLANNING
BASED ON INDONESIAN MIGRANT WORKERS IN MALAYSIA

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ABSTRACT

Edukasi Untuk Bangsa (EUB) is an organization which holds entrepreneurship training for Indonesian Migrant Workers in Kuala Lumpur, Malaysia. EUB in collaboration with Professional Certification Institution holds entrepreneurship certification either. This research aims 1) to identify characteristics of Indonesian Migrant Workers regarding their salaries, expenses, and savings, 2) to identify the most required entrepreneurial skills to be improved through training and certification, 3) to design human capital architecture based on Indonesian Migrant Workers. Data used in this study are primary and secondary data. Data analysis methods in this study are Descriptive Analysis, Importance Performance Analysis, and The House Model. The results of the study show that the interest of Indonesian Migrant Workers are high, but have not supported with sufficient entrepreneurial skill. Entrepreneur creation model consists of input, process, and output. They are expected to create job opportunities and help government eradicate poverty in their hometown.

Keywords: Descriptive Analysis, Importance-Performance Analysis, The House Model
MODEL OF CORPORATE GOVERNANCE IN EFFORT TO INCREASE SMALL AND MEDIUM-SIZED ENTERPRISE’S BUSINESS PERFORMANCE

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**ABSTRACT**

The purpose of this research is to analyze the corporate governance of Small and Medium-sized Enterprises (SME) in Creative Industry from the aspect of industrial profile, financial management, human resources management, operational management and marketing management in Sarolangun Regency. The research method used in this study is mixed method. This study combines sequential exploratory design that is used in early stages of research through qualitative methods followed by quantitative methods on the next stage. In the qualitative research phase, the researcher uses interpretive approach of phenomenology. Furthermore, at the stage of quantitative research the researcher uses inferential analysis tools in the form of multiple linear regression. The result of the research concludes that four variables namely financial, human resources, operational and marketing have strong influence towards business performance variable of Small and Medium-sized Enterprises in Sarolangun Regency. The results of multiple regression analysis showed positive numbers on all research variables, partially independent variables have a significant influence on business performance. Of the four variables studied it is known that marketing variables are the more dominant variables in influencing business performance.

**Keywords**: model, governance, small-medium enterprises, creative industry, business performance
INTRODUCTION

The role of small and medium enterprises (SMEs) in sustaining and improving a country's economy is very significant, both in developed and developing countries. The presence of SMEs is very important because it absorbs the most amount of labor and also, on the other hand, the contribution of SMEs towards Gross Domestic Product (GDP) is higher compared to the contribution of big companies.

The role of SMEs in Indonesia is very strategic, as seen from Indonesia's Gross Domestic Product (GDP) which continues to increase every year. Based on Central Bureau of Statistics’ (BPS) survey results and calculations, the contribution of SMEs to GDP (without oil and gas) in 2007 was 62.71 percent and in 2008 its contribution increased to 64.47 percent.

The foundation in government policy to encourage small and medium-sized enterprises is in Undang-Undang No. 20 Year 2008 on Micro, Small and Medium Enterprises. As mentioned herein, this effort needs to be conducted thoroughly, optimal and sustainably through conducive environment, providing business opportunities, support, protection, and expansion of business as widely as possible. SMEs are expected to improve their positions, roles and potentials in realizing economic growth, equity and increasing people's income, job creation, and poverty alleviation.

Furthermore, the creativity in business environments can not be separated from the intellectual role of academicians in helping the development of creative industries. In the creative economy, the Triple Helix system becomes an umbrella that connects between (1) Academics (Intellectuals); (2) Business and (3) Government, where the three helix is the main actors driving the birth of creativity, ideas, science, and technology vital to the growth of creative industries. As a concept, the main idea of Triple Helix is the synergy between academia, business, and government. Academics with resources, science, and technology are focusing on generating findings and innovation. Businesses make capitalization that provides economic benefits and other benefits to society. While the government guarantees and maintains the stability of both relations with regulation (Etzkowitz, 2008). This concept is supported by evidence and research conducted by Gendut Sukarno (2014) on the synergicity between the three actors that is able to contribute significantly to the growth of creative industry.

The problems faced by Jambi Province illustrate the difficulties of SMEs in competing with competitors and unable to penetrate the international market. This challenge is addressed in Gendut Sukarno's (2014) study, that the role of scholars, business and government is able to contribute to the growth of the creative industry. To improve the competitiveness of small and medium industries, further study of the role of intellectuals, business and government is required to create a model of creative SME governance in an effort to increase the competitiveness of creative industries in market competition.

Sarolangun District has many SMEs. Most of the SMEs have problems in corporate governance and competitiveness that include issues of financial management, human resources, operational management and marketing. Therefore, there should be a research that is able to provide an explanation on to what extent the governance of SMEs affect the competitiveness in the city of Sarolangun.
Research on governance and corporate governance has been widely implemented (Mulbert, 2010; Crowther and Seifi, 2010; Maman, Merita and Mery, 2006). This research is the first study to examine the governance of SMEs in terms of financial management, human resources, operations and marketing in order to formulate a specialized model of corporate governance in an effort to improve SME’s competitiveness.

LITERATURE REVIEW

Small businesses are companies with minimum capital of Rp.500,000, (Ministry of Industry). Small business is a company that employs 5-10 employees (Department of Industry). Small business is a company that employs employees between 5-19 people, while medium-sized enterprises are companies that employ employees between 20-99 people (Haryadi, 2008).

Small industry is an industrial business activity with investment value up to Rp. 200,000,000 (two hundred million) excludes land and building of business premises. While small and medium industry is industrial business with investment value of company up to Rp. 1,000,000,000, - (one billion) excluding land and building of business premises (SK Minister of Industry and Trade No. 589/MPP/Kep/10/1999).

Small Business is an economic activity carried out by an individual, a household or a body, aims to produce commercially traded goods or services, which have a net worth of Rp 200 million, and have annual sales of Rp 1 billion or less. (Undang-Udang No. 9 of 1995).

Based on Undang-Udang Number 9 of 1995, a small industry must have the following criteria:

A. Has a net worth of at most Rp. 200,000,000, - (two hundred million rupiah), excluding land and building of business premises or

B. Has annual sales of at most Rp. 1,000,000, - (one billion rupiah);

C. Owned by an Indonesian citizen;

D. Stand alone, not a subsidiary or branch of a company owned, controlled, or affiliated directly or indirectly with medium or large-scale business;

E. In the form of an individual business, a non-legal entity, or a legal entity, including a cooperative.

Whereas based on Presidential Instruction No. 10 of 1999 (Anonymous, 2008a), medium enterprises have the following characteristics:

A. Has a net worth of greater than Rp. 200,000,000, - (two hundred million rupiah) up to a maximum of Rp. 10,000,000,000 (ten billion rupiah), excluding land and building of business premises;

B. Owned by an Indonesian citizen;

C. Stand alone and not a subsidiary or branch of a company owned, controlled or affiliated directly or indirectly with large business;

D. In the form of individual businesses, business entities which are not legal entities and or corporate entities with legal entities.
The Government imposes restrictions on small business: (1) having net assets (assets) of more than Rp 50 million up to Rp 500 million excluding land and building of business premises, (2) annual sales of more than Rp 300 million up to Rp 2.5 billion, (3) Indonesian citizenship, and (4) stand alone, not a subsidiary or branch of the company.

While Medium Enterprises are: Criteria of Medium Enterprises are as follows: (1) a. Has a net worth of more than Rp 500,000,000 (fifty million rupiahs), (2) up to a maximum of Rp 10,000,000,000 (ten billion rupiahs) not, (3) including land and building of business premises; Or having annual sales proceeds of more than Rp 2,500,000,000 (two billion five hundred million rupiahs) up to a maximum of Rp 50,000,000,000 (fifty billion rupiahs).

**The Characteristics of Small and Medium-sized Enterprise**

Characteristics of small businesses in Indonesia can be split into two parts. The first characteristic is the advantage of the small business. Some of the characteristics of this business include: (1) small scale business, whether viewed from capital, labor, and market, generally located in rural, small town or suburb with private ownership status, (2) private and family business status, (3) the source of labor comes from the socio-cultural environment (ethnic or geographical), (4) the pattern of work is often part time or in the form of a side business, (4) simple and limited management in adopting technology, (5) Highly dependent on the source of personal capital, (6) often do not have a business license and business requirements are not met, (7) corporate strategy often depends on the environment.

Meanwhile, the second characteristic which is the weakness of the small business in Indonesia are: (1) the intensity of business change so that it is difficult to establish the specialization and professionalism of the business, (2) the instability of product quality, tend to seek quick and short-term profit, (4) business management is not well managed (finance, organization etc.), (5) Collectivism (especially in production) causes competition to be limited, (6) Most SMEs are established as an attempt to survive. (Sucherly, 2003)

**Challenges Faced by Small and Medium-sized Enterprises**

The results of a survey conducted by the UIEU UKM Study Center (May 2008) of 30 SMEs show that financial management, marketing, labor and production are the main problems facing SMEs. From the financial side, there are many parties who have helped SMEs. The various parties must understand that the problem of SMEs is not solely related to financial or capital issues. In this context, what is needed by SMEs is not only capital but also coaching. Tambunan (2004) mentioned that although capital flows in large amounts to SMEs, but if not followed by coaching mainly on how to utilize the capital received, then SMEs will tend to be unsuccessful.

Sucherly (2003) also states that the number of small businesses is overwhelming but inconsistent, often the old SMEs are dead and then new ones emerge. This factor also causes the number of SMEs difficult to identify. Because many small businesses are not identified, then many small businesses are not getting the attention from the government.
Tambunan (2004) stated that the role of SMEs in the national economy is still low. This is mainly due to the difficult access in funding. Despite various institutions and credit schemes for SMEs have been established, the difficulty of raw material procurement, the dependence of SME products on the domestic market, the unavailability of reliable human resources in accordance with the needs, SMEs not ready in the face of global competition due to low productivity and quality, Sources of information (markets, technology and design), low technological mastery, and a range of other factors are the problem of SMEs in developing themselves.

The Principles of Good Corporate Governance
Crowther and Seifi (2010) explained there are 4 (four) principles of good management as stated below:

1. Transparency (transparency), which means the company must be transparent with all governance procedures;
2. Accountability, which means that the structure of the financial statements should be clear;
3. Responsibility (responsibility), which means a person must be responsible for actions that have been taken;
4. Fairness, which means that the company's system must run fairly, ie impartial with nothing and without prejudice with anyone.

In the context of corporate governance, companies talk a lot about how fairness, transparency / disclosure, accountability and responsibility principles are part of the internal structure and systems within their companies, and this is part of corporate behavior. According to Crowther and Seifi (2010), measures to determine good governance and management are still debated. However, good organization and management will create positive things for the company as stated below:

1. Create sustainable value;
2. It will increase shareholders' satisfaction;
3. Effective and efficient management improvement;
4. Efficient risk management;
5. It will increase corporate credibility;
6. It will increase accountability;
7. There is a balance between economic and social benefits;
8. There is a fair responsibility;

Business Performance
The business performance is described as the achievement of the business organization in its business. According to Musran Munizu (2010) business performance variables have indicators of sales growth, capital growth, labor growth, market growth and profit growth.
RESEARCH METHODS

Population and Sample

Population is a collection of all elements in this case is defined as the object of research (Supranto, 1990). The population in this study amounted to 802 business units. While the sample according to Sutrisno (1992) is part of the population taken in a certain way and the number is smaller than the population. How sampling in this study conducted in *a non-probability sampling* is sampling where the probability or chance of a person to be elected to unknown samples (Soeharto, 2001). According to Sevilla (2007) to determine the sample size of the population used Slovin formula, namely:

$$n = \frac{N}{1 + NE^2}$$

Where:
- N: Number of Samples
- N: Total Population
- $E^2$: Errors that are tolerated (10%)

So the number of samples is: $n = \frac{702}{1 + 702.01} = \frac{702}{8.02} = 88$

Method of collecting data

A. Structured interviews
B. Observation and Documentation
C. Documentation Study

Research methods

There are three methods were used, namely: (1) Question structured (questionnaire) (2) secondary data collection and (3) *Focus Group Discussion* (4) Multiple linear regression. This study aims to produce a model of SME governance in Sarolangun District. This study uses a combination of research methods (*mixed method*), which is a combination of qualitative and quantitative research methods. The type of research that is used is a combination of *Exploratory Sequential Design*, which is in the early stages of research using qualitative methods and the next phase using quantitative methods. The method used in this research technique *Focus Group Discussion* (FGD), then used regression analysis. This research will last for one year (first year), with location in Sarolangun Jambi Province.

Further data collection and multiple linear regression analysis to test whether the applied model has an effect on or not to improve the performance of SMEs business and how much influence the implementation of the model of governance on the performance of SME business actors in Sarolangun regency.
Data analysis

The analytical tool used to test the hypothesis in this study is Multiple Linear Regression using a significant level of 5%. Multiple linear regression was conducted to determine the extent to which independent variables affect the dependent variable with the following steps:

a. **Validity Test (Test of Validity)**

To test the validity used by using the factor/ R test critically in accordance with the theory in the Sugiyono’s book (2000). Conditions used are Pearson correlation greater than critical r 0.3, if less than 0.3 then the point instrument r correlation less than 0.3 we assume failed/not used.

b. **Test Reliability (Test of Reliability)**

This research was conducted with the reliability test Croanbach’s Alpha formula. Criteria of Croanbach’s Alpha value less than 0.600 means bad, about 0.700 received and more than or equal to 0.800 is good. In this study, the independent variable is the financial management (X1), human resource management (X2), operational management (X3) and marketing management (X4), while the variable dependent is Ta t a Ke l o l u Know crafters tempe (Y). To get good results, multiple linear regression requires to test classical assumptions. The general form of multiple linear regression equation used in this study are as follows:

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_i
\]

Where:
- \(Y\) = Business Performance
- \(B\) = constants
- \(X_1\) = financial management
- \(X_2\) = HR management
- \(X_3\) = Operational management
- \(X_4\) = Marketing management
- \(e\) = error

**Classic assumption test**

**Normality Test**

Normality Test aims to test the basic assumptions valid multiple regression analysis, the independent variables and the dependent must be normal or nearly normal distribution (Priest, 2005).

**Multicollinearity test**

Multicollinearity test is performed to test the regression model, whether the regression model has a relationship between independent variables. If there is a correlation between independent variables, then there is a multicollinearity problem. A good regression model should be no correlation between independent variables.
Heteroscedasticity Test
The heteroscedasticity test was performed to test whether in the regression model there was a variance inequality of the residual one observation to another observation. If the variance of the residual one observation to another observation remains, it is called homoscedasticity and if different is called heteroscedasticity.

Autocorrelation test
Autocorrelation test is used to find out whether the regression equation contains serial correlation or not among variable. To know the existence of autocorrelation used Durbin-Watson test near or around the number 2 means there is no autocorrelation.

Hypothesis testing
To test whether there is any relationship between X and Y variable, statistic test with critical value of t distribution at significance level α = 0,05 with degrees of freedom dk = n-2.

Hypothesis:
- a. $H_0: b = 0$ (financial management ($X_1$), human resource management ($X_2$), operational management ($X_3$) and marketing management ($X_4$) does not affect the Business Performance ($Y$) either partially or simultaneously);
- b. $H_a: b \neq 0$ (financial management ($X_1$), human resource management ($X_2$), operational management ($X_3$) and marketing management ($X_4$) effect on Business Performance($Y$) either partially or simultaneously).

This test is associated with the real test of the regression line obtained from the prediction of the observed value of the dependent variable. In addition to the above test, the predicted $b$ value of $\beta$ values obtained from the sample must still be tested. The hypothesis is as follows:

- a. $H_0: b = \beta$ (regression coefficient is not significant)
- b. $H_a: b \neq \beta$ (significant regression coefficient)

Hypothesis testing as a whole is done for testing the overall regression coefficient is by using the value of $t$. With a significant value $t$ which is close to zero, it can be said that independent variable (X) associated with the regression coefficient has a significant influence on the dependent variable (Y) studied.

Simultaneous Test (F)
In this research, F test is used to know the level of significance of independent variables simultaneously to the dependent variable (Imam, 2005).

Basic decision-making is to use a significant level 0, 05, namely:

- a. If $F_{count} > F_{table}$, then $H_0$ is rejected, it means that each independent variable (X) are jointly have a significant influence on the dependent variable (Y).
- b. If $F_{arithmetic} < F_{table}$, then $H_0$ accepted means each independent variable (X) with the same does not have a significant influence on the dependent variable (Y).

The way to test F is to compare the statistical value of $F_{arithmetic}$ with $F_{table}$ as follows:

A. If Sig > $\alpha$ then, $H_0$ Received; and $H_a$ Denied
B. If Sig < $\alpha$ then, $H_0$ Declined; and $H_a$ accepted
Partial Test (t)

The t test is conducted to see the significance of individual independent influence on the dependent variable by assuming other variables are constant. The level of significance (Sig t) of each independent variable with sig level $\alpha = 0.05$. According to Imam (2005), How to do t test by comparing the static value t with the criteria point according to the table.

Testing criteria:

a. If $t > t_{table}$ then $H_0$ is accepted and $H_a$ rejected (no effect),

b. If $t < t_{table}$ then $H_0$ is rejected and $H_a$ accepted (influential)

Coefficient of determination ($R^2$)

The coefficient of determination ($R^2$) essentially measures the extent of the model's ability to explain the variation of the dependent variable. The coefficient of determinant ($R^2$) is intended to determine the best level of accuracy in the regression analysis, which is indicated by the magnitude of the determination coefficient ($R^2$) between 0 (zero) And 1 (one).

The coefficient of determination was shown by $R Square$ in the Model Summary generated by SPSS. If the value of $R^2$ is closer to 1, the regression model is considered better because the independent variables used in this study are able to explain the dependent variable. The value that is close to one means the independent variables provide almost all the information required for the variation of the dependent variable (Imam, 2005).

RESULTS AND DISCUSSION

Validity Test (Test of Validity)

From result of validity test done, by using program of SPSS Version 17.0, obtained result that its Pearson Correlation is bigger than 0.3, so all statement item used in this research stated valid, and all item showed positive direction, It is concluded that all statement items in this study are valid.

Reliability Test

Reliability test performed with Spearman Brown correlation using SPSS version 17.0, the result that all the items otherwise reliable statements because Cronbach's Alpha values above 0.6. So it can be concluded that all statement items in core research can be said to be reliable.

Multiple Regression Analysis

To test the influence of financial aspect (X1), Human Resources (X2), Operational Aspect (X3) and Marketing Aspect (X4) on Business Performance of SME (Y), used multiple regression, also to test the research hypothesis.

Table 1 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.751 a</td>
<td>.564</td>
<td>.543</td>
<td>.45514</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), X4, X3, X2, X1

b. Dependent Variable: Y
Based on the results of multiple regression analysis conducted with SPSS program, it is known that the value of R = 0.751, this means that the relation (relations) between the financial aspects (X1), Human Resources (X2), Operational Aspects (X3) and Marketing Aspects (X4) on Business Performance of SME (Y) equal to 75.1%. This means that the relationship is close.

Adjusted R square of 0.564 means that 56.4% of business performance variables can be explained by financial aspects, Human Resources, Operational Aspects and Marketing Aspects, while 43.6% can be explained by other variables not examined by this research.

**Anova (Test F) Test Simultaneously**

To test whether the proposed hypothesis is accepted or rejected statistically used F (test F). If \( F_{\text{arithmetic}} < F_{\text{table}} \), then \( H_0 \) is accepted or rejected, whereas if \( F_{\text{arithmetic}} > F_{\text{table}} \), then \( H_0 \) is rejected or accepted. If the level of significance below 0.05 then \( H_0 \) is rejected and \( H_a \) accepted.

### Table 2 ANNOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>22.261</td>
<td>4</td>
<td>5.565</td>
<td>26.865</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>17.194</td>
<td>83</td>
<td>.207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39.455</td>
<td>87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), X4, X2, X3, X1
b. Dependent Variable: Y

The table above shows that \( F_{\text{count}} \) is 26.865 with a significance level of 0.000, whereas \( F_{\text{table}} \) at 95% confidence (\( \alpha = 0.05 \)) is 2.6. Therefore, in both calculations \( F_{\text{count}} > F_{\text{table}} \) and its significance level is 0.000 < 0.05, indicates that the influence of independent variable (financial aspect (X1), Human Resources (X2), Operational Aspect (X3) and Marketing Aspect (X4)) are simultaneously significant against Y (Business Performance). Therefore, simultaneously \( F_{\text{count}} > F_{\text{table}} \), then \( H_0 \) is rejected and accepts \( H_a \), which means each independent variable (X) together have a significant influence on the dependent variable (Y), as well as the significance value < \( \alpha \), so \( H_0 \) was rejected; and \( H_a \) is accepted.

**T Test, Test Partially**

To test whether the proposed hypothesis is accepted or rejected the t (t test) statistic was used. If \( t_{\text{count}} < t_{\text{table}} \), then \( H_0 \) is accepted or \( H_a \) is rejected, while \( t_{\text{count}} > t_{\text{table}} \), then \( H_0 \) is processed or \( H_a \) is accepted. If the level of significance is below 0.05 then \( H_a \) is rejected and \( H_a \) accepted.
Table 3 Regression Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-0.147</td>
<td>0.399</td>
<td>-0.368</td>
<td>0.714</td>
</tr>
<tr>
<td>X1</td>
<td>0.129</td>
<td>0.110</td>
<td>0.112</td>
<td>2.167</td>
</tr>
<tr>
<td>X2</td>
<td>0.072</td>
<td>0.097</td>
<td>0.071</td>
<td>2.744</td>
</tr>
<tr>
<td>X3</td>
<td>0.209</td>
<td>0.121</td>
<td>0.164</td>
<td>3.723</td>
</tr>
<tr>
<td>X4</td>
<td>0.589</td>
<td>0.099</td>
<td>0.538</td>
<td>5.966</td>
</tr>
</tbody>
</table>

Dependent Variable: Y

Based on the table above, it can be explained that:

1) Financial Variable (X1) have positive and significant impact to Business Performance (Y), this can be concluded from the significant value 0.047 <0.05, and the value of t count 2.167 > 1.98, which means if the improvement of Finance variable (X1) is equal to one unit then Business performance (Y) will increase by 0.129 units. Therefore, partially t count > t table, then Ho is rejected and accept Ha, which means each independent variable (X1) partially has significant influence on the dependent variable (Y), as well as the significance value <α, then Ho is rejected; and Ha is accepted.

2) Human Resource Variable (X2) have positive and significant impact to Business Performance (Y), it can be seen from the significant value 0.009 <0.05, and t count value 2.744 > 1.98, which means if the improvement of Human Resource variable (X2) is equal to one unit then Business performance (Y) will increase by 0.072 units. Therefore, partially t count > t table, then Ho is rejected and accepts Ha, which means each independent variable (X2) partially has significant influence on the dependent variable (Y), as well as the significance value <α, then Ho is rejected; and Ha is accepted.

3) Operational Variable (X3) have positive and significant impact to Business Performance (Y), this can be seen from the significant value 0.039 <0.05, and t count value 3.723 > 1.98, which means if the improvement of operational variable (X3) is increased by one unit then Business performance (Y) will increase by 0.209 units. Therefore, the partial t count > t table, then Ho is rejected and accepts Ha, which means that each independent variable (X3) partially has significant influence on the dependent variable (Y), as well as the significance value <α, then Ho is rejected; and Ha is accepted.

4) The marketing variable (X4) has a positive and significant impact on Business Performance (Y), this can be seen from the significant value 0.000 <0.05, and t count value 5.966 > 1.98, it means if the marketing variable (X4) is increased by one unit then Business performance (Y) will increase by 0.589 units. Therefore, partially t count > t table, then Ho is rejected and accepts Ha, which mean each independent variable (X4) partially has a significant influence on the dependent variable (Y), as well as the significance value <α, then Ho is rejected; and Ha is accepted.
5) Based on the output result, then the formula of the regression equation is:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_i \]
\[ Y = -0.147 + 0.129 X_1 + 0.072 X_2 + 0.209 X_3 + 0.589 X_4 + e_i \]

**DISCUSSION**

This research aims to discover the profile of SMEs in Sarolangun District, analyze their financial management, human resources, operational, marketing in order to formulate creative SME governance model for the purpose of increasing the competitiveness business level in Sarolangun District.

After conducting field research and analysis, it is found out that there is a close value of R between independent variables (X) with dependent variable (Y) of 0.751. The relations can be said as very close because the value of R approaches 1, the positive sign of the value of R means that the R value of the independent variable has a direct relationship with the dependent variable. If the independent variable increases then the dependent variable also increases, and vice versa. Adjusted R square of 0.564 means that 56.4% of business performance variables can be explained by the service marketing mix and service quality, while the 43.6% can be explained by other variables not examined in this research.

Based on the aforementioned description, it is known that the four Variables of Finance (X1), Human Resources (X2), Operational (X3) and Marketing (X4) influence greatly on business performance of SMEs in Sarolangun (Y). This can be proved by looking at the comparative value of \( F_{\text{count}} > F_{\text{table}} \) (26.865> 2.6) with 0.000 significance level which means simultaneously variable X1, X2 X3 and X4 have significant effect to variable Y. So it can be concluded that Financial Variable (X1) Human Resources (X2), Operational (X3) and Marketing (X4) are the variables that can affect SMEs performance in Sarolangun (Y).

The results of multiple regression analysis also showed positive numbers on the Financial Variables (X1), Human Resources (X2), Operational (X3) and Marketing (X4), it shows that partially independent variables have a significant impact on SMEs (Y) performance. If the independent variable is increased partially, then the business performance of SME (Y) will increase as well because the variable has significant influence.

Of the four variables studied it was discovered that marketing variable (X4), is the more dominant variable in influencing SME (Y) business performance with regression coefficient (b) equal to 0.589 which is bigger than the other variable. By knowing that the more dominant variable influence business performance is the marketing variable, businessmen must pay attention to and improve marketing variable to increase the business performance of SME (Y).

**The Effect of Financial Management on SMEs Business Performance**

Based on the multiple regression analysis financial management related to SME business performance the result generated is \( H_a; B \neq 0 \), financial management (X1) affects the Business Performance (Y) (either partially or simultaneously). The significance value obtained is 0.047 (below 0.05) which means that financial management affects the performance of SMEs in Sarolangun.
These results are in line with the results of the research done by Sugis (2014) that there is a positive impact of capital variables with general training indicators and specific training) as well as social variables (with indicators of structural dimensions, relational dimensions, and dimensions to performance) Research conducted by Rayadi (2012) concluded that the biggest factor in improving company performance is performance appraisal and by doing so also means to motivate workers to work harder.

The result of research by Susilowati et al (2013) concludes that in the industry, the aspect of human resource management is proved to have an effect on the performance of the organization, the contribution of human resources management as an aspect to the improvement of organizational performance will be greater if done through the improvement of employee performance.

**The Effect of Operational Management on SMEs Business Performance**

Based on the multiple regression analysis result, operational management associated with SMEs business performance the result received $H_0: \beta \neq 0$, operational management (X3) has an impact on Business Performance (Y) either partially or simultaneously. The significance value obtained is 0.009 (below 0.05). Which means that operational management affects SMEs performance in Sarolangun.

These results are consistent with the result of the research conducted by Ulfah and Raharjo (2013) which concludes that strategic factor variables, tactical factors, and operational factors have positive and significant impact on operational performance, financial performance and non-financial performance. Operational performance variables have positive and significant impact on financial performance and non-financial performance.

Study by Nugroho (2015) concluded that the quality of management influential both directly and moderately by the quality culture of the IKM. This finding indicates that IKM is still not fully conducting the quality management practices in a strategic manner when it should be the main focus of the company.

**The Effect of Marketing Management on SME Performance**

Based on the multiple regression analysis result, the linked marketing management with SMEs business performance, the result received $H_0: \beta \neq 0$, marketing management (X4) has an impact on Business Performance (Y) either partially or simultaneously. The significance value obtained is 0.000 (below 0.05). Which means that marketing management affects the SMEs performance in Sarolangun.

These results are consistent with the results of research done by Listyarso (2005) which concluded that the marketing consisting of price advantage, quality excellence, time superiority, service flexibility, relationship and alliance have positive and significant impact on small-medium enterprises performance. Marketing strategy as an independent variable has significantly positive influence on marketing performance as a dependent variable.

Research conducted by Andharinini (2012) concludes that the performance of MSMEs can be improved and developed by doing several things which are developing the target marketing and the marketing area, setting the selling price according to the packaging, developing the marketing channel, maintaining the product characteristic and packaging, and paying attention to the need and interest of customers.
CONCLUSION AND RECOMMENDATION

This research concluded that independent variable have direct relations with dependent variable. When the independent variable increases so does the dependent variable, and vice versa. The four variables of finance (X1), human resource (X2), operational (X3) and marketing (X4) have significant impact to business performance variable in Sarolangun (Y). Of the four independent variables studied the marketing variables (X4) was discovered as the dominant variable in affecting business performance.

In relation to the aforementioned conclusion, the researcher would like to give some recommendations to District of Saro businessmen to always improve the financial, human resources, operational and marketing governance in order to improve their business performance. This study concentrates only on four variables of business governance; the author also recommends conduct further research to examine the other variables in small and medium enterprise governance.

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THE DETERMINANT OF INTERNET FINANCIAL REPORTING DISCLOSURE ON INDONESIAN LOCAL GOVERNMENT

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ABSTRACT

The transparency of public information on Indonesian Local Government was considered low. The compliance of public service was also low, and other complications were found in implementing e-government program. Financial transparency of public institutions was expected to suppress corruption and improve the quality of financial statements. The purpose of this research was to get empirical evidence of the population, auditor, press visibility, political competition, and Human Development Index (HDI) determinant on Internet Financial Reporting (IFR) disclosure on local governments in Indonesia. The population was amounted to 499 local governments in Indonesia. By Purposive Sampling method, sample equalled to 378 local governments was obtained. The statistical method used for this research was Logistic Regression Method. The results showed that population and press visibility affected the IFR, while auditor, political competition and HDI had no effect on IFR.

Keywords: Internet Financial Reporting, local governments, Indonesia
INTRODUCTION

Public service enforcement should be organized through nationwide information systems. The government through Law No. 25 of 2009 on public service states that the organizers have an obligation to provide the public with open and accessible information. The basis of transparency indicator is the level of accessible information to all relevant stakeholders (Biondi and Lapsley 2014). The accessible information can be carried out with various information means such as via internet.

Fast, precise and simple services should be provided by all public institutions by appointing Information and Documentation Management Official (IDMO). In addition, public institutions have to create and develop information service provision system in a fast, easy and reasonable way in accordance to the technical guidelines of national public information service standards. One of the implementations of public information disclosure and accountability principles is realized by the report of IDMO service to Central Information Commission (CIC) every year. The lastest CIC data on January 23, 2017, for the 2016 IDMO service report states that there were only 9 public institutions which have submitted their reports. Whereas in 2015, there were 53 public institutions that reported their IDMO services (www.komisiinformasi.go.id). This shows the lack of IDMO participation in all Indonesian’s public institutions in term of public information disclosure implementation where CIC has been established since 2010. It also violates the Regulation of Central Information Commission Chairman No. 1 of 2010 article 36 act 1 that the public authorities have to prepare and submit reports no later than three months after the fiscal year ends.

Besides, based on the public information disclosure in 2015 in accordance with the Central Information Commission Chairman Decree of Indonesia No. 02 / KEP / KIP / XII / 2015, the results can be seen as follows:

1. In the top 10 ministries, the average score is 88.41 with the highest score of 99.722 and the lowest point of 77.747;
2. In the top 10 state institutions, the average value is 82.38 with the highest score of 98.056 and lowest point of 68.327;
3. In the top 10 provincial governments, the average value is 76.66 with the highest value of 94.111 and the lowest point of 61.206.

The obedience and local government to public service standards in accordance with Law No. 25 of 2009 still need improvement. Indonesian’s Ombudsman carried out public service obedience survey in 22 ministries, 15 institutions, 33 provincial governments and 114 districts/cities government in 2015. The result of availability level of electronic and non electronic public service information indicators (pamphlets, booklets, websites, television and so on) were as follows:

1. Cities have got an obedience value of 58.83%; and
2. Districts have got an obedience value of 48.80%.
Public information disclosure is aimed at transparency of public services from government to stakeholders and in the framework of e-government implementation. Principles in good governance also require transparency and accountability. E-government is the use of information technology by government institutions to provide information and services for employees, business processes and other matters related to government. This definition comes from Regulation of Utilization and State Apparatus Minister no. 14 year 2014. E-government involves information technology and communication, especially web-based application to provide faster, easier, and more efficient access in delivering information and service to the public (Lee, 2010). The easiness in the use of website as one of e-government implementation would provide faster, transparent, and accountable service for the society. The importance of placing financial transparency, comparative and obedience information in enhancing accountability in recent years has encouraged the development of studies which aim at identifying key factors affecting accounting and disclosure options made by public organizations (Bolivar et al., 2013). In applying this, e-government in Indonesia still has got several obstacles, such as limited law regulation, uniregated system, limited service of experts in information engineering, civil servants moratorium, and poor security system (www.nasional.kompas.com).

Transparency in government financial management is carried out as the effort in preventing and eradicating corruption in accordance with Presidential Instruction No. 17 of 2011. The follow up of this Presidential Instruction is Home Affairs Ministerial Instruction No. 188.52 / 1797 / SJ about the improvement of transparency in managing financial management in regions. All Governors, Regents and Mayors in Indonesia have to prepare a content menu that contains financial information on the official website of each region. In developing the website, all institutions of state official are also guided by Regulation of Communication and Information Minister of Indonesia No. 5 of 2015. The disclosure of financial information is an obligation for all public institutions. The summary of the financial reports should consist of at least:

1. Plans and reports on budget realization;
2. Balance sheet;
3. Cash flows reports and financial reports arranged in accordance with applicable accounting standards
4. List of assets and investments.

The disclosure is mandatory that every public institution is obliged to do so. If we look at the level of obedience from Ombudsman’s research, the availability of information by public institution is still in low and medium category. The disobedience of public institutions in implementing the regulations related to financial transparency could result in information delays received by the public. Low financial transparency affects to corruption practices which are indicated by the large number of public complaints to Corruption Eradication Commission (CEC). Budget transparency is such a main factor for a better governance in the public sector (OECD 2001). The follow up of the disclosure of financial information on government's website is still considered to be less beneficial for stakeholders especially the society. Public simply notices disclosure of information which concerns to their basic needs in daily life.
Improvement in financial transparency from the government is expected to prevent corruption practices. Transparency International shows that the perception of corruption index in Indonesia in 2016 was amounted to 3.7 and was ranked 90 worldwide with the highest index of 9 for Denmark (www.indonesia-investments.com). Although there was an improvement in index value than the previous year, the eradication corruption in Indonesia still faces many challenges. The result of economics laboratory research of Gajah Mada University reveals that there were 803 corruption cases which involved 967 corruption defendants in 2014-2015 (www.news.liputan6.com).

Financial report is one of the transparency manifestations from government to the public. The public should know the financial management from the government in order to avoid misuse of state finance. The increasing demand for public accountability implementation can bring an impact on public sector management in providing the public with accounting information in the form of financial reports (Mardiasmo 2009). A qualified Local Government Financial Report (LGFR) should get Fair Without Exception (FWE) opinion from Audit Board of the Republic of Indonesia. FWE opinion for LGFR in districts/cities is targeted to achieve 60% in 2019 regarding 2015-2019 National Medium Term Development Plan. As stated by Indonesian Audit Board in 533 LGFR in 2015, there were 312 (58%) LGFR with FWE opinion, 187 (35%) with Fair With Exception opinion, 30 (6%) with Unstate opinion and 4 (1%) with Unfair opinion. The problems of regional losses generally occur due to lack of supervision and control by the officers, less assertiveness in collecting activities’ down payment, and nonconformity between the contract and the accountability.

The Fair Without Exception (FWE) opinion given by Audit Board is not a guarantee that government institutions become least corrupt. Audit Board also ensures that FWE opinion does not certify that the entity is least corrupt, for the audit of the financial reports does not specifically aim at detecting corruption. Audit Board is obligated to reveal any non-compliance whether it affects the opinion of the financial reporting. It is proven by the caught red-handed operation conducted by Corruption Eradication Commission to four suspects related to FWE opinion case in the Villages, Disadvantaged Regions and Transmigration Ministry on 27 May 2017 (www.kpk.go.id).

The sale and purchase opinions on the financial reporting still possibly happens to the BPK auditors. The allegation in FWE corruption case is likely to affect the quality of government financial reporting. Moreover, the quality of the auditors can be an important factor that the author is interested in undertaking this research.

The factors that influence in financial information disclosure through internet are obtained from several preceding researches. Wealth factor influences positively in disclosing financial information (Utomo and Aryani 2016); Jafaru and Francis 2016; Perez et al. 2014; Lepore and Pisano 2013; Laswad et al. 2005). Yet, wealth does not impact to information disclosure in Spanish cities (Gandia and Archidona 2008). Size factor affects to financial information disclosure through internet (Utomo and Aryani 2016; Suranto 2015; Basuony and Mohamed 2014; Joseph et al. 2014; Dolinsek et al. 2014; Martani et al. 2014; Momany et al. 2014; Lepore and Pisano 2013; Garcia and Garcia 2010; Al Moghaiwli 2009; Styles and Tennyson 2007). This result comes different in other researches in which size factor does not affect financial information disclosure via internet (Nurunnabi and Hossain 2012; Laswad et al. 2005).
Population is one of the factors that influences transparency and financial information disclosure (Jafaru and Francis 2016; Albalate 2012). However, there is a different result in a research conducted by Perez at al. (2014) in which the number of population would not influence online financial report disclosure. Other factors in internet-based financial information disclosure are the number of debt, political competition, leverage, press visibility, education level, liquidity, and audit opinion. Debt becomes one of the factors that is relevant in information transparency via internet (Perez et al. 2014; Styles and Tennyson 2007). Nevertheless, Albate (2012) in his research shows that the number of debt does not impact to the local government transparency. Leverage in some researches does not affect the financial information disclosure through internet (Utomo and Aryani 2016; Suranto 2015; Garcia and Garcia 2010; Gandia and Archidona 2008). It only impacts to the financial information disclosure in a research by Laswand et al. (2005). Political competition also does not bring influence to the financial information disclosure in a research by Laswand et al. (2005). Otherwise, the researches accomplished by Perez at al. (2014); Garcia Garcia (2010); Gandia and Archidona (2008) illustrate that Political competition would have an effect in government’s financial information disclosure. Aly et al. (2010) points that auditor’s measure does not impact to IFR, while (Nurunnabi and Hossain 2012) in their research indicate that there is a significat impact between auditor and IFR.

Problem Formulation

Based on the the background of the study that has been described on the previous chapter, as well as some existing problems, researchers were interested in conducting a research on the determinant of Internet Financial Reporting (IFR) disclosure on local governments in Indonesia. As for the questions raised on this research, they were:

1. Does the population of a local government affect its IFR disclosure?
2. Do local government’s auditors affect the disclosure of IFR?
3. Does local government’s press visibility affect its IFR disclosure?
4. Does local government’s political competition affect the disclosure of IFR?
5. Does local government’s Human Development Index (HDI) affect the disclosure of IFR?

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Stakeholder Theory

Stakeholders, in an organization, are defined as several groups of individuals or individuals that can affect or be affected by the process of achieving organizational goals (Freeman, 1984). The starting point of this theory is that an organization is part of a social system, the system consists of several groups working together to achieve the goals. One part of this system is the stakeholders that interact with the organization in achieving its objectives (Cotter et al., 2011).
Wood and Ross (2006) find that stakeholders’ opinions were more influential in managers’ attitudes toward social environmental control than subsidies, cost regulations, or mandatory disclosures. Some studies also state how stakeholders influence the financial reports (Freeman et al., 2010). Chen et al. (2007) finds that there are certain characteristics of stakeholders that influence the voluntary dissemination of financial information. The dissemination of financial information is done, one of which, through the internet. In recent years, people started doing research on the impact of the internet in accounting. Internet is perceived as significant because communication with the stakeholders is important for company’s social and environmental management and its accountability (Freeman et al., 2010). Internet is one of the most powerful communication tools to communication with stakeholders. Schankar et al. (2002) proposes a stakeholder theory as an online trust that would help professional information systems to better understand the perspectives of various stakeholders.

Organizations, both in public and private sectors, can be considered as stakeholder groups and have specific objectives. Friedman and Miles (2006) identify groups of people perceived as stakeholders - customers, employees, local communities, suppliers and distributors, shareholders, citizens, media, business partners, future generations, founders of the organization, academia, competitors, stakeholder representatives, trade unions or associations of suppliers or distributors of trade, financiers, shareholders, bondholders, creditors, competitors, governments, regulators, policymakers, and others. Ubeibor et al. (2012) states that in the public sector, government and officials are the management, while communities, businesses, and agencies are the stakeholders.

Stakeholder theory is considered to be an alternative to government regulation (Bucholz and Rosenthal, 2004). Long-term implementation of stakeholder management principles marks the need for industry policy and increased role of government intervention and regulation (Freeman, 1998: 132). Collaboration and participation of the community and government are expected in the formulation of government policy. Leaders of the government are expected to consider the aspirations of the community and prioritize the disclosure of financial information so that the performance of the organization can be improved and become better.

**Agency Theory**

Agency Theory is often used in various studies. This theory is considered as the theory that explains the relationship between principals and agents in a particular business. Generally, it raises a problem that can be categorized as a conflict of interest between the principal and the agent in maximizing their own utility and differently defined goals. Another problem arises from different risk tolerances between principals and agents (Salehi and Shirazi, 2016). Such problems may result in agency costs to be considered as the decreasing of company’s value and management supervision costs (Marston and Polei, 2004). Agency costs arise from differences in interests between managers and shareholders due to the separation of ownership and control. This separation results in the asymmetry of personal information about future prospects of the company. One of the actions that can be done in overcoming this is that managers show the shareholders that they have acted correctly and disclosed company information voluntarily and are willing to be supervised (Xiao et al., 2004).
Agency costs can be reduced by disclosing more information (Al-Shammari, 2007). Another way is by increasing the amount of information included in the accounting report (Aly, 2008). In the government sector, the one acting as principal is usually the people, while the agent is the government. The government can make policies that benefit the government and certain parties but ignore the interests and welfare of the people. Therefore, the people as the principal is very important to monitor of what is done by the government as an agent. One form of government accountability is financial reports.

**The Transparency of Public Information**

Law no. 14 of 2008 states that any public information is open and accessible to any user of public information. This is aimed to accomplish a transparent, effective, efficient and accountable state administration. Fiscal transparency and accountability are an important component of citizens’ trust in government, so citizens demand an improvement in state finances transparency (Thornton and Thornton, 2013). The level of public trust in government can increase when financial transparency becomes one of the things the government pays attention to. Transparency in the financial report becomes an integral component of increased accountability (Styles and Koprowski; 2008).

Information transparency describes a condition in which people have access to data and documents on actions and decisions taken by the government (Florini, 2007). Available information becomes important to enable people to detect corruption in their government (McGee and Gaventa 2011; Michener and Bersch 2013). People can access the information easily through electronic media. One of the easiest media to use is the website. Most local governments in Indonesia have a website, based on the instruction from the Ministry of Home Affairs and the Ministry of Communication and Information. The use of the Internet by governments has become popular and is believed to contribute to an effective and efficient government information flow. People are surveyed to see, investigate or search for required information about government services related to the use of the internet by the government (Sweeney 2007).

**Government Financial Information**

The government as a public body has an obligation to disclose financial information to all stakeholders. Full disclosure of all relevant fiscal information does not mean that the public knows if they have an appealing offer for public finances (Rubin 1996). In general, financial information disclosure in Indonesian government is regulated by Law No. 14 of 2008 and Information Commission Regulation No. 1 of 2010. Specifically on local government, the Minister of Home Affairs has issued the Instruction of the Minister of Home Affairs No. 188.52 / 1797 / SJ / 2012 on improving the transparency of local government budgets management.

The latest data that should be disclosed on the local government website in accordance with the Instruction of the Minister of Home Affairs are:

- a. Summary of work plans and budget plans of the Local Government Work Units and a summary of work plans and budget plans of the Regional Finance Officials;
- b. The draft for Local Regulation on Regional Revenue and Expenditure Budgets and the regulation draft on its Amendment;
- c. Local regulations on Revenue and Expenditure Budgets and its amendment;
d. The draft on document for the implementation of Local Government Work Units and Regional Finance Officials budget plans;

e. Budget Realization Report of Local Government Work Units and Regional Finance Officials;

f. Local Government Financial Reports that have been audited and the opinions of the Local Government Financial Reports.

Disclosure generally has the purpose of presenting important information in order to achieve the purpose of financial reports and to attend to various parties of different interests. Technical disclosure is the final step in accounting process that is presenting full financial statements information (Suwardjono 2011: 578). In this study, financial information is disclosed through websites managed by local governments. Groff and Pitman (2004) make a review on more than 100 local government websites in the United States for financial disclosure via the Internet.

Government Regulation No. 71 of 2010 states that government financial reports are used by several users, namely community, people's representatives, regulatory institution and inspection institution, those who give or take part in the processes donations, investments, loans and government. The government must pay attention to the information presented in the financial statements for the purposes of planning, controlling and decision making. The components of the main financial statements according to Government Regulation No. 71 of 2010 are:

- Realization Report on Budget Plans
- Report on Over Budge Changes
- Balance Sheet
- Operational Report
- Statements of Cash Flow
- Statements of Changes in Equity
- Notes on the Financial Statements

**Internet Financial Reporting (IFR) Disclosure**

Internet, nowadays, is something that is very important for everyone. All sorts of information can be found through internet anytime and anywhere. Both private and public sectors use internet in conducting operational activities, finance activities, information activities, and others. The power of the internet and web technologies has become highly favoured in e-commerce, local, regional and government business around the world such as developing e-government (Huang and Benyoucef 2014). In the field of public administration, internet has facilitated the introduction and development of a large number of actions related to New Public Management (Gandia and Archidona 2008).
Internet is a unique information disclosure tool that provides instant information to global audience (Abdelsalam et al., 2007), it also reveals any information updates to improve efficiency and effectiveness (Kelton and Yang 2008), it reduces information asymmetry (Cormier et al. 2012, Puspitaningrum and Atmini 2012), and increases accessibility and / or flexibility of information use (Ojah et al., 2012). Internet Financial Reporting (IFR) is one form of voluntary disclosure (Oyelere et al., 2003). One of the advantages of IFR is saving in the cost of production and distribution of financial information (Oyelere and Kuruppu 2012). Nature and Rashid (2014) mention that nowadays, IFR became an accepted tool to communicate with stakeholders. The Government discloses its financial information through the internet aims to facilitate the delivery of information to the public. It has been implemented by issuing regulations as a legal umbrella. All public bodies are required to disclose their financial information on their respective websites.

**Population**

Every citizen is entitled to financial information disclosure from the government for them to be able to influence or to provide advice in order to achieve state goals. The one determining the size of a city is the population (Albalate 2012). Large companies tend to adopt various methods of IFR disclosure to effectively disseminate information to the public (Debreceny et al., 2002). In this study, the population of a Regency / City is expected to affect IFR disclosure.

**Auditor**

Auditors are competent and independent individuals conducting audit activities (Arens et al., 2012). Auditors routinely check Local Government Financial Statements. Xiao et al. (2004) finds that the level of internet disclosure in companies is greater among Chinese firms audited by Big-Five (now Big-Four) companies. Internal auditors in a local government are the one at regional inspectorate.

**Press visibility**

Press, as one of the stakeholders of the government, has an influence on the policies and services that are provided by the government. However, press does not always act on behalf of the community. They have their own financial goals and usually prefer to publish news that presents scandals and corruption news to improve their sale circulation and rating (Garcia and Garcia 2010).

**Political Competition**

Leaders from both political and non-political party in Indonesia are influential in achieving the organizational goals. High levels of political competition increase long-term costs which cause the elected officials to ignore pre-election promises, and motivate the on duty candidate to agree to bear greater monitoring costs (Baber 1983; Evans and Patton 1987). A website is an effective cost mechanism for instantaneous and simultaneous information dissemination, and therefore it may be an important medium for the political agents to use additional monitoring obligations (Laswad et al., 2005).

**Human Development Index (HDI)**

HDI provides the explanations of how people can access data on development results in obtaining income, health, education and so on. HDI is one of the important indicators to measure the success of increasing community’s quality of life (www.bps.go.id).
HYPOTHESES ELABORATION

1. The Influence of Population on IFR Disclosure

Communities or society are among the stakeholders outside of the government that will influence and be influenced by the accomplishment of organizational goals. Ubeibor et al. (2012) states that in the public sector, government and officials act as management, while society, employers, and agencies act as stakeholders. The one determining the size of a city is the population (Albalate 2012). The population has a significant influence on the IFR voluntary disclosure (Jafaru and Francis 2016). Based on previous theories and research, we compiled the following hypothesis:

H1 = The more densely populated a regency / city, the IFR disclosure tends to be higher.

2. The Influence of Auditors on IFR Disclosure

Auditors are supervisory partners of the government. The size, corporate’s auditors and managerial effects, as measured by the multivariate regression analysis framework, affect the sophistication of IFR (Bozcuk 2012). However Aly et al. (2010) report that there was no significant relationship between the number of auditors and IFR in Egypt. Xiao et al. (2004) find that the level of internet disclosure in companies is greater among Chinese firms audited by Big-Five (now Big-Four) companies. Some characteristics of the companies audited by large audit firms rather than private firms affect the voluntary disclosure (Nurunnabi and Hossain 2012). Based on the description above, the hypothesis in this study is:

H2 = The higher the number of expert auditors owned by the Regency / City, the possibility of the Regency / City to disclose its IFR is high.

3. The influence of Press Visibility on IFR Disclosure

Press visibility affects negatively on IFR disclosure in a research conducted by Utomo and Aryani (2016); Lepore and Pisano (2013); and Garcia and Garcia (2010). However, Gandia and Archidona (2008) and Laswad et al. (2005) find different results that press visibility positively affect the disclosure of IFR. Based on these inconsistent results, we propose a hypothesis as below:

H3 = The possibility of Regencies / Cities disclosing their IFR is high when the pressures are also high.

4. The Influence of Political Competition on IFR Disclosure

Political competition has no effect on IFR disclosure (Perez et al., 2014 and Laswad et al., 2005), but it has a positive effect based on a research by Garcia and Garcia (2010) and Gandia and Archidona (2008). In Indonesia, the influence of officials, from both political and non-political parties, is noticeable in constituting public policy. 

H4 = The higher the percentage of pro-government parties, the higher the possibility of the Regency / City to disclose its IFR.
5. The influence of HDI on IFR Disclosure.

HDI is one of the fundamental indicators to measure the successfulness of increasing the community’s quality of life (www.bps.go.id). The HDI of an area indicates its advancement. Areas with high HDI are expected to disclose their financial information better than areas with low HDI. The better the growth of HDI is, the higher the community and government life quality (Ramachandran 2002). HDI positively affects the disclosure of Local Government Financial Statements (Setyowati 2016). Based on the above description, the researcher formulates a hypothesis as follows:

H5 = Regencies / cities with higher HDI have higher tendency to disclose their IFR.

RESEARCH METHODS

Population, Sample and Sampling Technique

The population is an entire group of people, events, or other factors that attract researchers to do a research (Sekaran and Bougie 2013). The population in this study is all local governments in Indonesia. Based on the results of the Local Government Financial Statements from the Audit Board of the Republic of Indonesia’s 2015 Audit Report, there is as many as 499 local governments in Indonesia.

The sampling technique used in this research is non probability sampling with purposive sampling category. Purposive sampling is a type of sampling based on certain criteria made by the researchers (Sekaran and Bougie 2013). Some of the criteria used in the sampling are as follows:

1. Local governments that provide 2015 Local Government Financial Statements audited by Audit Board of the Republic of Indonesia;
2. Local governments that provide official websites accessible to online users;
3. Local governments that provide the latest data on human population and Human Development Index (HDI) on Statistics Indonesia official website;
4. Local governments that obtain Local Government Financial Statements opinions from Audit Board of the Republic of Indonesia, that is Reasonable without Exception and Reasonable with Exception;
5. Local governments that provide other data as required in this study.

The total sample in this research is 378 local governments. The data were collected from various secondary data sources, namely:

1. Local Government Financial Statements from 2015 that have been audited by the Audit Board of the Republic of Indonesia;
2. Summary of 2016 First Semester Examination Result of the Audit Board of the Republic of Indonesia;
3. Official websites of the local governments;
4. Data on human population and HDI from local governments’ Statistics Indonesia official website;
5. The data on the number of Regional People's Representative Assembly seats taken from www.puskapol.ui.ac.id;
RESULTS AND DISCUSSION

This research uses logistic regression analysis model with Enter Method. Hosmer et al. (2013) states that logistic regression models are used to describe relationships between dependent variables (responses) with one or more predictor variables (independent). In Enter Method, all predictor variables are inserted into the model and being estimated together.

Feasibility Test of Regression Model

The logistic regression model test was performed through Hosmer and Lemeshow's Test using Chi-square measurement.

Table 1 Hosmer dan Lemeshow Test

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<tr>
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<th>Sig.</th>
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<td></td>
<td>12.082</td>
<td>8</td>
<td>0.147</td>
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</table>

Source: Output SPSS 23 (2017)

The table above shows that the Chi-square value is 12.082 with the significance of 0.148 or more than 0.05, so the null hypothesis is accepted and the logistic regression model is corresponding with the data and feasible for further analysis.

Another test was performed with omnibus tests of model coefficients.

Null hypothesis (H0) : There is no variable X that significantly affects the variable Y.

Hypothesis one (H1) : There is at least one variable that significantly affects its Y variable. Ho is rejected if the significant value is < 0.05.

Table 2 Omnibus Tests of Model Coefficients

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-Square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
<td>39.212</td>
<td>5</td>
<td>0.147</td>
</tr>
<tr>
<td>Block</td>
<td>39.212</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>39.212</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Source: Output SPSS 23 (2017)

The table above shows that the Chi-square value on the model is 39.212 with a significance of 0.000, which means the H0 is rejected and H1 accepted. This means that with a 95% confidence level, there is at least one independent variable that affects the dependent variable and the model can be analyzed further.

Determination Coefficient Test

The coefficient test of determination was conducted through Nagelkerke R Square test. Nagelkerke R Square test can be interpreted as R2 value in Multiple Regression.
Table 3 Model Summary

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>483.950</td>
<td>0.099</td>
<td>0.147</td>
</tr>
</tbody>
</table>

Source: Output SPSS 23 (2017)

Table 3 shows that the value of Nagelkerke R square is 0.131, which means the variability of dependent variables that can be explained by the variability of independent variables is 13.1%, while the remaining 86.9% is explained by other variables outside the study.

Regression Coefficient Test

The purpose of this test is to examine whether each independent variable simultaneously affects the dependent variable. The high value of Wald with the significance of 0.05, indicates that the independent variable is significantly influential to the dependent variable.

Table 4 Variables in the Equation

<table>
<thead>
<tr>
<th>Step 1a</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>POP</td>
<td>0.000</td>
<td>0.000</td>
<td>6.209</td>
<td>1</td>
<td>0.013</td>
<td>1</td>
</tr>
<tr>
<td>AUD</td>
<td>-0.022</td>
<td>0.016</td>
<td>1.808</td>
<td>1</td>
<td>0.179</td>
<td>0.978</td>
</tr>
<tr>
<td>PRESS</td>
<td>0.000</td>
<td>0.000</td>
<td>9.050</td>
<td>1</td>
<td>0.003</td>
<td>1</td>
</tr>
<tr>
<td>POL</td>
<td>0.747</td>
<td>0.575</td>
<td>1.687</td>
<td>1</td>
<td>0.194</td>
<td>2.110</td>
</tr>
<tr>
<td>IPM</td>
<td>-0.009</td>
<td>0.021</td>
<td>0.162</td>
<td>1</td>
<td>0.687</td>
<td>0.991</td>
</tr>
<tr>
<td>Constant</td>
<td>0.777</td>
<td>1.533</td>
<td>0.257</td>
<td>1</td>
<td>0.612</td>
<td>2174</td>
</tr>
</tbody>
</table>

Source: Output SPSS 23 (2017)

Based on the table above, there is at least one significant independent variable. Table 12 shows that POP variable has 6.209 Wald value and the significance is 0.013, while the PRESS variable has 9.050 Wald value with 0.003 significance. It means that both variables have a significance value below 0.05. Thus, it can be concluded that the independent variables significantly affect the dependent variables.
Prediction Capability Test

The prediction capability or accuracy test was conducted through Classification Plot Test. This test is done to examine the strength of the regression model in predicting the dependent variables using the independent variables.

Table 5 Classification Table

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted IFR</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rendah</td>
<td>Tinggi</td>
</tr>
<tr>
<td>97</td>
<td>83</td>
<td>53.9</td>
</tr>
<tr>
<td>48</td>
<td>180</td>
<td>75.8</td>
</tr>
<tr>
<td>1 Percentage</td>
<td></td>
<td>65.3</td>
</tr>
</tbody>
</table>

Source: Output SPSS 23 (2017)

Table 5 above shows that the logistic regression model being used is quite good because it is able to accurately predict 65.3 percent of the conditions that occur.

Hypotheses Testing

we can compile the logistic regression equation for model 1 as follows:

\[
\text{IFR} = 0.777 + 0.000\text{POP} - 0.022\text{AUD} + 0.000\text{PRESS} + 0.747\text{POL} - 0.009\text{IPM}
\]

Negative directions are shown in the AUD and HDI variables. The significance level used in this study was 0.05. An independent variable is considered to have a significant influence if the significance value is less than 0.05. Here is the significance (Sig) of each variable to answer the hypotheses in this study.

Variable Population (POP)

Variable POP has 0.013 Sig value that is under 0.05. This suggests that hypothesis 1 is accepted. It means that an increase in the population of a local government tends to increase the IFR disclosure rate. High IFR disclosure rate in local governments is positively related to society population.

Variable Auditor (AUD)

The Sig value of variable AUD is 0.179, which is not significant because it is above 0.05. Hence, hypothesis 2 is rejected. The quantity of expert auditors does not affect the local government IFR disclosure. The regression coefficient shows the number of -0.022, so it can be interpreted as the absence of expert auditors can increase IFR disclosure rate although not significant.

Variable Press Visibility (PRESS)

The PRESS variable has a Sig value of 0.003, below 0.05. This shows that hypothesis 3 is accepted, means that local governments with higher press visibility or higher website traffic statistic tend to disclose their financial information through online website. The regression coefficient is 0.000 (positive), so that the IFR probability is in line with the press visibility.

Variable Political Competition (POL)

POL regression coefficient, 0.747, indicates a positive direction, but the Sig value that is 0.194 is well above 0.05. Hence, hypothesis 4 is rejected. Political parties supporting the Regent / Mayor and Regional People's Representative Assembly seats cannot affect local governments’ IFR disclosure rate.
Variabel HDI
The Sig value of the HDI variable is 0.687 which is well above 0.05. This shows that hypothesis 5 is rejected. The regression coefficient is -0.009 which shows a negative but not significant direction. The high levels of education, health, and income tend not to affect IFR disclosure rate in a local government.

DISCUSSION
This study uses logistic regression analysis tool to find out the probability of IFR disclosure level in local governments in Indonesia. In which, the dependent variable is IFR disclosure, while the five independent variables used are population, auditor, press visibility, political competition, and Human Development Index (HDI). Researchers use the Enter Method as the regression results have been discussed at the beginning of this chapter. The results of statistical analysis on the hypotheses are described as follows:

The Influence of Population on IFR Disclosure
The first hypothesis is accepted with the significance value of the population is 0.019. High-populated local governments tend to disclose their IFRs 1 times better than low-populated local governments. The results of this study are in accordance with a research done by Jafaru and France (2016) and contrary to Albalate (2012). In accordance with the stakeholder theory, an organizational goal can be achieved because of the influence of the stakeholders. Citizens as stakeholders will influence the government policy related to IFR disclosure. Nowadays, internet has become a necessity for the community, and the government is aware of its society needs, so that the disclosure of government’s financial information can be done through the internet only. Information can reach wider community, and it is more affordable.

The Influence of Auditor on IFR Disclosure
The second hypothesis is rejected because the significance value is 0.180, so it is higher than 0.05. The regression coefficient has a negative value of -0.022. This gives an indication that when a local government has a high number of expert auditors, the tendency for the regency / city to disclose its IFR is small. The results are not in accordance with a research from Nurunnabi and Hossain (2012) which proves that the auditor has an effect on IFR. The expert auditors are one of the government stakeholders in charge of reviewing the financial statements of the local government and providing consultation on local financial management. In this study, the auditor has no effect on IFR. Expert auditors are actually very concerned about Local Government Financial Statements, according to the researchers, the auditors only focus on the quality of Local Government Financial Statements and are not responsible for its disclosure activities.

The Influence of Press Visibility on IFR Disclosure
The probability of local governments disclosing high IFR is positively affected by the press visibility. The higher their website traffic, the tendency of IFR disclosure is also higher. The significance value of 0.002 indicates less than 0.05, so that the third hypothesis is accepted. This is consistent with the studies of Laswad et al. (2005) and Gandia and Archidona (2008) that show the positive impact of press visibility on IFR. This research is not in line with other studies by Utomo and Aryani (2016), Lepore and Pisano (2013) and Garcia and Garcia (2010) which state that it is significant, but has negative direction.
Press visibility is critical to IFR disclosure and the financial performance of local governments. All stakeholders, be it investors, creditors and society will do a monitoring through media such as official website of local government. The more visited their website by stakeholders, the higher the tendency of the local government to disclose their IFR. The official website of the local government is one of the important means of information for the society. The local government should provide attractive and useful public service menus.

**The Influence of Political Competition on IFR Disclosure**

Political competition tends to have no effect on IFR disclosure. This is proved by the significance value that is 0.194, far above 0.05, so the fourth hypothesis is rejected. The stronger the support of political parties and Regional People's Representative Assembly to the Regent / Mayor tends not to positively affect IFR disclosure. This supports the research of Perez et al. (2014) and Laswad et al. (2005). However, this result is not in accordance with research by Garcia and Garcia (2010) and Gandia and Archidona (2008).

The support of political parties to the Regent / Mayor is very important for local governments. Regent / Mayor's policies will usually run much easier when it is supported by the majority of Regional People's Representative Assembly members. However, in this study, the disclosure local governments’ IFR was not influenced by political competition in particular areas.

**The Influence of HDI on IFR Disclosure**

HDI as a new variable turns out to give insignificant results. With the Sig value of 0.687 (well above 0.05) and has a -0.009 direction, the fifth hypothesis is rejected. High HDI trends cannot influence local governments to disclose their IFR. Increased index of income, education and health of the society in a region does not affect the tendency to disclose their financial statements. HDI is more focused on the community, whereas IFR disclosure is more of the obligations and policies of the local government.

The results showed that regencies and cities with high HDI had low IFR disclosure, for example, Surakarta, Padang, Kendari and Banda Aceh (highest HDI). HDI explains how people can access outcomes of development such as in obtaining income, health, education and so on. Local governments with high HDI should have good human resources that can reflect their performance that will increase IFR disclosure.

**CONCLUSION AND SUGGESTION**

1. The analysis shows that the level of IFR disclosure on local governments is still low at 45.64%. The R2 value (Nagelkerke R Square) in the first model is 13.1%, and in the second model is 6.9%. In the first model, it shows that 13.1% of IFR disclosures can be explained by population, auditor, press visibility, political competition and HDI variables, while the remaining 86.9% is influenced by other factors outside this research model.

2. Population, auditor, press visibility, political competition and HDI Variables have a simultaneous tendency to significantly influence local government’s IFR disclosure in Indonesia. Partially, only population and press visibility variables have positive influence on IFR disclosure.
3. Auditor variable proves to not likely have effects on IFR disclosure due to the expert auditors focus more on the quality of financial statements rather than on IFR disclosure. IFR disclosure is considered to be the responsibility of the Regent / Mayor for the sake of public information transparency.

4. The political competition variable proves to have no effect on IFR disclosure. To board members, IFR disclosure is seen as a non-priority matter that needs full support from political parties both the supporters and non-supporters of the Regent / Mayor.

5. HDI Variable has a tendency not to affect local governments’ IFR disclosure. HDI is focused on society, whereas IFR disclosure is one type of government’s responsibilities to society. When the HDI of a region is high, but the local government does not comply with public information disclosure rules, the IFR disclosure remains low.

Based on the conclusions, limitations and suggestions above, the suggestions or implications of this study are as below:

1. Local governments should pay more attention to the transparency and disclosure of public information, especially IFR. It makes citizens, as external stakeholders, know the government financial position and able to provide suggestions as well as inputs that can improve their performance;

2. Government policies should consider the interests of all stakeholders. In supervising and giving consultation, internal auditors may pay attention to the method of financial statements disclosure rather than the main objective of Reasonable without Exception opinions achievements;

3. Members of the Regional People's Representative Assembly, as the representatives of the principal, must provide support to the local government in IFR disclosure and the quality of financial statements as agents. It is because, nowadays, public transparency level is higher, and will have an impact on the support to political parties and regents / mayors from the society.

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HOW IS SOCIAL ENTREPRENEURSHIP AS AN ASSET TO IMPLEMENT RURAL TOURISM AT MUARAJAMBI HERITAGE?

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ABSTRACT

One of the famous heritages in Jambi Province is Muarajambi Heritage which established as one of tourist destination. Hence, rural tourism that determines by social entrepreneurship potencies is considered to be the right marketing tool. So, research question: “Is social entrepreneur potential to implement rural tourism at that heritage tourist destination? This research mainly uses qualitative method that adding information by delivered questionnaires to the citizen surrounding the heritage. In-depth interview is conducted to several key stakeholders in order to craft heritage value to be delivered as a model for rural tourism. The results shows that: 1) local people and community do not comprehend and perceived their role on the local government heritage program, 2) value that delivered by related officials is not clear enough so it prevents local citizen and community to be involved, and 3) coordination between government affairs is not well conducted to manage tourism program. These make social entrepreneurship is not well implemented yet to be established as rural tourism practices on marketing program. Hence it is recommended to reformulate heritage value to be delivered to potential segment market creatively. Furthermore, it should consider global and universal attribute in order to sustain it as the rural tourism destination.

Keywords: community marketer, market segment, heritage value, conservation activities and heritage branding

JEL classification: Z39
BUILDING THE RESILIENCE OF NEW COMMODITY: A CASE STUDY OF PAPAYA’S SUPPLY CHAIN IN INDONESIA

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ABSTRACT

This study aims to determine quality improvement for Calina papaya’s supply chain. This study focused on consumer requirements in order to increase competitive advantage. The study conducted through two main steps. The first step applied Quality Function Deployment (QFD) to build the house of quality (HOQ), which transforms the consumer requirements (CRs) of Calina papayas into the supply chain process requirements (SCPRs). Secondly, after determining the CRs and SCPRs, an Analytical Network Process (ANP) is employed to determine the importance levels in the HOQ with consideration to the interrelationships among the SCPRs and CRs. The findings indicated that the important CRs for Calina papayas were good aroma & sweetness, color & appearance, and size & shape. The SCPRs that had the highest importance value in terms of the quality improvement for Calina papayas and thus should be prioritized were quality seedlings. The second and third most important SCPRs were cultivation and harvesting handling by farmers. Prioritizing quality improvement for papayas within the framework of the supply chain requires a shared responsibility of the supply chain players. Maintaining quality improvement, however, is a concern of farmers and other groups. Collaboration among supply chain players is imperative in meeting these priorities. The study contributes to our understanding of quality management concept within supply chain management through the extensions of QFD. Although the application of the QFD method for supply chains has grown significantly, literature on food supply chains, especially for fruit, is limited.

Keywords: Calina papaya, supply chain, quality improvement, Quality Function Deployment, Analytical Network Process
ENVIRONMENTAL RESPONSIVENESS CAPABILITY IN INTEGRATED POULTRY COMPANY: A REVIEW FROM ORGANIZATIONAL CULTURE AND KNOWLEDGE MANAGEMENT

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ABSTRACT

This research was conducted to analyze the environmental responsiveness capability, which is the ability of a company to respond appropriately to the change of external business environment. The company's unpreparedness in the face of changing external business environments and preparing for future possibilities can cause loss to the company. Therefore, the research on company's responsiveness is chosen. Changes in the external business environment could not be controlled by the company. For that reason, company need to manage their internal environment well in order to face change and survive in business competition. As an aspect that contains the values of the company, organizational culture determines how a company acts. Meanwhile, knowledge management enables the company to have new knowledge, information, ideas, and ways of conducting daily activities. The analysis of environmental responsiveness capability is done by measuring the influence of organizational culture and knowledge management on the said variable. The study was conducted on an integrated poultry company in Indonesia. The survey was conducted on 73 employees of the company with supervisor position upward. Data analysis was done by using structural equation modeling-partial least square. The results of this study indicate that organizational culture and knowledge management have a positive and significant influence on environmental responsiveness capability. From these two aspects, knowledge management has a greater impact on environmental responsiveness capability compared to organizational culture.

Keywords: organizational culture; knowledge management; environmental responsiveness capability
FACTORS AFFECTING BRAND PREFERENCES: COMPARATIVE STUDIES IN INDONESIA AND MALAYSIA

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ABSTRACT

In recent years, various brands of mobile phones have dominated Indonesia and Malaysia market. Most of them are imported from other countries, such as China, America, Europe, and South Korea which are highly competitive by offering the variety of designs and functions. To compete with other competitors, Indonesian telecommunication industry needs to focus on brand management, especially in building brand preference. The aims of this research to examine factors affecting brand preference. Questionnaire surveys have been conducted to 200 respondents in Indonesia & Malaysia. Data were analyzed by descriptive and Structural Equation Modeling Partial Least Square (SEM-PLS). SEM PLS has been conducted in order to examine the relative impact of the identified factors on brand preference. The major findings were out of three factors of brand preference statistically significant toward brand preference. Thus, the results of this research would benefit the market expansion and product development in both countries.

Keywords: brand awareness, brand preference, customer satisfaction, mobile phone brand, structural equation modeling
EFFECT OF GREEN MARKETING FOR CONSUMER PURCHASING INTENTION IN FOOD INDUSTRY: COMPARATIVE STUDY IN INDONESIA AND MALAYSIA

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ABSTRACT

The emergence of awareness of environmental issues has been triggering the industrial sector to create a marketing concept that promotes environmental issues or better known as green marketing. The objectives of this research were 1) to examine the influence of green marketing on consumer purchasing intention in the food industry in Indonesia and Malaysia and (2) to compare the influence of green marketing on consumer purchasing intention in the food industry in Indonesia and Malaysia. Questionnaire surveys have been conducted to 208 respondents in Bogor (Indonesia) & Klang Valley (Malaysia). Data were analyzed by descriptive and Sequencing Equation Model Partial Least Square (SEM-PLS). SEM PLS is functioned to also examine effect of factors which can be influential towards each indicator’s purchasing intention. The results of this study indicated a difference. In Indonesia, purchasing intention was more influenced by green marketing while in Malaysia it was more influenced by brand image.

Keywords: Green Marketing, Purchasing Intention, Food Industry, Descriptive Analysis, SEM
DETERMINANTS OF CREDIT ACCESS FOR RICE FARMER IN INDONESIA

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ABSTRACT

As staple food for almost all society in Indonesia, rice is still a political and strategic commodity. Many government policies is aimed to achieve rice self sufficiency. One of these policies is credit access which is still become the main problem to increase farmer income. The objective of this study is to analyze factors that influence credit access for rice farmer and the relationship between credit access and farmer income. This study used agricultural census data 2014 in three production central provinces namely West Java (8203 rice farmers), (East Java 9207 rice farmers), and South Sulawesi (4145 rice farmers). Using logistic binary regression, this study show that determinant of credit access which significantly influenced in West Java is similar with East Java. Those are age, land area, land status, farmer group membership, farm structure, harvesting method, pest attack, and disaster. Meanwhile in South Sulawesi, there are two variable which are not in line with the hypothesis, namely membership of farmer group and harvesting method. This revealed that rice farmers in South Sulawesi are more advance to adopt government program. Besides that, in line with microfinance theory that only rich farmer (especially rice farmers in Indonesia) who can access to credit both from government and other institution. Whereas it can be proven that credit access in these three provinces have positive relationship significantly on farmer income.

Keywords: credit access, determinants, income, logistic regression, rice farmer
ABSTRACT

The development of biogas-based electricity is an alternative to solve the problem of electricity shortage in remote areas. Palm oil mill effluent (POME) is one of source of biogas-based electricity. Rantau Sakti is one of remote village in the Riau Province which face electricity shortage. This village has a wide area of smallholder palm oil plantations and a palm oil mill exists to process farmers’ fresh fruit bunches. This research study the extent to which the village can establish self-sufficient energy village (Desa Mandiri Energi) in order to solve the problem of electricity shortage and to reduce the potency of environmental damage from POME. Specific objectives of this paper are to assess the benefit of self-produced electricity enjoyed by the local community and to understand their response on the development of biogas-based electricity. We conducted households survey and interviews with key persons. A considerable volume of POME (630 m3/day) results from the palm oil mill in Rantau Sakti Village in which 80 percent has been used for generating biogas-based electricity. It produces 1 MW of electricity distributed to Rantau Sakti and two adjacent villages (i.e. Mahato Sakti and Rantau Kasai). Supply from biogas-based electricity has been able to replace the use of diesel-based electricity in this community. It saves about IDR 190,000 of house expenditure per month. The use of electricity has increased not only for lighting but also for other household activities (i.e. cooking, washing, etc.). Besides these benefits, provision of electricity in these villages has created economic activities, promote social activities and provide public facilities for local people. The production of electricity from POME also avoids environmental damage, such as river and water pollution. The use of biogas-based electricity should be encouraged to reach wider area and various utilizations in order to generate higher benefit for the community and the environment. This paper suggests further research on how local people, government and stakeholders play role to achieve these purposes.

Keywords: palm oil mill effluent, biogas-based electricity, economic benefits, self-sufficient energy village, environment
ACHIEVING SUSTAINABLE DEVELOPMENT GOALS: CASE STUDY ON ASEAN DEVELOPING COUNTRIES

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ABSTRACT

Sustainable Development Goals (SDG) agreed by United Nations on September 25, 2016 is a global agenda especially for the government which starting to incorporate the 17 goals into their nation’s development plans. Targets and Indicators have been set to be achieved by 2030. At this early stage, each country must first recognise their current position of each goal. This paper aims to apply a multi-criteria decision analysis method to analyse the current position of selected ASEAN countries for sustainable human development: ensure healthy lives and promote well-being for all at all ages (SDG 3) and ensure inclusive and quality education for all and promote lifelong learning (SDG 4). Outcome of the analysis suggests milestones to be achieved by each ASEAN country to achieve ensuring the goals are achievable by 2030.

Keywords: Sustainable Development Goals, human development, milestone
INTRODUCTION

World War II which ended in year 1945 had caused massive damage to worldwide nations. Nations since then working together to promote a peace and making the world a better place for living. The United Nations (UN) is an international organization founded in 1945. It is currently made up of 193 member states. The mission and work of the United Nations are guided by the purposes and principles contained in its founding Charter. There are five major agenda of UN: maintain international peace and security; protect human rights; deliver humanitarian aid; promote sustainable growth and uphold international law. Under the agenda of promote sustainable growth, UN Millennium Declaration had been made during the largest world leaders meeting at the Millennium Summit in 2000. World leaders committed to reduce extreme poverty and setting out eight goals to be achieved by year 2015: the Millennium Development Goals (MDGs). The eight goals were: eradicate extreme hunger and poverty; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, Malaria and other diseases; ensure environmental sustainability; and develop a global partnership for development. Each goal is supported by 21 targets and measureable with more than 60 indicators. According to UN’s final report on MDGs, the 15-year worldwide effort was largely successful, while some shortfalls still remain.

UN further their effort to promote sustainable development following the success of MDGs. On September 2015, another set of goals adopted by world leaders: the Sustainable Development Goals (SDGs) at UN Summit. 17 targeted goals are: no poverty; zero hunger; good health and well-being; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry, innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice and strong institutions; and partnership for the goals. 169 targets to be achieved by year 2030 and measureable by 230 individual indicators. Since SDGs are not legally binding, each nation’s government is expected to take the ownership and responsibility to establish their own development plan to achieve the 17 goals. It is the responsibility of nation to monitor the progress made. In other words, governments play a vital role in assuring the 17 goals are achievable by 2030. The SDGs came into force on 1 January 2016. At this early stage of the 15-year journey, it is vital to identify nation’s current progress and thus set up milestones to be achieved by year 2030. This paper focused on the key area of human development which are the third goal (SDG 3): ensure healthy lives and promote well-being for all at all ages; and the fourth goal (SDG 4): ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The objective of this paper is to apply a multi-criteria decision analysis method to analyse the current position of ASEAN developing countries for sustainable human development (SDG 3 and SDG 4). The rest of the paper is organized as follows. Section 2 demonstrates some overview of ASEAN developing countries in achieving SDGs, Section 3 will discuss briefly on previous related studies, Section 4 provides the explanation on methodology and variables, Section 5 reports the results and discussion, and Section 6 summarizes and concludes.
BACKGROUND STUDY

The focus of this paper is on achieving SDG 3 and SDG 4. Table 1 and Table 2 shows the targets for SDG 3 and SDG 4 respectively. There are 13 targets for SDG 3 and 10 targets for SDG 4 to be achieved by 2030.

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Reduce the global maternal mortality ratio to less than 70 per 100,000 live births.</td>
</tr>
<tr>
<td>3.2</td>
<td>End preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.</td>
</tr>
<tr>
<td>3.3</td>
<td>End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.</td>
</tr>
<tr>
<td>3.4</td>
<td>Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.</td>
</tr>
<tr>
<td>3.5</td>
<td>Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.</td>
</tr>
<tr>
<td>3.6</td>
<td>Halve the number of global deaths and injuries from road traffic accidents.</td>
</tr>
<tr>
<td>3.7</td>
<td>Ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.</td>
</tr>
<tr>
<td>3.8</td>
<td>Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.</td>
</tr>
<tr>
<td>3.9</td>
<td>Reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.</td>
</tr>
<tr>
<td>3.10</td>
<td>Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.</td>
</tr>
<tr>
<td>3.11</td>
<td>Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.</td>
</tr>
<tr>
<td>3.12</td>
<td>Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.</td>
</tr>
<tr>
<td>3.13</td>
<td>Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.</td>
</tr>
</tbody>
</table>

Source: United Nations, 2017
Table 2 SDG 4’s targets

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>All girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.</td>
</tr>
<tr>
<td>4.2</td>
<td>All girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.</td>
</tr>
<tr>
<td>4.3</td>
<td>Equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.</td>
</tr>
<tr>
<td>4.4</td>
<td>Increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.</td>
</tr>
<tr>
<td>4.5</td>
<td>Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.</td>
</tr>
<tr>
<td>4.6</td>
<td>All youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.</td>
</tr>
<tr>
<td>4.7</td>
<td>All learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development.</td>
</tr>
<tr>
<td>4.8</td>
<td>Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all</td>
</tr>
<tr>
<td>4.9</td>
<td>Expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.</td>
</tr>
<tr>
<td>4.10</td>
<td>Increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States.</td>
</tr>
</tbody>
</table>

Source: United Nations, 2017

The 2030 Agenda for Sustainable Development encourages nations to conduct country-led and country-driven regular and inclusive reviews of progress at the national and sub-national level. Malaysia, Indonesia and Thailand are among 44 countries that join voluntarily the High-Level Political Forum held on July 2017 to review their progress towards achieving SDGs. Malaysia started its effort on sustainable development since 1970s under the New Economic Policy (NEP) which aimed on eradicating poverty and societal restructuring. Therefore Malaysia’s sustainable development is working on process. On progress of SDG 3, Malaysia’s child and maternal mortality rates are almost at the level of developed countries; endemic small pox and polio eradicated and the spread of HIV/AIDS have been reversed. Besides, there is drastic reductions in water-borne diseases, deaths from treatable childhood diseases and Malaria. On progress of SDG 4, there are more than 90 percent enrolment rates for primary and secondary levels for both sexes.
Indonesia’s government is committed in human resources development through its efforts in developing the National Security System (Sistem Jaminan Sosial National). On SDG 3, health insurance are provided for the poor, for which the contribution is paid by the government. In 2016, 66.4 percent of the population receive the Indonesia Health Card and it has become the largest health insurance scheme in the world. Besides, under the maternal mortality reduction program, the maternal mortality ratio has decreased from 346 to 305 maternal deaths per 100,000 live births in 2015. The infant mortality rate also decreased from 68 in 1991 to 32 per 1000 live births in 2012 while the under-five mortality rate has decreased from 97 in 1991 to 40 per 1000 live in 2012. On SDG 4, the participation rate in primary and secondary education has increased over time. The net enrolment rate in 2016 in primary education is 99.93 percent; at lower secondary education is 107.93 percent while at upper secondary education is 112.19 percent. In Thailand, the main and highest mechanism responsible for the country’s sustainable development is the National Committee of Sustainable Development (CSD). The main task of CSD is formulating polices and strategies on national sustainable development and oversight their implementation, including the SDGs. On SDG 3, maternal and neonatal mortality rates are well below the global targets. New cases of pandemic diseases are also on the decline. On SDG 4, more than 90 per cent of school age children are enjoying subsidized 15-year basic education available to all children in the land, regardless of their nationalities or migrant status.

SDG INDEX REVIEW

SDG Index and Dashboards-Global Report published by Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN) is the first SDG index created to measure the starting point for 2015 at the country level. The aim is to help every country identify priorities for early action, understanding the key implementation challenges and identify the gaps that must be closed in order to achieve the SDGs by 2030. SDG index for 149 countries are calculated through four statistical steps: (1) perform statistical tests for normality and remove extreme values from the distribution; (2) rescale the data to ensure comparability; (3) aggregate the indicators within and across SDGs; and (4) conduct sensitivity and other statistical test. Table 3 demonstrates the SDG index and ranking for ASEAN developing countries. According to SDG Index, Thailand is doing better compared to other ASEAN developing countries, followed by Malaysia and Vietnam. The shortfall in calculating SDG Index is the insufficient data for some indicators, especially indicators for SDG 4, which is acknowledged by UN through its publication on data for SDG 4.

Table 3 SDG Index for ASEAN developing countries

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Country</th>
<th>SDG Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>Thailand</td>
<td>62.2</td>
</tr>
<tr>
<td>63</td>
<td>Malaysia</td>
<td>61.7</td>
</tr>
<tr>
<td>88</td>
<td>Vietnam</td>
<td>57.6</td>
</tr>
<tr>
<td>95</td>
<td>Philippines</td>
<td>55.5</td>
</tr>
<tr>
<td>98</td>
<td>Indonesia</td>
<td>54.4</td>
</tr>
<tr>
<td>107</td>
<td>Lao PDR</td>
<td>49.9</td>
</tr>
<tr>
<td>117</td>
<td>Myanmar</td>
<td>44.5</td>
</tr>
<tr>
<td>119</td>
<td>Cambodia</td>
<td>44.4</td>
</tr>
</tbody>
</table>
The SDG Index includes only 11 indicators out of 26 indicators for SDG 3, whereas only 6 out of 11 indicators for SDG 4 covered in calculating the SDG Index. This mainly due to data availability. Based on this report, this paper propose an alternative method to serve the same purpose: providing reference for ASEAN countries on their current position compared with other countries in the same region and demonstrate the gap between each country and the targets.

METHODOLOGY AND DATA

The analysis method for comparative study in this paper applies the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS hereafter). TOPSIS is a multi-criteria decision analysis method which was developed by Hwang and Yoon (1981) and further improved by Yoon (1987) and Hwang, Lai and Liu (1993). TOPSIS mainly applied in management science and occasionally in economics study. Among economics studies which applied TOPSIS are Karimi et al. (2010) which using TOPSIS to determine the most suitable location for foreign direct investment among ASEAN countries; SALT (2011) applied TOPSIS to analyse economic performance among European Union members; Balcerzak and Pietrzak (2016) on comparison of sustainable development in European Union Countries; Wei et al. (2011) on evaluation of the industrial economic benefits of a province in China.

TOPSIS is based on the concept that the chosen alternative should have the shortest gap with the positive ideal solution and the longest gap with the negative ideal solution. It is a method which compares a set of alternatives with a set of criterion and rank the alternatives according to the calculated index for each alternative. The process involves seven steps. The advantage of TOPSIS is its simplicity in term of Mathematics and flexible in choosing criterion. Thus TOPSIS is a suitable method for comparative study in this paper. In this study, the following matrix decision [A] is built (step 1 of TOPSIS):

\[
A = \begin{bmatrix}
    x_{11} & x_{12} & x_{13} & a_{14} & x_{15} \\
    x_{21} & \ldots & \ldots & \ldots & \ldots \\
    x_{31} & \ldots & \ldots & \ldots & \ldots \\
    x_{41} & \ldots & \ldots & \ldots & \ldots \\
    x_{51} & x_{52} & \ldots & x_{55} \\
\end{bmatrix}
\]

Where \( A_i \) is the \( i \)th alternative, which is the countries involve in this study: Malaysia, Thailand, Indonesia, Myanmar, Philippines, Cambodia, Lao DPR and Vietnam. \( C_j \) is the \( j \)th criteria, which is the indicator of SDG 3 and SDG 4. \( x_{ij} \) is the performance score of \( i \)th alternative for \( j \)th criterion. Data are taken from databank of World Bank and UNESCO. In addition to indicators included in SDG Index, this paper includes covers some addition indicators based on data available. Table 4 demonstrates the indicators covered in SDG Index and this paper.

---

1 Sustainable Development Data Digest: Laying foundation to measure sustainable development goal 4.
### Table 4 Indicators covered in SDG Index and this paper (SDG 3)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>SDG Index</th>
<th>This paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.11</td>
<td>Maternal mortality ratio</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.12</td>
<td>Proportion of births attended by skilled health personnel</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3.2.1</td>
<td>Under-five mortality rate</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Neonatal mortality rate</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.3.1</td>
<td>Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations</td>
<td>x</td>
<td>/</td>
</tr>
<tr>
<td>3.3.2</td>
<td>Tuberculosis incidence per 1,000 population</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.3.3</td>
<td>Malaria incidence per 1,000 population</td>
<td>x</td>
<td>/</td>
</tr>
<tr>
<td>3.3.4</td>
<td>Hepatitis B incidence per 100,000 population</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3.3.5</td>
<td>Number of people requiring interventions against neglected tropical diseases</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Suicide mortality rate</td>
<td>x</td>
<td>/</td>
</tr>
<tr>
<td>3.5.1</td>
<td>Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.5.2</td>
<td>Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol</td>
<td>x</td>
<td>/</td>
</tr>
<tr>
<td>3.6.1</td>
<td>Death rate due to road traffic injuries</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.7.1</td>
<td>Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.7.2</td>
<td>Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.8.1</td>
<td>Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.8.2</td>
<td>Number of people covered by health insurance or a public health system per 1,000 population</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.9.1</td>
<td>Mortality rate attributed to household and ambient air pollution</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.9.2</td>
<td>Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.9.3</td>
<td>Mortality rate attributed to unintentional poisoning</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>3.10.1</td>
<td>Age-standardized prevalence of current tobacco use among persons aged 15 years and older</td>
<td>/</td>
<td>X</td>
</tr>
<tr>
<td>3.11.1</td>
<td>Proportion of the population with access to affordable medicines and vaccines on a sustainable basis</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.11.2</td>
<td>Total net official development assistance to medical</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Indicator</td>
<td>Description</td>
<td>SDG Index</td>
<td>This paper</td>
</tr>
<tr>
<td>-----------</td>
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<td>X</td>
</tr>
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<tr>
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<td>X</td>
</tr>
<tr>
<td>3.9.2</td>
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</tr>
<tr>
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<td>X</td>
</tr>
<tr>
<td>3.11.1</td>
<td>Proportion of the population with access to affordable medicines and vaccines on a sustainable basis</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3.12.1</td>
<td>Health worker density and distribution</td>
<td>/</td>
<td>X</td>
</tr>
<tr>
<td>3.13.1</td>
<td>International Health Regulations (IHR) capacity and health emergency preparedness</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>Indicator</td>
<td>Description</td>
<td>SDG Index</td>
<td>This paper</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Participation rate in organized learning (one year before the official primary entry age), by sex</td>
<td>x</td>
<td>/</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4.5.1</td>
<td>Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4.6.1</td>
<td>Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>4.7.1</td>
<td>Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4.8.1</td>
<td>Volume of official development assistance flows for scholarships by sector and type of study</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4.9.1</td>
<td>Proportion of teachers in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
### Table 6 SDG 3 indicators’ target

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians (per 1,000 people)</td>
<td>3</td>
</tr>
<tr>
<td>Incidence of malaria (per 1,000 population at risk)</td>
<td>1</td>
</tr>
<tr>
<td>Incidence of HIV (% of uninfected population ages 15-49)</td>
<td>0.005</td>
</tr>
<tr>
<td>Maternal mortality ratio (modeled estimate, per 100,000 live births)</td>
<td>70</td>
</tr>
<tr>
<td>Mortality rate, under-5 (per 1,000 live births)</td>
<td>25</td>
</tr>
<tr>
<td>Mortality rate, neonatal (per 1,000 live births)</td>
<td>12</td>
</tr>
<tr>
<td>Incidence of tuberculosis (per 100,000 people)</td>
<td>10</td>
</tr>
<tr>
<td>Mortality caused by road traffic injury (per 100,000 people)</td>
<td>8.4</td>
</tr>
<tr>
<td>Mortality from CVD, cancer, diabetes or CRD between exact ages 30 and 70 (%)</td>
<td>8</td>
</tr>
<tr>
<td>Suicide mortality rate (per 100,000 population)</td>
<td>2</td>
</tr>
<tr>
<td>Total alcohol consumption per capita (liters of pure alcohol, projected estimates, 15+ years of age)</td>
<td>1</td>
</tr>
<tr>
<td>Adolescent fertility rate (births per 1,000 women ages 15-19)</td>
<td>25</td>
</tr>
<tr>
<td>Coverage of social insurance programs (% of population)</td>
<td>30</td>
</tr>
</tbody>
</table>

### Table 7 SDG 4 indicators’ target

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean years of schooling. Age 20-24. Female</td>
<td>12</td>
</tr>
<tr>
<td>Mean years of schooling. Age 20-24. Male</td>
<td>12</td>
</tr>
<tr>
<td>Net enrolment rate, pre-primary, male (%)</td>
<td>95</td>
</tr>
<tr>
<td>Net enrolment rate, pre-primary, female (%)</td>
<td>95</td>
</tr>
<tr>
<td>Gross enrolment rate, tertiary, male (%)</td>
<td>30</td>
</tr>
<tr>
<td>Gross enrolment rate, tertiary, female (%)</td>
<td>30</td>
</tr>
<tr>
<td>Youth literacy rate, population 15-24 years, male (%)</td>
<td>98</td>
</tr>
<tr>
<td>Youth literacy rate, population 15-24 years, female (%)</td>
<td>98</td>
</tr>
<tr>
<td>Adult illiterate population, 15+ years, male</td>
<td>5</td>
</tr>
<tr>
<td>Adult illiterate population, 15+ years, male (number)</td>
<td>5</td>
</tr>
</tbody>
</table>
Upon confirming the alternatives and set of criterion, the following steps of TOPSIS analysis will then be carried out using Microsoft Excel:

**Step 2:**
Normalize decision matrix, [A] to form the matrix \( R = [R_{ij}]_{mxn} \) using the following normalization method:

\[
R_{ij} = \frac{x_{ij}}{\left(\sum_{i=1}^{m} x_{ij}^2\right)^{1/2}} \quad i = 1,2,\ldots,n; \quad j = 1,2,\ldots,n
\]

**Step 3:**
Calculate the weighted normalised decision matrix \([V]\). The value of \(v_{ij}\) is calculated using the following formula:

\[
v_{ij} = w_j r_{ij} \quad i = 1,2,\ldots,m; \quad j = 1,2,\ldots,n
\]

Where \(\sum_{i=1}^{n} w_i = 1\)

**Step 4:**
Identify the positive ideal solution \((A^+)^*\) and negative ideal solution \((A^-)^*\):

\[
A^+ = \{V'_1, V'_2, \ldots, V'_n\} = \{(\max v_{ij}; i \in I'), (\min v_{ij}; i \in I'')\}
\]

\[
A^- = \{V''_1, V''_2, \ldots, V''_n\} = \{(\min v_{ij}; i \in I'), (\max v_{ij}; i \in I'')\}
\]

Where \(I'\) is associated with the criterion with positive impact and \(I''\) is associated with criterion with negative impact.

**Step 5:**
Calculate the distance between \(i\)th alternative and the ideal positive solution,

\[
S^+ = \sqrt{\sum_{j=1}^{n} (v_{ij} - v^+_{ij})^2} \quad i = 1,2,\ldots,m
\]

And the distance between \(i\)th alternative and the ideal positive solution,

\[
S^- = \sqrt{\sum_{j=1}^{n} (v_{ij} - v^-_{ij})^2} \quad i = 1,2,\ldots,m
\]

**Step 6:**
Calculate the similarity to the negative ideal solution as follow:

\[
C_i^* = \frac{S^-}{S^- + S^+}, \quad i = 1,2,\ldots,m
\]

where \(0 \leq C^* \leq 1\), \(i\)th alternative is close to ideal when \(C_i^* \) close to 1.

**Step 7:**
Rank the alternatives according to \(C_i^*\).
RESULTS AND DISCUSSION

Result of TOPSIS analysis is demonstrated in Table 8. Result shows that Malaysia is the nearest country with the SDG target with gap only 0.046. Vietnam ranked second behind Malaysia with gap 0.079 with SDG target. Myanmar has the biggest gap with target, 0.704. Thus for SDG 3, Malaysia is doing better compared to other developing countries in ASEAN region and can be an referral for other countries in developing framework to achieve SDG 3. Based on this TOPSIS result, this paper proposes milestones (Table 9) for each country to achieve in order to close the gap with target and eventually hit the target by 2030. Each country is expected to reach the milestone to make sure it is on the right track towards achieving SDG 3.

Table 8 TOPSIS result for SDG 3

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>S+</th>
<th>S-</th>
<th>C</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TARGET</td>
<td>1.513</td>
<td>17.316</td>
<td>0.920</td>
<td>/</td>
</tr>
<tr>
<td>1</td>
<td>Malaysia</td>
<td>2.468</td>
<td>16.991</td>
<td>0.873</td>
<td>-0.046</td>
</tr>
<tr>
<td>2</td>
<td>Vietnam</td>
<td>2.986</td>
<td>15.804</td>
<td>0.841</td>
<td>-0.079</td>
</tr>
<tr>
<td>3</td>
<td>Thailand</td>
<td>3.395</td>
<td>15.385</td>
<td>0.819</td>
<td>-0.100</td>
</tr>
<tr>
<td>4</td>
<td>Lao PDR</td>
<td>9.978</td>
<td>12.000</td>
<td>0.546</td>
<td>-0.374</td>
</tr>
<tr>
<td>5</td>
<td>Philippines</td>
<td>10.895</td>
<td>8.230</td>
<td>0.430</td>
<td>-0.489</td>
</tr>
<tr>
<td>6</td>
<td>Indonesia</td>
<td>15.792</td>
<td>5.877</td>
<td>0.271</td>
<td>-0.648</td>
</tr>
<tr>
<td>7</td>
<td>Cambodia</td>
<td>15.289</td>
<td>4.436</td>
<td>0.225</td>
<td>-0.695</td>
</tr>
<tr>
<td>8</td>
<td>Myanmar</td>
<td>14.852</td>
<td>4.093</td>
<td>0.216</td>
<td>-0.704</td>
</tr>
</tbody>
</table>

Table 9 Milestone to close gap

<table>
<thead>
<tr>
<th>Country</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>-0.031</td>
<td>-0.016</td>
<td>0</td>
</tr>
<tr>
<td>Vietnam</td>
<td>-0.053</td>
<td>-0.027</td>
<td>0</td>
</tr>
<tr>
<td>Thailand</td>
<td>-0.067</td>
<td>-0.034</td>
<td>0</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>-0.250</td>
<td>-0.126</td>
<td>0</td>
</tr>
<tr>
<td>Philippines</td>
<td>-0.326</td>
<td>-0.163</td>
<td>0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.432</td>
<td>-0.216</td>
<td>0</td>
</tr>
<tr>
<td>Cambodia</td>
<td>-0.463</td>
<td>-0.231</td>
<td>0</td>
</tr>
<tr>
<td>Myanmar</td>
<td>-0.469</td>
<td>-0.234</td>
<td>0</td>
</tr>
</tbody>
</table>

Result of TOPSIS analysis on Table 10 shows that Thailand is doing better than other ASEAN developing countries with gap 0.012 with target for SDG 4. Malaysia ranked second with gap 0.043 while Vietnam ranked third with gap 0.054. Cambodia is on the bottom of the table with biggest gap to target, 0.721. Based on this TOPSIS result, this paper proposes milestones (Table 11) for SDG 4 for each country to achieve in order to close the gap with target and eventually hit the target by 2030. Each country is expected to reach the milestone to make sure it is on the right track towards achieving SDG 4.
Table 10 TOPSIS result for SDG 4

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>S+</th>
<th>S-</th>
<th>C</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TARGET</td>
<td>0.028</td>
<td>0.084</td>
<td>0.748</td>
<td>/</td>
</tr>
<tr>
<td>2</td>
<td>Thailand</td>
<td>0.029</td>
<td>0.081</td>
<td>0.736</td>
<td>-0.012</td>
</tr>
<tr>
<td>3</td>
<td>Malaysia</td>
<td>0.033</td>
<td>0.079</td>
<td>0.705</td>
<td>-0.043</td>
</tr>
<tr>
<td>4</td>
<td>Vietnam</td>
<td>0.034</td>
<td>0.077</td>
<td>0.693</td>
<td>-0.054</td>
</tr>
<tr>
<td>5</td>
<td>Philippines</td>
<td>0.042</td>
<td>0.075</td>
<td>0.644</td>
<td>-0.104</td>
</tr>
<tr>
<td>6</td>
<td>Indonesia</td>
<td>0.051</td>
<td>0.067</td>
<td>0.567</td>
<td>-0.181</td>
</tr>
<tr>
<td>7</td>
<td>Myanmar</td>
<td>0.071</td>
<td>0.054</td>
<td>0.431</td>
<td>-0.316</td>
</tr>
<tr>
<td>8</td>
<td>Lao PDR</td>
<td>0.089</td>
<td>0.015</td>
<td>0.144</td>
<td>-0.603</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>S+</th>
<th>S-</th>
<th>C</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thailand</td>
<td>0.029</td>
<td>0.081</td>
<td>0.736</td>
<td>-0.012</td>
</tr>
<tr>
<td>2</td>
<td>Malaysia</td>
<td>0.033</td>
<td>0.079</td>
<td>0.705</td>
<td>-0.043</td>
</tr>
<tr>
<td>3</td>
<td>Vietnam</td>
<td>0.034</td>
<td>0.077</td>
<td>0.693</td>
<td>-0.054</td>
</tr>
<tr>
<td>4</td>
<td>Philippines</td>
<td>0.042</td>
<td>0.075</td>
<td>0.644</td>
<td>-0.104</td>
</tr>
<tr>
<td>5</td>
<td>Indonesia</td>
<td>0.051</td>
<td>0.067</td>
<td>0.567</td>
<td>-0.181</td>
</tr>
<tr>
<td>6</td>
<td>Myanmar</td>
<td>0.071</td>
<td>0.054</td>
<td>0.431</td>
<td>-0.316</td>
</tr>
<tr>
<td>7</td>
<td>Lao PDR</td>
<td>0.089</td>
<td>0.015</td>
<td>0.144</td>
<td>-0.603</td>
</tr>
<tr>
<td>8</td>
<td>Cambodia</td>
<td>0.100</td>
<td>0.003</td>
<td>0.027</td>
<td>-0.721</td>
</tr>
</tbody>
</table>

Table 11 Milestone to close gap

<table>
<thead>
<tr>
<th>Country</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>-0.008</td>
<td>-0.004</td>
<td>0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>-0.029</td>
<td>-0.015</td>
<td>0</td>
</tr>
<tr>
<td>Vietnam</td>
<td>-0.036</td>
<td>-0.018</td>
<td>0</td>
</tr>
<tr>
<td>Philippines</td>
<td>-0.069</td>
<td>-0.034</td>
<td>0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.121</td>
<td>-0.061</td>
<td>0</td>
</tr>
<tr>
<td>Myanmar</td>
<td>-0.211</td>
<td>-0.106</td>
<td>0</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>-0.402</td>
<td>-0.201</td>
<td>0</td>
</tr>
<tr>
<td>Cambodia</td>
<td>-0.481</td>
<td>-0.241</td>
<td>0</td>
</tr>
</tbody>
</table>

TOPSIS analysis for both SDG 3 and SDG 4 shows that top three countries among ASEAN developing countries are Thailand, Malaysia and Myanmar, which is consistent with SDG Index. Therefore, other ASEAN countries can make them as an example when drawing planning for sustainable development goals. In addition, the lack of data for indicators as shown in Table 4 and 5 is an issue to be catered by each nation as quality data are essential to measure the achievement of SDG by 2030. The TOPSIS method proposed in this paper can also be applied to other SDGs.

CONCLUDING REMARKS

The objective of this paper is to apply a multi-criteria decision analysis method to analyse the current position of ASEAN developing countries for sustainable human development (SDG 3 and SDG 4). This study is an alternative measure to SDG Index which aims to help every country identify priorities for early action, understanding the key implementation challenges and identify the gaps that must be closed in order to achieve the SDGs by 2030. TOPSIS analysis demonstrates that Thailand, Malaysia and Vietnam are doing better than other ASEAN developing countries for SDG 3 and SDG 4. Besides, this paper also proposes tables of milestone to be achieved by each country in assuring SDGs are achievable by 2030. In addition, it is vitally important for countries to make sure the availability of data in measuring achievement of SDGs.
REFERENCES


THE IMPACT OF FINANCIAL CONSTRAINTS AND RATING ON FIRM PRODUCTIVITY IN MALAYSIA

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ABSTRACT

Every firm require enough financial resources to ensure the firm can operate well. This need seemed very important for firm to develop and expand the firm economic. However, every firm definitely face the problem which is the financial constraint such as get less of fund. Among factor that involved in financial constraint is credit rating for firm. Therefore, this main purpose of research carried out is to study and analyse the effect of financial constraint and rating towards productivity and growth in Malaysia. This study also aimed want to see how much credit rating for firm affect the capacity of firm in productivity and growth. The chosen firms listed in the main board of Bursa Malaysia and the data achieved from Data Stream Thomson Reuters and agency’s websites related to rating. Collected data is from year 2000 until 2015. The data analysed by using Stata application and Total Factor Productivity (TFP) as a method used to detect the effect of financial constraint and rating on productivity and growth for firms in Malaysia. The results found that credit rating can affect the firm’s productivity and growth, also consequently able to expand the economy for the future.

Keywords: Financial constraints; productivity; growth; rating.
MANAGING COMMUNICATION STRUCTURE OF COMPLEX INTER-ORGANIZATIONAL NETWORK. EFFECTS OF NETWORK STRUCTURAL POSITION ON ORGANIZATIONAL RELATIONAL CAPITAL

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ABSTRACT

Effective and efficient communication approaches have strategic importance in organizational management methodologies. However, despite its importance and the investment place into the management of inter-organizational communication, it has been more of a tacit knowledge of lucky few rather than inheritable technical skills. In this article, the researcher aim to provide technical aspects of inter-organizational communication approaches by determining the ideal network structural positions than one firm shall invest in and assume in its complex inter-organizational network. Through the Social Network Analysis methodology, the study found that firms unique network structural position influence the organizational degree of relational capital. Findings of this research is significance as it provide managers of organizations with new strategic approach in investing and managing of its communication network in order to gain the relevant social capital. Interested researchers may adopt the similar methodology in an attempt to identify other network position that may or may not impact organizational social capital such as reputation itself.

Keywords: Supply Chain Management; Network Studies; Inter-Organizational Relations; Social Capital; Supply Chain strategy.
BILATERAL TRADE BALANCE AND THE J-CURVE PHENOMENON IN MALAYSIA: EVIDENCE FROM LINEAR AND NON-LINEAR MODEL

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ABSTRACT

This paper investigates the effect of exchange rate changes on bilateral trade balance of Malaysia with its major trading partners, namely the United States, China, Japan, Singapore and Thailand. In particular it examines whether there exist a J-curve phenomenon in bilateral trade between Malaysia and each of its trading partners. In addition, it also evaluates whether the positive change and the negative change of the exchange rate cause symmetric effect on the trade balance. The study employs linear and non-linear auto regressive distributed lag (ARDL) model on quarterly data spanning from 1990 to 2016. The results indicate that, unlike the linear ARDL model, the non-linear ARDL model has successfully detected J-curve phenomenon for bilateral trade between Malaysian and Thailand and between Malaysia and China. The results also indicate that changes in the exchange rate potentially cause asymmetric effects on the bilateral trade balance of Malaysia with China. The findings give some insight to policy makers in mitigating adverse effects of the volatile change in the exchange rates especially in curbing inflation from abroad.

Keywords: Trade balance, exchange rate, J-curve, ARDL
EMPLOYMENT POTENTIAL IN IDENTIFYING GREEN SECTOR IN MALAYSIA: AN ANALYSIS OF INPUT-OUTPUT

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ABSTRACT

At the Copenhagen Climate Change Summit 2009, Malaysia has targeted a reduction in the emission of greenhouse gases from GDP, up to 40% by 2020. Consequently, green growth is one of the focus areas in the realization of the RMK-11 and the focus is certainly supported by human resource skills of all levels. The convergence of the government certainly affects the Malaysian workforce, especially for the green sector identified in Malaysia. Hence, this study is conducted to look at the projections of the workforce that can be contributed specifically to the green sector identified in Malaysia. This study uses an input-output analysis model using the 2005 and 2010 input-output tables from the national accounts. As a result, the green sector identified in Malaysia is seen to contribute 29.0% to the needs of the workforce by 2020 and 41.7% for the year 2025. Transportation sector is the highest contributor of the green sector identified in Malaysia at 14.0% in 2020 and 22.7% in 2025. From the productivity point of view, only mining and electricity and gas sectors show an increase in productivity compared to other green sectors identified in Malaysia.

Keywords: Input-Output Analysis, Employment Potential, Green Sector
KNOWLEDGE SPILLOVERS, INFORMATION AND COMMUNICATION TECHNOLOGY AND INNOVATION: A PANEL ANALYSIS

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Tamat Sarmidi  
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Abu Hassan Shaari Md Nor  
Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Malaysia

________________________________________________________________________

ABSTRACT

Debate on foreign direct investment (FDI) to stimulate level of innovation is still far from conclusive. Recent studies show that the main reasons are due to the heterogeneous absorptive capacity gap and level of infrastructure between countries. Therefore, we conjecture that FDI knowledge spill overs is conditional on the level of infrastructure development. Therefore, the main focus of this paper is to analyse whether inward foreign direct investment (FDI) stimulates new knowledge. If the answer is affirmative, we try to dig deeper by investigating further does the impact depends on the level of ICT development. We choose ICT as one of the most important infrastructure because ICT is seen as the vital mode of knowledge dissemination tool in the k-economy era. Applying dynamic panel data model covering the period 1970 to 2014 for 190 developed and developing countries, our findings show that FDI has a strong positive spill over effect on innovation. Interestingly, the positive spill over effect is strengthened by ICT infrastructure. The findings support the proposition that greater knowledge diffusion gain from the linkages between FDI and the level of ICT causes greater innovation.

Keywords: knowledge spillovers, innovation, information and communication technology (ICT)
ABSTRACT

The explosion of information technology (IT) in the business world today has revolutionised the way business communicates with its stakeholders. The forward-thinking business leaders are digitising the essential functions within their internal operation processes as well as along the value chain (end-to-end digitization). With the existence of digital technology for fourth industrial revolution, it will fundamentally change the companies and its employees to adapt with work challenges particularly in transforming market dynamics across whole industries. However, as the business constantly request for innovation to sustain, the concern on employees’ willingness to make full use on the value of innovation is always become a major concern. The evidence revealed that not all investment in IT lead to success due to user’s resistance to change, minimal compliance of IT, anxiousness with complex features, lacking skills and less initiative to explore (Hall 2016; Krigsman 2013). Indeed, a study by Panorama Consulting Solutions in year 2015 revealed that 41% of the cases showed received 50% or less in benefits realisation. In this case, can the practice of mindfulness help? How can the employees adapt to the challenges and utilise the benefits of digital technology at the workplace? Hence, this study intend to incorporate mindfulness in technological innovation, what are the challenges face by the employees and ways to overcome the challenges. Companies are exposed to acute demands of services in dealing with changes and forces in business life as a result of globalization. Optimising the benefits of new technology at the workplace contributes to improvement and efficiency to both employees and organisations. Toward this end, this paper calls for more empirical research that contributes to new rival theories that goes beyond the theoretical tradition of information technology.

Keywords: Information technology, mindfulness, industry 4.0
THE IMPACT OF GOODS AND SERVICES TAX (GST) ON MIDDLE INCOME EARNERS IN MALAYSIA

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Ng Suat Thing  
Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Malaysia

ABSTRACT

The Malaysia government has announced that on April 1, 2015 it will implement a Goods and Services Tax (GST) of six percent. The new GST will replace the current sales and services tax regime. The introduction of GST in Malaysia has called many arguments from various parties including academics, professionals and the nation on how GST affect goods prices—increase or decrease. The consumers are worrying of the cost of living increases when the GST has fully implemented. With the relatively high living costs particularly in main big cities like Kuala Lumpur, Penang and Johor Bahru, GST is considered as another burden for middle income earners. Therefore, the key purpose of this study is to gain a deep understand regarding the middle class household’s potential consumptions behaviour after Goods and Services Tax (GST) implemented in Malaysia. There are four coping mechanism which are implement in consumer’s spending behaviour after Goods and Services tax (GST) implemented in Malaysia will be analysis in the study (avoiding spending, reducing expenses, maximizing value, and generating income). Besides that, the effects of Goods and Services Tax (GST) in Malaysian economy and society Malaysia will be discussed. In this study, primary and secondary data are used to help complete this study. For the primary data, questionnaires have distributed to middle class respondents randomly in Malaysia. In practical, this research is important for both researchers and practitioners to gain a deep understanding regarding the middle class household’s potential consumptions (purchases) behaviour after Goods and Services Tax (GST) implemented in Malaysia.

Keywords: Goods and Services Tax, middle class, consumptions behaviour
INTRODUCTION

Goods and Services Tax (GST) is a consumption tax imposed on the sale of good and services. Goods and Services Tax (GST) is also called Value Added Tax in some countries. France was the first country which introduces a comprehensive goods and services tax Regime in the year of 1951. The Goods and Services Tax (GST) is a comprehensive indirect tax levy on manufacture, sale and consumption of good as well as services at a national level.

Today, there are more than 150 countries fully implemented Goods and Services Tax (GST), including all member state of the European Union (EU) and Asian Countries such as Singapore, India and China. According to statistic of 2017 Worldwide Value Added Tax (VAT), Goods and Services Tax (GST) and Sales Tax Guide, it shows that roughly 90 percent of the world’s population live in countries with Value Added Tax (VAT) or Goods and Services Tax (GST). Goods and Services Tax vary significant from the countries, the standard Goods and Services Tax (GST) rates range from 5 percent to 25 percent.

Table 1 Goods And Services Tax (GST) Rated of Some Countries Around The World

<table>
<thead>
<tr>
<th>Country</th>
<th>Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>10%</td>
</tr>
<tr>
<td>China</td>
<td>17%</td>
</tr>
<tr>
<td>Denmark</td>
<td>25%</td>
</tr>
<tr>
<td>France</td>
<td>20%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>10%</td>
</tr>
<tr>
<td>Japan</td>
<td>8%</td>
</tr>
<tr>
<td>Singapore</td>
<td>7%</td>
</tr>
<tr>
<td>Mongolia</td>
<td>10%</td>
</tr>
<tr>
<td>Sweden</td>
<td>25%</td>
</tr>
<tr>
<td>Turkey</td>
<td>18%</td>
</tr>
<tr>
<td>Ukraine</td>
<td>20%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>20%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>10%</td>
</tr>
<tr>
<td>Zambia</td>
<td>16%</td>
</tr>
</tbody>
</table>

Sources: 2017 Worldwide Value Added Tax (VAT), Goods and Services Tax (GST) and Sales Tax Guide.

Table 1 above shows the detail regarding tax rated of some countries around the world who have implemented Goods and Services Tax (GST) or Value Added Tax (VAT).

Types of Goods and Services Tax (GST)

Goods and Services Tax (GST) is a percentage tax on value added (the differences between sales and the cost of purchased material inputs) at each stage of production. For more information, Goods and Services Tax (GST) or Value Added Tax (VAT) can traditionally categories into three types: (I) GDP-type Goods and Services Tax, (II) Consumption-type Goods and Services Tax, and (III) Income-type Goods and Services Tax.
Table 2 Three Basic Types of Value Added Taxes (VAT) Depending On How the Investment Is Treated in the Tax Base

<table>
<thead>
<tr>
<th>Types of VAT</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP-type GST</td>
<td>There is no deduction allowed for capital investment and depreciation of capital when calculating the tax base. The tax is equivalent to a sales tax applicable to both consumer and capital goods.</td>
</tr>
<tr>
<td>Consumption-type GST</td>
<td>Capital investment is subtracted from the value added in the year of purchase. The tax is equivalent to a sales tax applicable to consumer goods.</td>
</tr>
<tr>
<td>Income-type GST</td>
<td>The tax base excludes the depreciation of capital. The tax imposed on net domestic product, which is close to national income.</td>
</tr>
</tbody>
</table>

Table 2 below shows the details regarding three basic types of Value Added Taxes (VAT) depending on how the investment is treated in the tax base. Most of the countries that have implemented Goods and Services Tax (GST) system adopt the Consumption-type Goods and Services Tax (GST) in which all purchases of capital goods from other firms are deductible from a firm’s sale (Shoup, 1990). However, it doesn’t mean all of the country which implemented Goods and Services Tax are only adopted Consumption-type GST. Some of the countries such as Argentina, Peru and Turkey have adopted the Income-type Goods and Services Tax while countries such as China, Finland, Morocco and Senegal have employed GDP-type Goods and Services Tax.

Theoretically, a Goods and Services Tax (GST) with one standard rate is completely neutral with respect to all forms of productive inputs. However, Goods and Services Tax (GST) will modified to multiple rates and exemptions based on political, economic and social consideration in a country. Most of the countries currently using a Goods and Services Tax which apply a reduced or zero rate to necessities, such as food, shelter and medical care. In addition, some specific services such as banking and insurance are usually exempt because of the difficulty in computing their value added tax (VAT). However, most of the country will apply zero tax rate on exports. The reason of is because exports may be taxed upon entry into another country, typically a GST on the final selling price of export products is not collected. Of course, Goods and Services Tax (GST) will be applied to imports for ensure that import fairly compete with value-added taxes domestic products. We might conclude that these two features strengthen a nation’s sale of export relative to its purchase of imports and it was also improved balance of trade results.
GOODS AND SERVICES TAX (GST) IN MALAYSIA

Goods and Services Tax Malaysia is imposed on goods and services at every production and distribution stage in the supply chain including importation of goods and services. The Malaysian government has announced that Goods and Services Tax (GST) of six percent will be effectively implemented on April 1, 2015. The new GST will replace the sales and services tax (SST) which is rated between 5-11 percent in Malaysia. In other meaning, sales and service tax will be abolished.

To gain a deeply understanding, table 3 below shows the differences between Sales and Services Tax (SST) and Goods and Services Tax (GST) in Malaysia.

Table 3 The Differences between Sales and Services Tax (SST) and Goods and Services Tax (GST) in Malaysia

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Sales and Services Tax (SST)</th>
<th>Goods and Services Tax (GST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>Manufactured in Malaysia, under the provisions in Sales Tax Act</td>
<td>Any supply of goods and services made in Malaysia, including anything treated as a supply under the GST Act</td>
</tr>
<tr>
<td></td>
<td>Imported into Malaysia by any person for household consumption</td>
<td>Any importation of goods into Malaysia</td>
</tr>
<tr>
<td></td>
<td>Categories of taxable person in certain groups</td>
<td></td>
</tr>
<tr>
<td>Stage</td>
<td>Single-stage</td>
<td>Multiple-stage</td>
</tr>
<tr>
<td>Threshold</td>
<td>Annual sales turnover exceeding RM100,000 (under Sales Tax)</td>
<td>RM 500,000 of annual taxable turnover</td>
</tr>
<tr>
<td>Rates</td>
<td>Sale Tax (5 percent, 10 percent at a specific rate) and Service Tax is at 6 percent</td>
<td>Standard rate of GST is at 6 percent</td>
</tr>
</tbody>
</table>

Sources: Royal Malaysian Customs Department (www.customs.gov.my) (2017)

Types of Goods and Service Tax (GST) in Malaysia

Goods and Services Tax Malaysia can be categories into four types: (i) Standard rated supply, (ii) Zero rated supplies, (iii) Exempt supplies, and (iv) Supplies not within the scope of GST. Standard rated supply are goods and services that are charged GST with standard rate of 6 percent. Business will involved in Goods and Services Tax (GST) which mean business will paid for government. They can recover credit back on their inputs. If their input tax is bigger than their output tax, they can recover back the difference. Next, zero rated supplies are taxable supplies that are subject to a zero rate. It means that business are eligible to claim input tax credit in acquiring these supplies, and change GST at zero rate to the consumer. Exempt supplies are non-taxable that are not subject to Malaysia GST. Business are not eligible to claim input tax credit in acquiring these supplies, and cannot charge output tax to the consumer. Lastly, Supplies not within the scope of GST defined as supplies which do not fall within the charging provision of the GST Act include non-business transactions, sale of goods from a place outside Malaysia to another place outside Malaysia as well as services provided by the Government sector. Table 4 below shows the example regarding zero rate supplies and exempt supplies of GST Malaysia.
Table 4 The Differences between Sales and Services Tax (SST) and Goods and Services Tax (GST) in Malaysia

<table>
<thead>
<tr>
<th>Zero Rate Supplies</th>
<th>Exempt Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture products</td>
<td>Financial services</td>
</tr>
<tr>
<td>Foodstuff</td>
<td>Private education services</td>
</tr>
<tr>
<td>Livestock Supplies</td>
<td>Childcare services</td>
</tr>
<tr>
<td>Poultry</td>
<td>Private health care service</td>
</tr>
<tr>
<td>Eggs</td>
<td>Tolled highways or bridges</td>
</tr>
<tr>
<td>Fish, prawns, cuttlefish, crabs, oysters,</td>
<td>Building used for residential purposes</td>
</tr>
<tr>
<td>cockles and lobsters</td>
<td></td>
</tr>
<tr>
<td>Supply of treated water domestic customer</td>
<td>Funeral, burial and cremation services</td>
</tr>
<tr>
<td>Supply of the first 200 units of electricity</td>
<td>Supplies made by societies and similar organization</td>
</tr>
<tr>
<td>to a domestic household for a minimum</td>
<td></td>
</tr>
<tr>
<td>period of twenty eight days</td>
<td></td>
</tr>
<tr>
<td>Goods supplies to designated areas</td>
<td>Land used for residential or agricultural purposes</td>
</tr>
<tr>
<td>(Labuan, Langkawi and Tioman) from</td>
<td>or general use</td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
</tr>
<tr>
<td>International Services</td>
<td>Transportation service</td>
</tr>
</tbody>
</table>


Why Goods And Services Tax (GST) Instead Of Other Higher Tax?

The implementation of Goods and Services Tax (GST) will give a positive impacts to Malaysian government’s tax reform program such as enhance the capability, effectiveness and transparency of tax administration and management. For your information, Goods and Services Tax (GST Malaysia) that implemented in Malaysia is actually lower than the sales and services tax Malaysia. The purpose of the government in proposing the GST at a lower rates is to neutralize GST impact on the consumers - to reduce the burden of rakyat of consumer especially those lower income group. By imposing GST at a lower rate, Malaysian government is expected consumers can get benefit from the price reduction in most of the goods and services.

Goods and Services Tax (GST) can be describe as a better and fairer tax system compared to Sales and Services Tax (SST). With Goods and Services Tax (GST), business can recovering input taxes on raw materials and incurred expenses instead of pay multiple taxes and higher levels of tax-on-tax (cascading tax) under Sales and Services Tax (SST). It obviously shows that GST have the power to lower business cost. In addition, business can skip the application for approval to get tax-free materials and also for special exemption for capital goods. This system will abolished as businesses can offset automatically the GST on inputs in their return.
In addition, prices of Malaysia exports will become more competitive on the global stage due to no Goods and Services Tax (GST) is imposed on exported goods and services, while GST incurred on inputs can be recovered along the supplies chain. This will increase global competitive, strengthen export industry and helping the country progress even further. With Goods and Services Tax (GST), taxes are leveled fairly among all the businesses involved which is manufacturing, wholesaling, retailing or services sectors. Lastly, consumers will pay fairer prices for most goods and services compared to SST and unlike the SST, consumer would benefit under GST as they will know exactly whether the goods they consume are subject to tax and the amount they pay for.

EFFECTS OF GOODS AND SERVICES TAX IN MALAYSIA

The implementation of Goods and Services Tax (GST) will give an impact or effects towards Malaysia. We can traditionally categories these effects toward two aspect which is: (I) the effects of goods and services tax (GST) in Malaysian economy and (ii) the effects of goods and services tax (GST) in society Malaysia.

Effects of Goods and Services Tax (GST) in Malaysian Economy

Effects of Goods and Services Tax (GST) in Malaysian economy are as following:

(a) Increase Gross Domestic Product (GDP): As we know, Goods and Services Tax system is a more efficient and effective tax system compared with previous system-Sales and Service Tax system. Consumer can gain a knowledge whether product they purchase is subject to tax or exempt from tax and the amount they pay for when they consume something. In addition, implementation of goods and services tax can stimulate the economic growth. It might increase the government profit from collection of Goods and Services Tax. For your information, revenue increases is not only from Malaysian but also from foreigners. Therefore, Goods and Services Tax can increase government revenue from sector of tourism industry - overall revenue will increase when tourists spend money on goods and services that made in Malaysia. This will directly give an effect on the Malaysia economy and increase Malaysia’s Gross domestic product (GDP).

(Official portal of Ministry Finance of Malaysia)

(b) Price - Competitive in Foreign Markets: Under the previously Sales and Services Tax system, it always faced the issues of cascading tax, double tax, tax erosion and pyramiding tax. Therefore, consumer will forced to pay higher price in the end due to these mistaken of SST system. This problem can be solved through Goods and Services Tax system, each party in supply chain can get the refund of the GST paid to the government which mean business can claim back input tax. In this way, the tax element won’t become the cost of production. When the cost of production decrease in domestic markets, producer will produce more goods and services, this will directly affect Malaysian goods and services as more price competitive in the foreign markets. Under Goods and Services Tax system, all exported goods and services is zero rated and this is a good opportunities for exporters who competing with producer abroad using a lower cost structure. (NBC group)
Effects of Goods and Services Tax (GST) in Malaysia Society

Effects of Goods and Services Tax (GST) in society Malaysia are as following:

(a) **Standard of Living Changes:** Malaysian government will have more money to spend at development such as institutions, health facilities, education and social infrastructure etc. due to increment of revenue from the collection of Goods and Services Tax (GST). Therefore, it will directly affect the standard of living of Malaysian business and consumers. Government can improve the needs of the public and provide the better health care system and welfare service with the revenue collect from GST. Hence, GST can improved standard of living of Malaysian by using the revenue collect from GST to investing for existing improvement and future development. Goods and Service Tax (GST) enable Malaysian have a better management of its finance and improve standard of living and in order to become a successful country such as Australia, Singapore and South Korea. (Official Portal of Ministry of Finance Malaysia) However, some economist have argued that implementation of Goods and Services Tax will increase cost of living and reduced standard of living of Malaysian. According a survey from an online recruitment company, the survey concluded that implementation of GST has increase the burden of Malaysian in aspect cost of living. On the other hand, the salaries have not been increasing as compared to the rising cost of living which is thus leading to decrease in standard of living of Malaysian. (Jobstreet Malaysia)

(b) **Consumption Behavior Changes:** The consumption pattern of consumers has changed when government Malaysian implementation Goods and Services Tax (GST). For your information, some goods such as basic foodstuff rice sugar, cooking oil, fish and essential services are exempted from Goods and Services Tax (GST) whereas there are certain goods which are not exempted from Goods and Services Tax (GST). This incident will leading to increase price to consumer. Therefore, consumer’s expenses may divert towards buying essential goods and services rather than on luxury goods since Goods and Services Tax only incurred when goods and services are consumed.

PROBLEM STATEMENT AND THE STUDY OBJECTIVE

As you may already know, without the full participation of the middle class, there are no country can possible reach progressive growth in economically and socially in the same time. We can measure an economy of a country through the size and strength of the country’s middle class. The middle class’ social and cultural habits and value system can essentially determine the course of a country’s history. The household income ranges of middle class (M40) was between RM3,900 and RM8,300. For your information, middle class is the driver of the economy in any capital market enterprise economy such as Malaysia. The M40 is central to consumption spending and private investment, M40 also serves as a critical pool for talent, investment and entrepreneurship. Therefore, we can conclude that the middle 40 percent of household income group or M40, is extremely important to the nation’s well-being (Najib Razak, 2015).

However, Malaysia’s middle class may be shrinking with some hanging on by a thread and others even falling off into poverty due to cost of living continues to rise and salaries struggle to catch up. Economist and academics say the term “middle class” does not have the same meaning it had more than 10 years ago. With salaries unable to match inflation, being middle class no longer means as comfortable a living as compared to 20 years ago.
G. Ackley defined inflation as “a persistent and appreciable rise in the general level or average of prices”. In other words, inflation is a state of rising prices, but not high prices. There are many different factors and policies have been held responsible for inflation. We can traditionally categories inflation into seven factors: (I) “demand-pull inflation”, (ii) “government inflation”, (iii) “credit expansion”, (iv) “imported inflation”, (v) gold inflation”, (vii) “wage-push inflation”, and (viii) “administered price inflation” (Gottfried Haberler, 1960). Implementation of Goods and Services Tax can be categories as one of the point which cause inflation, which under factor of “government inflation”. Therefore, we clearly understand that implementation of Goods and Services Tax (GST) will increase the burden of middle class in aspect cost of living and standard of life.

In conclusion, we deeply understand the middle class is the driver of the economy- strong and growing M40 will lead the economy towards the path of advanced and strong. Nevertheless, the introduction of Goods and Services Tax (GST) in Malaysia has called many arguments from various parties including academics, professionals and the nation on how GST affect goods prices-increase or decrease. With the relatively high living costs particularly in main big cities such as Kuala Lumpur, Penang and Johor Bahru, Goods and Services Tax (GST) is considered as another burden for middle income earners. Therefore, it is important for both researchers and practitioners to gain a deep understanding regarding the middle class household’s potential consumptions (purchases) behaviour after Goods and Services Tax (GST) implemented in Malaysia.

The following objectives are going to be achieved throughout the study:

(a) To gain a deep understanding regarding Goods and Services Tax (GST).
(b) To identify the effects of Goods and Services tax (GST) in Malaysian economy and society Malaysia.
(c) Examining the middle class household’s potential consumptions (purchases) behaviour after Goods and Services Tax (GST) implemented in Malaysia.

This study focuses on middle income earners in Malaysia. Middle income earners also known as middle 40 percent of household income group or M40, their household income ranges was between RM3,900 and RM8,300. Middle class is choose in this study because they are the key driver of the economy in Malaysia. Based on the statistic of household by ethics according to medium income, is shows that all the ethics in Malaysia play an important role towards this - 64.17% Bumiputera, 26.43% Chinese, 9.10% Indian, and 0.30% Others.

In order to be more accurate study, this survey is applied to all ethics and gender from various organizations including government and private sectors from various locations in Malaysia. A questionnaire is used to collect the data and information from a sample of 100 middle class respondent randomly in Malaysia. The questionnaire is divided into 3 sections. First section is about demographic profile of the respondents. Second section is about the middle class household’s potential consumptions (purchases) behaviour after Goods and Services Tax (GST) implemented in Malaysia and the third section is about middle class retention on Goods and Services Tax (GST).
REVIEW OF THE LITERATURE

The literature on Goods and Services Tax (GST) in Malaysia is considerably sparse as it is still a new issue in Malaysia since its implementation on 1 April 2015. In this chapter will further discuss the literature review regarding Goods and Services Tax (GST) in Malaysia. The chapter will begin with the review of Goods and Services Tax (GST) which called a new tax reform in Malaysia. Besides that, the relationship between the level of understanding of Goods and Services Tax (GST) and Consumer spending behavior also will discuss in the detail too.

GOODS AND SERVICES TAX (GST): A NEW TAX REFORM IN MALAYSIA

In Malaysia, tax is a major contributor to total government revenue. Based on review of the Malaysia federal government’s revenue for the year 2011, it shows that direct taxes and indirect taxes represent more than 70 percent of total national income. (Treasury Malaysia, 2011) In the other meaning, the higher of tax revenue can drive a strong economic growth. In line with Malaysia’s goal of becoming a developed nation by the year 2020, the government of Malaysia plans to implement tax reforms which can make the existing tax system simpler, more transparent and more efficient. Therefore, Malaysia decided to implement the Goods and Services Tax (GST) system.

Goods and Services Tax (GST), is a form of indirect tax in which consumers pay taxes as they purchase goods and services. Therefore, Goods and Services Tax (GST) is a tax imposed based on spending amount as opposed to income tax where it is taxed based on the amount of income earner (Rashid, Mohammed & Saheh, 2005). For your information, Goods and Services tax is not a new tax policy in Malaysia, it is actually a tax replacement the sales and services tax (SST). Goods and Services Tax (GST) is imposed at every level of production and distribution chain until the final consumer (Mansor & Ilias, 2013). Therefore, Goods and Services Tax (GST) is much fairer tax system that will be able to detect tax evasion (Choong, 2006). According to International Monetary Fund (IMF), the introduction of GST will increase the efficiency of tax system and in the end raises the collection of tax. It was believed that the introduction Goods and Services Tax (GST) will provide the government with the opportunity to reduce corporate and personal income tax rates (Palil & Ibrahim, 2012). Goods and Services Tax (GST) will encourages saving and investments, rewards enterprise and eventually strengthen economic resilience of a country (Low & Loi, 1994).

The idea of introducing Goods and Services Tax (GST) in Malaysia has first appeared since 1989 (Lau,Tam & Heng, 2013). In the year of 2005, government of Malaysia was announced that Goods and Services Tax (GST) will be implementation in 2007. However, in February 2006, the Malaysian government announced that the implementation of Goods and Services Tax (GST) would be delay due to Malaysian government was required to obtain feedback from general public. Subsequently, Goods and Services Tax (GST) was tabled for first reading in 2009 for proposed implementation in 2011. Finally, it become a reality with the Parliament’s announcement on 25 October 2013 that Goods and Services Tax (GST) would be implemented commencing on 1 April 2015 at a rate of 6 percent. In the same meaning, the idea of implement Goods and Services Tax (GST) or reform a new tax in Malaysia was not just a “fairy-tale” or “legend”, it was officially implemented in Malaysia on 1 April 2015.
The Dark Side of Goods and Services Tax (GST)

Malaysian government was believed that implementation of Goods and Services Tax (GST) are able to increase revenue collection by the government and reduce fiscal debt. Despite the benefits from the implementation of Goods and Services Tax, there are rising concerns from various parties including academics, professionals and the nation (would become the taxpayers) on significant increasing prices of goods and services tax will burden the people in the country. According to a statistic, it showed that more than half of the respondents do not understand clearly about Goods and Services Tax (GST) since the announcement is made on its implementation (Abdullah, Idrus & Mehat, 2013). In addition, the study conducted by Shamsuddin et al (2014) showed that there is low level of awareness towards Goods and Services Tax (GST) implementation in Malaysia. Many Malaysian still confused with the implementation of Goods and Services Tax as they do not understand the justification behind the implementation of this new tax scheme.

Besides that, the finding from Saira, Zarriyati & Yoke-May (2010) indicated that many Malaysians do not have a high level of confidence on government regarding Goods and Services Tax (GST). Consumer are worrying of the significant price increase when the Goods and Services Tax (GST) has fully implemented especially will be a burden for middle and low income earners (Palill & Inrahim, 2012). This is true that household with lower income will pay proportionately more tax than higher incomes. ( Yong Hoe Hong, Boon Heng Teh, Patrick C-H Soh & Tze San Ong, 2015). We can concluded that the level of awareness among Malaysian is still relatively low due to the lack of knowledge or information regarding Goods and Services Tax (GST) among citizen. Consequently, it will lead to the problem of Most of the Malaysian disagree and do not accept with Goods and Services Tax (GST) (Mazni & Noor-Sharoja, 2008; Tan & Chin-Fatt, 2000)

The Relationship Between The Level of Understanding Goods and Services Tax (GST) and Middle Income Households’ Spending Behavior

There are many preliminary studies on Goods and Services Tax (GST) in Malaysia prior to its actual implementation. Overall, the current literature indicates that the level of understanding among Malaysian toward Goods and Services Tax (GST) was found to be generally low. Shamsuddin et al (2014) investigated the level of awareness and moderate level of acceptance towards Goods and Services Tax (GST) in Malaysia and the finding of this study show that there is low level of awareness and moderate level of acceptance towards Goods and Services Tax (GST) implementation in Malaysia. It is because Goods and Services Tax (GST) is a new tax reform in Malaysia (Mansor and Ilias, 2013). Besides that, there are also some other study which explored the issue of Goods and Services Tax (GST). Kasipillai and Sinnakkannu (2008) conducted a research on the distributive effects of the introduction of Goods and Services Tax (GST) in Malaysia. The findings from the research showed the effects into three perspectives: (i) change in expenditure due to Goods and Services Tax (GST), (ii) Burden of Goods and Services Tax (GST) on household classes, and (iii) burden of Goods and Services Tax on the categories of expenditure.
Meanwhile, Lau, Tam and Heng (2013) presents the current tax system in Malaysia and analyzed the effect of Goods and Services Tax (GST) on the economy. From the perspective of growth impact, it was found that the quarters before the full implementation of Goods and Services Tax (GST) may show accelerated growth in consumption as households bring forward future purchases to avoid paying Goods and Services Tax (GST). (Lau, Tam & Heng, 2013). Furthermore, Palil and Ibrahim (2012) also proposed a comprehensive overview on consumer readiness, perceptions and acceptance of Goods and Services Tax (GST). This study further analyzed households’ potential consumption behavior if Goods and Services Tax (GST) is introduced. It was conclude that people’s consumption behavior would change significantly due to the implementation of Goods and Services Tax (GST). However, the particular study also found that 51.3 percent of the respondents will not change their consumptions behavior although they perceived that Goods and Services Tax would increase the price of goods and services. Earlier study by Choong (2006) examined the possible implication of Goods and Services Tax (GST) on household spending behaviour. It was found that majority of the respondents foreseen that Goods and Services Tax (GST) would affect their spending habit. This study also provides useful insight on how Malaysians distribute their income which can reflect their consumption patterns.

Goods and Services Tax (GST) also called as Value Added Tax (VAT). In terms of studies of Value Added Tax (VAT) in foreign countries, Glardi (2013) used a graphical descriptive analysis to analyze value added tax and consumer spending. The analysis found that there was no or little consumers’ behavior changes when new tax were introduced in the UK and Canada (Gelardi, 2014). In addition, James and Alley (2008) mentioned in their study that although low income household spend a greater proportion of their income on food than do those on higher income, most of the benefit from food exemption will be benefited the latter group. The study of Value Added Tax (VAT) by Zaman, Okasha and Iqbal (2000) also found that Value Added Tax (VAT) was highly regressive in the case of India and Pakistan. Aside from the Goods and Services Tax (GST) topic, the other part of this study is related to spending behavior among middle income household. Sereetrakul, Wongveeravuti and Likitapiwat (2013) also look into the gender differences in saving and spending behaviors of Thai Students. On the other hand, Ganesan (2012) investigated the relationship between different variables such as budgeting, distraction, economic cost assessment, time binding and pre-commitment with the spending behavior of Generation Y. From the past researches mentioned above, there is limited study that links the relationship between understanding and middle income households’ spending behavior.

The level of consumers’ understanding towards Goods and Services Tax (GST) and its relationship with middle income households’ spending behavior are a great concern for many parties including the government and hence will be explored further in this study. Since Goods and Services Tax (GST) is a consumption tax, it would be added cost to the consumers. It would be expected that there could be some behavioral changes by consumers, it would also include middle households earner (Gelardi, 2013). This statement is evidenced when many consumers were on a buying spree prior to the implementation date of Goods and Services Tax (GST) in order to avoid Goods and Services Tax (GST) (The Strait Times Asia, 2015).
In the case of Australia, there was evidence of a spike in domestic consumption on the months leading to Goods and Services Tax (GST) implementation as consumers rushed to purchase products. Domestic consumption declined when the Goods and Services Tax came into effect but returned to normal soon after (Palil & Ibrahim, 2012). The rationale of stockpiling for future use to avoid price increases after the implementation of Goods and Services Tax (GST) would depend on the understanding of the consumers toward Goods and Services Tax (GST) as a whole.

**RESEARCH METHODOLOGY**

The purpose of this research is more concerning in examining the middle class household’s potential consumptions (purchases) behavior after Goods and Services Tax (GST) implemented in Malaysia. The coping mechanism such as avoiding spending, reduce expenses, maximizing value, generating income and stretching budget which implement in middle class household’s spending behavior after Goods and Services Tax (GST) implemented in Malaysia also use to examine the middle class retention on Goods and Service Tax (GST). In addition, effects of Goods and Services tax (GST) in Malaysian economy and society Malaysia also identified. Besides that, Goods and Services Tax (GST) in Malaysia are examined too.

This study adopted both qualitative and quantitative approach in this research. Qualitative research is concerned with qualitative phenomenon, i.e., phenomena relating to or involving quality of kind. In the other meaning, qualitative approach is use to collect the data and information in the form of words from other researches. Quantitative research, on the other hand, is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. Quantitative approach is use to measure the data in numbers and test the relationship for a coping mechanism.

**VARIABLE MEASUREMENT**

**Independent variables**

The independent variables in this study are the middle class household’s potential consumptions (purchases) behaviour after Goods and Services Tax (GST) implemented in Malaysia. There are four independent variables used in this study which are avoiding spending, reduce expenses, maximizing value, and generating income & stretching budget. Each of these variables described have 5 questions. Each of this questions was measured by Likert five-point, ranging from very unimportant = 1, to very important = 5.

**Dependent variable**

Dependent variable in this study is middle class retention on Goods and Services Tax (GST). There are 4 question is use to described the middle class retention measured by Likert five-point scale, ranging from very disagree = 1, to very agree = 5. A total of 5 questions for each coping mechanism (independent variable) in this survey are to examine which coping mechanism is more implement in middle class household’s spending behavior after Goods and Services Tax (GST) implemented in Malaysia.
HYPOTHESIS DEVELOPMENT

H0: Avoiding spending is no relationship with middle class retention on GST.
H1: Avoiding spending is relationship with middle class retention on GST.
H2: Reducing Expenses is relationship with middle class retention on GST.
H3: Maximizing Value is relationship with middle class retention on GST.
H4: Generating income and stretching budget are relationship with middle class retention on GST.

H0 be accept when middle class household feel that avoiding spending is not important or will not effect to them in their spending behavior after Goods and Services Tax (GST) implemented in Malaysia. H1,H2,H3 and H4 will be accept when middle class household feel that coping mechanism is important and have a significant positive effect on middle class household’s spending behavior after Goods and Services Tax (GST) implemented in Malaysia.

Questionnaire was prepared for use in the survey based on literature review and objectives of the study. The questionnaire was divided into three section. The demographic information of the respondents is requested in section one. Section two consists of questions regarding the coping mechanism including avoiding spending, reduce expenses, maximizing value, and generating income & stretching budget which will implement by middle class household’s spending behavior after Goods and Service Tax (GST) implemented in Malaysia. Section three is about middle class retention on Goods and Services Tax (GST). Five-point Likert scales are applied in the section two and three’s questionnaire ranging from 1 = very unimportant/ very disagree to 5 = very important/ very agree.

In this study, sample size was 100 respondents and all of them are complete the information needed, no one was rejected due provided incomplete information in this survey. The respondent profile was as 50 female and 50 male. This study was conducted during the period of May 2017.

Random sample technique was used to select the respondents among middle class household. The sample was randomly selected without calculate about gender, ethics, marital status, and career sectors etc. The questionnaires were created with Google Form and send it by Facebook to all respondents. Hence, it is more easy and effective in the process collect data and respondents.

Both primary and secondary data was used in this study. Primary data is a data that gather through the questionnaires and observations in the process data collection. The questions use in questionnaire was very simple and straight to the point to make sure the respondents understand the question asking about and avoid ambiguity. Secondary data is a data that already prepare by other researcher or author either in website or articles. For example, research done by researches before.

DATA ANALYSIS

The data obtained will be processed and analysed using the Statistical Package for Social Science (SPSS) program. Charts were used to show the demographic data include gender, ethics, marital status, and career sectors. It can show the data that have collect more clearly and easy to understand.
The next analysis that have use in this study is reliability analysis, which was introduced by Cronbach in 1951. It functions with split of the data in two halves in every possible manner and the computes the correlation coefficient for each split after that get the average of these values is equal to Cronbach’s alpha. The value of Cronbach’s alpha which is less than 0.6 are consider as poor, more than 0.7 are acceptable, 0.8 are good and 1.0 is the best reliability. Reliability test is using the Cronbach’s alpha for coping mechanism including avoiding spending, reduce expenses, maximizing value, and generating income & stretching budget which will implement by middle class household’s spending behavior after Goods and Service Tax (GST) implemented in Malaysia. In this analysis, Cronbach’s alpha is to measure how closely a relationship between independent variables and dependent variable.

Besides that, regression analysis’s linear regression also used in analysis. Regression analysis is used to show the relationship between dependent variable and independent variable. For simple linear regression, it predicts the scores on a variable from the scores on other variable. For multiple linear regression, it attempts the relationship between two or more independent variables. In this research, the regression analysis is as following:

\[ y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \]

Where,

Y: Middle class retention on Goods and Services Tax (GST)
X: avoiding spending; reduce expenses; maximizing value; and generating income & stretching budget

Last analysis that have use is Pearson’s correlation to show how strongly pairs of variables are related. Each row of the table corresponds to one of the variables and also each column will corresponds to one of the variables.

DEMOGRAPHICS OF THE SAMPLE

Figure 1 Percentage of Gender in Survey

The sample consists 67% of female and 33% of male in this survey.
Majority of respondents are made up by Chinese (53%), followed by Malay (33%) and India (14%).

In this survey, it consists of 54% single respondents and 46% married respondents.
Majority of respondents are work in private sector (69%) and 31% respondents work in government office.

RELIABILITY ANALYSIS

Scale: ALL VARIABLES

<table>
<thead>
<tr>
<th>Case Processing Summary</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases Valid</td>
<td>100</td>
<td>100.0</td>
</tr>
<tr>
<td>Excluded a</td>
<td>0</td>
<td>.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. Listwise deletion based on all variables in the procedure.

a. Avoiding Spending and Middle Class Retention on Goods of Services Tax (GST)

Table 5 Reliability Statistics for Avoiding Spending

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.907</td>
<td>.908</td>
<td>5</td>
</tr>
</tbody>
</table>

Interpretation: This show the questions are clear to the audience because Cronbach’s alpha value is 0.907 more than 0.7.
b. Reducing Expenses and Middle Class Retention on Goods of Services Tax (GST)

Table 6 Reliability Statistics for Reducing Expenses

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.815</td>
<td>.827</td>
<td>5</td>
</tr>
</tbody>
</table>

Interpretation: This show the questions are clear to the audience because Cronbach’s alpha value is 0.815 more than 0.7.

c. Maximizing Value and Middle Class Retention on Goods of Services Tax (GST)

Table 7 Reliability Statistics for Maximizing Value

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.954</td>
<td>.954</td>
<td>5</td>
</tr>
</tbody>
</table>

Interpretation: This show the questions are clear to the audience because Cronbach’s alpha value is 0.954 more than 0.7.

d. Generating Income & Stretching Budget and Middle Class Retention on Goods of Services Tax (GST)

Table 8 Reliability Statistics for Generating Income & Stretching Budget

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.906</td>
<td>.911</td>
<td>5</td>
</tr>
</tbody>
</table>

Interpretation: This show the questions are clear to the audience because Cronbach’s alpha value is 0.906 more than 0.7.

REGRESSION ANALYSIS

a. Avoiding Spending and Middle Class Retention on Goods of Services Tax (GST)

Table 9 Regression Analysis for Avoiding Spending

<table>
<thead>
<tr>
<th>Variables Entered/Removed&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST
b. All requested variables entered.
**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.331a</td>
<td>.110</td>
<td>.101</td>
<td>.57924</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Avoiding_spending

**ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1</td>
<td>4.054</td>
<td>12.084</td>
<td>.001*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>98</td>
<td>.336</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>99</td>
<td>36.935</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.583</td>
<td>.304</td>
<td>8.495</td>
</tr>
<tr>
<td></td>
<td>Avoiding_spending</td>
<td>.242</td>
<td>.070</td>
<td>.331</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

**Interpretation:** Effect of avoiding spending on middle class retention on Goods and Services Tax (GST) is 11.0% because is .110 and significant with the middle class retention is which p-value < 0.01.

**Reducing Expenses and Middle Class Retention on Goods of Services Tax (GST)**

**Table 10 Regression Analysis for Reducing Expenses**

**Variables Entered/Removed**

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reducing_expenses</td>
<td></td>
<td>Enter</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

b. All requested variables entered.

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.528a</td>
<td>.279</td>
<td>.272</td>
<td>.52119</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Reducing_expenses

**ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1</td>
<td>10.314</td>
<td>37.971</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>98</td>
<td>.272</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>99</td>
<td>36.935</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

b. Predictors: (Constant), Reducing_expenses
**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>1.953</td>
<td>.276</td>
<td>7.086</td>
</tr>
<tr>
<td></td>
<td>Reducing expenses</td>
<td>.404</td>
<td>.066</td>
<td>.528</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

**Interpretation:** Effect of reducing expenses on middle class retention on Goods and Services Tax (GST) is 27.9% because is .279 and significant with middle class retention which p-value < 0.01.

c. **Maximizing Value and Middle Class Retention on Goods of Services Tax (GST)**
   
   **Table 11 Regression Analysis for Maximizing Value**

   **Variables Entered/Removed**

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maximizing_value</td>
<td></td>
<td>Enter</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST
b. All requested variables entered.

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.441</td>
<td>.194</td>
<td>.186</td>
<td>.55102</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Maximizing_value

**ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>7.180</td>
<td>1</td>
<td>7.180</td>
<td>23.650</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>29.755</td>
<td>98</td>
<td>.304</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36.935</td>
<td>99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST
b. Predictors: (Constant), Maximizing_value

**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>2.412</td>
<td>.254</td>
<td>9.480</td>
</tr>
<tr>
<td></td>
<td>Maximizing_value</td>
<td>.288</td>
<td>.059</td>
<td>.441</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

**Interpretation:** Effect of maximizing value on middle class retention on Goods of Services Tax is 19.4% because is .194 and significant with middle class retention which p-value < 0.01.
d. Generating Income & Stretching Budget and Middle Class Retention on Goods of Services Tax (GST)

Table 12 Regression Analysis for Generating Income & Stretching Budget

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Generating_income_and_stretching_budget</td>
<td>.</td>
<td>Enter</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST
b. All requested variables entered.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.460*</td>
<td>.211</td>
<td>.203</td>
<td>.54523</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Generating_income_and_stretching_budget
b. Predictors: (Constant), Generating_income_and_stretching_budget

c. Coefficients:

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.272</td>
<td>.269</td>
<td>8.453</td>
</tr>
<tr>
<td></td>
<td>Generating_income_and_str</td>
<td>.323</td>
<td>.063</td>
<td>.460</td>
</tr>
<tr>
<td></td>
<td>echting_budget</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

**Interpretation:** Effect of generating income and stretching budget on middle class retention on Goods and Services Tax (GST) is 21.1% because is .211 and significant with middle class retention which p-value < 0.01.
e. Avoiding Spending, Reducing Expenses, Maximizing Value, and Generating Income & Stretching Budget and Middle Class Retention on Goods of Services Tax (GST)

Table 13 Regression Analysis for Avoiding Spending, Reducing Expenses, Maximizing Value and Generating Income & Stretching Budget

Variable Entered/Removed

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Generating_income_and_stretching_budget, Reducing_expenses, Avoiding_spending, Maximizing_value</td>
<td></td>
<td>Enter</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST
b. All requested variables entered.

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.569*a</td>
<td>.323</td>
<td>.295</td>
<td>.51290</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Generating_income_and_stretching_budget, Reducing_expenses, Avoiding_spending, Maximizing_value

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>11.944</td>
<td>4</td>
<td>2.986</td>
<td>11.351</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>24.991</td>
<td>95</td>
<td>.263</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36.935</td>
<td>99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST
b. Predictors: (Constant), Generating_income_and_stretching_budget, Reducing_expenses, Avoiding_spending, Maximizing_value

c. Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.143</td>
<td>.293</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Avoiding_spending</td>
<td>.332</td>
<td>.139</td>
<td>-.455</td>
</tr>
<tr>
<td></td>
<td>Reducing_expenses</td>
<td>.373</td>
<td>.120</td>
<td>.488</td>
</tr>
<tr>
<td></td>
<td>Maximizing_value</td>
<td>.164</td>
<td>.137</td>
<td>.251</td>
</tr>
<tr>
<td></td>
<td>Generating_income_and_stretching_budget</td>
<td>.162</td>
<td>.127</td>
<td>.230</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Middle_class_retention_on_GST

Interpretation: Total effect of 4 factors on customer retention is 32.3%. About the significant, only reducing expenses is significant with middle class retention which p-value < 0.01. For the factor avoiding spending, maximizing value and generating income & stretching budget are no significant with middle class retention which p-value > 0.1.
CORRELATION ANALYSIS

Level of relationship between dependent variable and independent variables:

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 to 0.2</td>
<td>Very Weak</td>
</tr>
<tr>
<td>0.2 to 0.4</td>
<td>Weak</td>
</tr>
<tr>
<td>0.4 to 0.7</td>
<td>Moderate</td>
</tr>
<tr>
<td>0.7 to 0.9</td>
<td>Strong</td>
</tr>
<tr>
<td>0.9 to 1.0</td>
<td>Very Strong</td>
</tr>
</tbody>
</table>

a. Relationship between Avoiding Spending and Middle Class Retention

Table 14 Correlation Analysis between Avoiding Spending and Middle Class Retention

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Avoiding_spending</th>
<th>Middle_class_retention_on_GST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoiding_spending</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>100</td>
</tr>
<tr>
<td>Middle_class_retention_on_GST</td>
<td>Pearson Correlation</td>
<td>.331</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

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

According to the Pearson correlation test there is a positive and weak relationship between avoiding spending coping strategies and middle class retention. It means when increasing the avoiding spending coping strategies, middle class retention also will increase.

b. Relationship between Reducing Expenses and Middle Class Retention

Table 15 Correlation Analysis between Reducing Expenses and Middle Class Retention

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Middle_class_retention_on_GST</th>
<th>Reducing_expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle_class_retention_on_GST</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>100</td>
</tr>
<tr>
<td>Reducing_expenses</td>
<td>Pearson Correlation</td>
<td>.528</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
**Interpretation:** According to the Pearson correlation test there is a positive and moderately relationship between reducing expenses coping strategies and middle class retention. It means when the reducing expenses coping strategies increase, middle class retention also will increase.

c. **Relationship between Maximizing Value and Middle Class Retention**

Table 16 Correlation Analysis between Maximizing Value and Middle Class Retention

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Middle_class_retention_on_GST</th>
<th>Maximizing_value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.441 **</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000 **</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

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

**Interpretation:** According to the Pearson correlation test there is a positive and moderately relationship between maximizing value coping strategy and middle class retention. It means when maximizing value coping strategy increase, middle class retention also will increase.

d. **Relationship between Generating Income & Stretching Budget and Middle Class Retention**

Table 17 Correlation Analysis between Generating Income & Stretching Budget and Middle Class Retention

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Middle_class_retention_on_GST</th>
<th>Generating_income_and_strecthing_budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.460 **</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000 **</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

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

**Interpretation:** According to the Pearson correlation test there is a positive and moderately relationship between generating income & stretching budget and middle class retention. It means when generating income & stretching budget coping strategy increase, middle class retention also increase.
DATA ANALYSIS

After finish analysis data, we can see the reliability between the dependent valuable (middle class retention) and independent variables (avoiding spending, reducing expenses, maximizing value and generating income & stretching budget) have the high Cronbach’s alpha value, which is higher than 0.7. Next, we find that all the independent variables are significant with dependent variable which p-value is <0.01 in regression analysis. In correlation analysis, it show that 3 dependent variable is positive and moderately relationship with middle class retention (reducing expenses, maximizing value and generating income & stretching budget) and 1 dependent variable is positive and weak relationship between them (avoiding spending).

DISCUSSION

According to correlation analysis, it show that 4 dependent variable is positive and moderately relationship with middle class retention (avoiding spending, maximizing value and generating income) and 1 dependent variable is positive and weak relationship between them (reducing expenses). We can simply there is a relationship between dependent variable and independents variable of this study. In this section, we will gain an understanding regarding spending behaviour of middle income earners in Malaysia which is avoiding spending, reducing expenses, maximizing value and generating income& stretching budget).

There are five spending behaviours categories in coping strategy of avoiding spending which is : (i) Buy only necessities, (ii) use debit card or cash to control spending, (iii) settle credit card in full to avoid interest, (iv) keep minimum number of credit cards to avoid paying annual fee, and (vi) go out less to avoid spending. According to descriptive analysis, there is 53/100 respondents strongly agree buy only necessities, 52/100 respondents strongly agree use debit card or cash to control spending, 62/100 respondents strongly agree settle credit card in full to avoid interest, 63/100 respondents strongly agree keep minimum number of credit cards to avoid paying annual fee, and 55/ 100 respondents strongly agree go out less to avoid spending. The result shows that middle income earners are trying to avoid spending on not necessities item and trying to control their spending behaviour from credit card after Goods and Services Tax implement in Malaysia.

Next, there are five behaviours categories in coping strategy of reducing expenses which is : (i) reduce eating in outside, (ii) reduce weekend entertainment, (iii) reduce parents’ allowance, (iv) reduce children’s allowance and (v) reduce buying branded stuff. According to descriptive analysis, the result shows that there is 55/ 100 respondents strongly agree reduce eating in outside, 50/100 strongly agree reduce weekend entertainment, 44/100 strongly agree reduce parents’ allowance and children’s allowance and 58/100 strongly agree reduce buying branded stuff. The results shows that most of the respondents agree to reduce eating in outside because it can save money and avoid paying 16% (10% service tax and 6% GST) tax in one meal. On top of that, they also agree to reduce buying branded stuff because there is a high tax charged on every branded item and consumers have to pay more than the value. However, not every respondent agree to reduce parents and children’s allowance because family is irreplaceable in our heart and they are more important than money. This is human being and I believe everyone agree with this statement too.
Thirdly, there are five spending behaviours categories in coping strategy of maximizing value which is: (i) compare price between retailers or stores, (ii) calculate cost per unit to get the most value of money, (iii) checked newspapers for sale or discounts, (iv) pay attention to money-saving as message, and (v) shop on group buying sites to save money. The results of descriptive analysis shows that there are 56/100 respondents strongly agree compare price between retailers or stores, 51/100 respondents strongly agree calculate cost per unit to get the most value of money, 51/100 respondents strongly agree checked newspapers for sale or discounts, 49/100 respondents strongly agree pay attention to money-saving as message and 52/100 respondents strongly agree shop on group buying sites to save money. The results shows that middle income earners became a wise consumer and good in financial management after GST implemented in Malaysia.

Last but not least, There are five spending behaviours categories in coping strategy of generating income & stretching budget which is: (i) find others sources of income, (ii) utilize zero interest instalment plan whenever I can, (iii) change to a job with higher salary, (iv) use credit card so that I don’t need to pay immediately, and (v) utilize credits card balance transfer facility. According to descriptive analysis, the result shows that there is 53/100 respondents strongly agree to find others sources of income, 59/100 respondents strongly agree to utilize zero interest instalment plan whenever they can, 55/100 strongly agree change to a job with higher salary, 44/100 respondents strongly agree to use credit card so that don’t need to pay immediately and 8/100 respondents strongly agree to utilize credits card balance transfer facility.

**CONCLUSION**

Based on this research entitled “The Impacts of Goods and Services Tax (GST) on Middle Income Earners in Malaysia”, first objective describe Goods and Services Tax (GST) in Malaysia. In this research, we can gain a deep understanding regarding Goods and Services Tax (GST) such as types of GST and the reason to implementation Goods and Services Tax (GST).

Beside that, second objective is showing the effects of Goods and Services Tax (GST) in Malaysia economy and society Malaysia. We can conclude that implementation of goods and services tax can stimulate the economic growth, increase government profit, and the tax element won’t become the cost of production. This is a good impact towards economy Malaysia. However, some economist argued that implementation of Goods and Services Tax will increase cost of living and reduced standard living of Malaysia. The consumption pattern of consumers has changed when government Malaysian implementation Goods and Service Tax (GST). Therefore, it obviously showed that implementation of Goods and Services Tax doesn’t bring a positive impact towards society Malaysia.

Last objective are middle class household’s potential; consumptions behaviour after Goods and Services Tax (GST) implemented in Malaysia, we can define that avoiding spending, reducing expenses, maximizing value and generating income & stretching budget will help to reduce burden or cost of living to middle income earners in Malaysia. Middle income earners in Malaysia should pay more attention and implement those coping strategies in their daily life to ease their burden.
RECOMMENDATION

- Malaysian should gain an understanding and pay awareness towards Goods and Services Tax (GST).
- Besides that, Malaysian government should improve standard of living of Malaysian by using the revenue collect from Goods and Services Tax (GST) to investing for existing improvement and future development.
- Middle income earners in Malaysia should implement coping strategies (avoiding spending, reducing expenses, maximizing value and generating income& stretching budget) in their daily life.

REFERENCES


KERELEVENAN MAKLUMAT RIZAB PENYAMAAN KEUNTUNGAN DALAM SYARIKAT INDUK PERBANKAN ISLAM DI MALAYSIA

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ABSTRACT


Keywords: Kerelevenan Nilai, Pelicinan Pendapatan, Rizab Penyamaan Keuntungan, Institusi Kewangan Islam
RIDING THE WAVES OF INSTAGRAM – THE BEGINNING OF THE NEW BUSINESS EPISODE TO THE POTENTIAL ENTREPRENEURS

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ABSTRACT

Instagram, one of the social media applications on smart phone is gaining popularity as a mode of social interaction recently. Many people, especially young people, have used this application, not only for daily communication and sharing, but also for buying and selling products. Because of the heavy usage of Instagram, there is substantial interest in making this medium a commercial site, particularly among entrepreneurs who want to explore the potential of their businesses. However, little is understood from empirical viewpoint about the intensity of Instagram usages and its impact on society. This study seeks to investigate the perceived impact of Instagram on Malaysian potential entrepreneurs. A survey was administered which involved 115 individual. The findings revealed that most respondents in this study believed that Instagram is the future way of doing their businesses. In fact, they believed that those who want to be entrepreneurs need to have Instagram as they would not only allow them to share their products and services with other people but also assist them to make vital and critical business decisions. In addition to this finding, some other issues on the Instagram application were also revealed in this paper.

Keywords: Social media, Instagram, Entrepreneurs, Impact, Business, Malaysia
THE ROLE OF NIYYAT AND PRACTICAL WISDOM IN ISLAMIC BUSINESS ENTREPRENEURSHIP

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ABSTRACT

The purpose of this paper is to discuss the role of Niyyat in relation to practical wisdom, subsequently to explain both impacts on business entrepreneurial success. In this paper, we argue that business entrepreneurship is a religious response to the calling (fardhu) to serve the society with quality goods and services they need (ibadah) at profitability (blessing from Allah). To this end, we propose two concepts, Niyyat and practical wisdom, as a framework in understanding why and how entrepreneurs should make strategic decisions and take actions accordance to certain conditions (syariat). We suggest this framework so that the convention of entrepreneurship studies recognize business entrepreneurship in Islam has been as a body of knowledge since long time ago, embedding both best practices and philosophical wisdom in tandem. In other words, doing business is a choice and doing good business wisely is compulsory in the religion. By doing so, we enrich the answers to an inquiry like “Why only few entrepreneurs are successful and sustain?” towards recasting theories of entrepreneurship.

Keywords: Niyyat, intention, practical wisdom, entrepreneurial success
A CALL OF DUTY: EXPLAINING MALAY MUSLIM ENTREPRENEURS’ CAREER CHOICE

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ABSTRACT

Religion and spirituality are known to shape the internal values from which entrepreneurs derive their motivations and consequently influence their entrepreneurial activities. Entrepreneurs, generally have personal meaning embedded in their entrepreneurial pursuit. In the context of Muslim entrepreneurs, this may hold the key in explaining the different behaviours among the Muslim entrepreneurs because of their views on the concept of work, which further impact their choices on the type of business that they will venture into – i.e. halal or non-halal. In this paper we examine what it means for the Malay Muslim entrepreneurs to pursue entrepreneurship and how it shapes the way they do business. Using a narrative approach we interviewed 15 Malay Muslim entrepreneurs (12 females and 3 males) from various entrepreneurial background. Findings reveal that the Malay Muslim entrepreneurs regarded entrepreneurship as the pursuit of their callings. All entrepreneurs acknowledged that pursuing entrepreneurship was part of fulfilling their purposes and duties as Muslim. They frequently spoke of spiritual values of fardhu kifayah (communal obligation) as the value that drove them to pursue entrepreneurship. In this study we demonstrate how these values, derived from spirituality, helped participants to view entrepreneurship as an attractive and very meaningful goal to pursue. Participants were able to commit themselves to the whole entrepreneurial process in a somewhat unique fashion to western entrepreneurship because they see the career of being an entrepreneur as a calling and a form of worship.

Keywords: Spirituality, entrepreneurship, calling, halal, narrative approach, fardhu kifayah
HERD BEHAVIOUR IN MALAYSIAN STOCK MARKET

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ABSTRACT

This study examines the existence of herd behavior among investors in the Malaysian stock market. Two competing models, the Christie and Huang (CH) cross sectional standard deviation of returns and the Chang, Cheng and Khorana (CCK) cross sectional absolute dispersion are employed over daily data for the period of 1995-2016. This study further investigates the existence of herding behavior in both the Shariah-compliant and conventional stocks. The results reveal inconsistent findings for both models; nonexistence of herding behavior among investors using CH and existence of herding behavior using CCK. The results support previous studies on the existence of herding behavior for emerging markets and on the inconsistencies of the findings from both models.

Keywords: Herd behavior; Shariah compliant stocks, Malaysian stock market
ZAKAT, FINANCIAL DISTRESS AND FINANCIAL LEVERAGE OF MALAYSIAN FINANCIAL INSTITUTIONS

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ABSTRACT

Modigliani and Merton Miller Theorem (M&M Theory) is the keystone to modern capital structure theory today. Although many studies have been done in various industries to empirically test the theory, very few have focused on capital structure of financial institutions. This research examines the impact of zakat dan financial distress of financial institutions in Malaysia. We adopt a static panel regression technique of 22 listed financial institutions for 16 years, started from 2000 to end on 2015. Our findings show that zakat positively influences financial leverage while buffer of financial distress negatively influences the market value of firms’ financial leverage. As firms pay higher zakat, they tend to have higher amount of financial leverage, showing the effect of taxes in capital structure theory holds. Similarly, as bankruptcy cost decrease, the market value of firms’ leverage increases, conjecturing the trade-off theory exists in Malaysia.

Keywords: Capital structure, financial institutions, M&M Theory, Z-score, Zakat, Financial Distress
IMPAK PEMBANGUNAN HOMESTAY DALAM KALANGAN KOMUNITI RANCANGAN KEMAJUAN TANAH PERSEKUTUAN (FELDA), MALAYSIA

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ABSTRACT


Keywords: kemiskinan, homestay, impak sosial
THE EFFECT OF COOPERATIVE GOVERNANCE ON COOPERATIVE PERFORMANCE

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ABSTRACT

This study examines the relationship between good governance practices in cooperatives on performance. This objective answers to the question of how well governance practices influence cooperative performance. This is because the control mechanisms created by the government through several agencies and guidelines have not been able to ensure the cooperative's organization operates with excellence and well performed. This is due to many reports on weaknesses associated with cooperative management and governance. Based on the Agency Theory, this study hypothesized that the practice of cooperative governance affects cooperative performance. Primary data through questionnaire was obtained from 122 respondents consisting of Chief Executive Officer (CEO) of 122 Medium Cluster, Large Cluster and Successful Cooperatives in Peninsular Malaysia. Cluster analysis has classified cooperative governance into Management Efficiency (ME), Active Engagement (AE) and Board Effectiveness (BE). The Pearson Correlation matrix indicates a positive and significant relationship between Non-Financial Performance (NFP) and Financial Performance (FP) with all three components of the Governance. Regression analysis indicates that two cooperative governance components, namely Active Engagement and Board Effectiveness, are positively associated with both cooperative performance components (NFP and FP). Additional analysis indicates that the good governance practices have been implemented by the Large Cluster Cooperative in contrast to Medium Clusters and Small Clusters. This study has proven that the performance (finance and non-financial) of the Large Cluster Cooperation has been influenced by good governance practices. The results of this study are consistent with the Agency Theory. This finding is expected to contribute significantly to limited literature in Malaysia, cooperative regulatory bodies as well as cooperatives in Malaysia on the importance of good governance in affecting cooperative performance.

Keywords: Cooperative performance, financial performance, non-financial performance, cooperative governance.
INVESTIGATING THE FUTURE PRICES OF CRUDE PALM OIL FOR MALAYSIA: AN EMPIRICAL APPROACH

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ABSTRACT

This paper aims to evaluate the out-of-sample forecasting the performance of crude palm oil price in Malaysia by comparing several econometrics forecasting techniques namely ARIMA, MARMA and Vector Error Correction Model (VECM). Using monthly time series data set spanning from 2006 to 2016, this paper identifies several key factors in determining the future price in the Malaysian palm oil market, such as spot price of oil palm, total demand of palm oil, total stock of palm oil, crude petroleum oil price, real effective exchange rates and world soybean oil price. Using several statistical criterions, it is found that MARMA model is the most accurate and the most efficient method compare to VECM and ARIMA in forecasting the palm oil price for the future. The results also shows that the spot price of palm oil is highly influenced by stock of palm oil, crude petroleum oil price and world soybean oil price. Our empirical findings provide some insights for decision making and policy implementation, including the formulation of strategies helping the industry in dealing with the future price changes and thus enable the Malaysian palm oil industry to continue dominating the international market.

Keywords: ARIMA, MARMA, VECM, Forecasting, Crude Palm Oil Prices.
IMPAAK MODAL MANUSIA DAN TEKNOLOGI TERHADAP 
PRESTASI INDUSTRI BERASASKAN MINYAK KELAPA SAWIT DI 
MALAYSIA

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**ABSTRACT**

Malaysia is one of the producer and exporter of palm oil in the world and this sector contributes significantly to Malaysian economic growth. But high dependency on the export of palm oil is risk due price instability of this commodity. Therefore, emphasis should be given on the palm oil based industry and its competitiveness must be enhanced. This article attempts to analysis the performance of palm oil based industry based on 2000-2012 provided by the Department of Atatistics Malaysia. Analysis uses panel data of 13 years and 11 sub industries. Seemingly regression (SURE) model is used in the analysis on the four performance indicators, output growth, technical efficiency, total factor productivity and labour productivity. Results show that the main determinant of performance are R&D expenses and training expenses. Apart from this, the technical and associate professional workers also play a vital role on performance. The implication is that firms must emphasize on R&D and human capital investment.

**Keywords**: industry’s performance, palm oil, output growth, labour productivity, total factor productivity and technical efficiency.
EFFECT OF PEOPLE BASED LEADERSHIP ON PERSONAL OUTCOMES

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ABSTRACT

This study measures the relationship between people based leadership and personal outcomes using self-administered questionnaires collected from staff at a Malaysian public research university. The results of stepwise regression analysis confirm that participative and consultative styles were significantly correlated with job satisfaction and organizational commitment. This result demonstrates that the ability of leaders to appropriately implement participative and consultative styles in performing daily job operations have motivated employees to enhance their job satisfaction and organizational commitment in the studied organization. Additionally, this study offers discussion, implications and conclusion.

Keywords: Participative style, consultative style, job satisfaction, organizational commitment
INTRODUCTION

People based leadership (PBLP) is a person centered where leaders will form mutual respect, trust and confidence with followers, as well as motivate and inspire followers to accomplish their organizational strategic business vision and missions (Robbins & Judge, 2013). According to many scholars such as Amabile et al. (2004), Yukl (2005), and Jong and Hartog (2007) said that PBLP consists of two major features: participative and consultative styles. Participative style (PARTS) is broadly defined as the willingness of leaders to closely work with their followers and involve them in making decisions to achieve daily work objectives. For example, many leaders usually practice participative style through general consultation, empowerment, joint decision-making and power sharing in performing daily job (Jong & Hartog, 2007; Yukl, 2005). On the contrary, consultative style (CONSS) is often defined as the readiness of leaders to request brilliant opinions and ideas from their followers in achieving work objectives. For example, most leaders often practice consultative style through appreciation of followers’ opinions and ideas in setting goals and assigning daily tasks (Berson & Avolio, 2004; Jong & Hartog, 2007).

A review of the present literature pertaining to workplace leadership mostly published in the 21st century reveals that the capability of leaders to properly implement PARTS and CONSS in planning and administering daily job functions may have a significant impact on personal outcomes, especially job satisfaction (JOBS) (Brown, 2003; Rad & Yarmohammadian, 2006) and organizational commitment (ORGC) (Tabbodi, 2009; Yousef, 2000). In an organizational behavior perspective, JOBS is often defined as a result of employees assessing their internal and external job conditions. If employees have experienced high pleasurable emotions, this may lead to higher job satisfaction (Feinstein, 2002; Invancevich, 2008; McShane & Von Glinow, 2005). While, ORGC is normally defined as employees hold values that are consistent with their organizations’ values, have a high feeling of obligation and high desire to stay in order to gain benefits may lead to higher commitment with organization (Allen & Meyer, 1990; Feinstein, 2002; Meyer et al., 1990).

Within an organizational leadership model, many scholars concur that participative style, consultative style, job satisfaction and organizational commitment have different meanings, but highly interrelated constructs. For example, leaders who have the capabilities to properly implement participative and consultative styles in handling daily job functions may lead to an enhanced job satisfaction (Yijing & Ahmad, 2009; Ismail, Zainuddin & Ibrahim, 2010; Ismail et al., 2010; Gharibvand et al., 2013), and organizational commitment (Hulpia et al., 2009; Tabbodi, 2009; Yousef, 2000; Ismail et al., 2010). Although this relationship has extensively been studied, the predicting role of PBLP is given less emphasized in the leadership behavior research literature (Brown, 2003; Tabbodi, 2009; Hulpia et al., 2009; Yousef, 2000; Nguni et al., 2006). Therefore, this situation inspires the researchers to fill in the gap of literature by examining the effect of PBLP on personal outcomes. Specifically, this study intends to answer two major objectives: first, to investigate the relationship between people based leadership and job satisfaction. Second, to examine the relationship between people based leadership and organizational commitment.
LITERATURE REVIEW

The relationship between PBLP and personal outcomes is consistent with the notion of leadership theory. For example, path-goal theory (House, 1971, 1996; House & Mitchell, 1974) explains that the ability of leaders to clarify the right path will guide followers to achieve their goals (House, 1971, 1996; House & Mitchell, 1974). Conversely, leader member exchange theory (Dienesch & Liden, 1986; Gomez & Rosen, 2001) suggests that relationship quality between leaders and followers may induce positive follower behavior. Application of these theories in an organizational leadership shows that the notion of path-goal and quality of the relationship is often translated as participative and consultative styles. The notion of these theories has gained strong support from PBLP research literature. Several recent studies were conducted using a direct effects model to examine PBLP in diverse organizational settings, such as perceptions of 430 employees in different UEA organizations (Yousef, 2000), 238 Malaysian UM MBA part-time students and researchers’ working papers (Yiing & Ahmad, 2009), 27 supervisors and 93 participants in the University of Mysore, India (Tabbodi, 2009), 150 employees who had worked in one city based local authority in East Malaysia (Ismail et al., 2010), 72 faculty members and ten supervisors from Lithuanian public and private universities (Alonderiene & Majauskaite, 2016), and 364 employees in the educational sector in Qatar (Maryam et al., 2017). Findings from these studies reported that the ability of leaders to appropriately practice participative and consultative styles in executing daily work had led to an enhanced positive personal outcomes, especially job satisfaction (Alonderiene & Majauskaite, 2015; Ismail et al., 2010; Yiing & Ahmad, 2009) and organizational commitment (Tabbodi, 2009; Yousef, 2000).

Thus, it can be hypothesized that:

H1: There is a positive relationship between participative style and job satisfaction.
H2: There is a positive relationship between consultative style and job satisfaction.
H3: There is a positive relationship between participative style and organizational commitment.
H4: There is a positive relationship between consultative style and organizational commitment.

METHODOLOGY

A cross-sectional research design was employed because it allowed the researcher to combine the leadership research literature and the actual survey as the main procedure to collect data for this research. Utilizing this procedure may assist the researcher to collect precise data, minimize bias and enhance the quality of data being collected (Cresswell, 1998; Sekaran, 2000). This study was conducted at a Malaysian public research university in Peninsular Malaysia. At the early stage of this study, the survey questionnaire was constructed based on the PBLP literature. After that, a back to back translation technique was employed to translate the content of survey questionnaire into Malay and English languages in order to enhance the validity and reliability of research findings (Hulland, 1999; Sekaran, 2000).
The survey questionnaire has five major sections. Firstly, PARTS had six items adapted from participative leadership behavior literature (Jong & Hartog, 2007; Likert, 1967; Yukl, 2005; Yousef, 2000). Secondly, CONSS had five items adapted from consultative leadership behavior literature (Bennis, 1985; Jong & Hartog, 2007; Likert, 1967; Yousef, 2000). Thirdly, JOBS had fourteen items adapted from job satisfaction literature (Fletcher & William, 1996; Locke, 1976; Spector, 1997). Lastly, ORGC had eleven items adapted from organizational commitment literature (Allen & Meyer, 1990, 1990; Brown, 2003; Morrow, 1993). All these items were assessed using a 7-item scale ranging from “strongly disagree/dissatisfied” (1) to “strongly agree/satisfied” (7). Demographic variables were used as controlling variables because this research emphasized on employee attitudes.

A purposive sampling plan was used to distribute 200 survey questionnaires to employees in the organization. Of the total number, 130 (65 percent) usable survey questionnaires were returned to the researchers. Participants of this study answered the questionnaires based on their consents and a voluntary basis. Further, the Statistical Package for Social Science (SPSS/PC+ version 23.0) was used to analyze the survey questionnaire data and test the research hypotheses.

FINDINGS

Most respondents were female (58 percent), age from 25 to 34 years old (55 percent), married employees (69 percent), held Malaysian Certificate of Education (37 percent), supporting staff (82 percent), working experiences from 6 to 10 years (29 percent), and monthly salary between Malaysia Ringgit, RM1000 to RM2499 (53 percent).

The factor analysis with varimax rotation and Kaiser-Mayer-Olkin test were done for 36 items, which represent four variables: PARTS, CONSS, JOBS and ORGC. The results of these tests showed that: first, all research variables exceeded the acceptable standard of Kaiser-Meyer-Olkin’s value of 0.6, and all research variables were significant in Bartlett’s test of sphericity. These results indicated that all variables met the acceptable measures of sampling adequacy. Second, the items for each research variable exceeded factor loadings of 0.40, and all research variables had eigenvalues larger than 1, indicating that the items which represent the variables and the variables met the acceptable measures of validity analysis (Hair, Anderson, Tatham & Black, 1998). Further, all research variables exceeded the acceptable standard of reliability analysis of 0.70, indicating that the variables had high internal consistency (Nunally & Bernstein, 1994). These results indicated that the measurement scale met the acceptable standard of validity and reliability analyses.

The variables had mean values are between 5.3 and 6.0, signifying that the level of PARTS, CONSS, JOBS and ORGC were ranging from high (4) to highest level (7). While, the correlation coefficients for the relationship between the independent variable (i.e., PARTS and CONSS) and the dependent variable (i.e., JOBS and ORGC) were less than 0.90, indicating the data were not affected by serious collinearity problem (Hair et al., 1998). Further, the reliability values for all variables were 1, indicating the variables met the standard of reliability analysis (Hair et al., 1998).

Table 1 shows that the inclusion of PARTS and CONSS in the analysis had explained 74 percent in the variance of JOBS. This result indicates that it provides strong support for the model (Cohen, 1988). Further, the results of testing the hypotheses displayed that PARTS and CONSS were found to be significant predictors of JOBS ($\beta=.64$, $p<0.001$; $\beta=.64$, $p<0.001$, respectively), therefore H1 and H2 were supported. This result confirms that PARTS and CONSS act as an important predictor of JOBS in the organizational sample.
“Towards Economic Stability and Sustainability: Economics, Management, and Accounting Perspectives”

Table 1 Results of testing H1 and H2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent Variable (JOBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>PARTS</td>
<td>0.64***</td>
</tr>
<tr>
<td>CONSS</td>
<td>0.42***</td>
</tr>
<tr>
<td>R Adjust R Square</td>
<td>0.74</td>
</tr>
<tr>
<td>R Square change</td>
<td>0.51</td>
</tr>
<tr>
<td>F</td>
<td>16.16***</td>
</tr>
<tr>
<td>F Δ R Square</td>
<td>57.51***</td>
</tr>
</tbody>
</table>

Note: Significant at **<0.01, ***p<0.001

Table 2 shows that the inclusion of PARTS and CONSS in the analysis had explained 55 percent in the variance of ORGC. This result indicates that it provides strong support for the model (Cohen, 1988). Further, the results of testing the hypotheses displayed that PARTS and CONSS were found to be significant predictors of JOBS ($\beta=.46$, $p<.001$; $\beta=.29$, $p<.001$, respectively), therefore H3 and H4 were supported. This result indicates that PARTS and CONSS act as an important predictor of ORGC in the organizational sample.

Table 2 Results of testing H3 and H4

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent Variable (ORGC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>PARTS</td>
<td>0.46***</td>
</tr>
<tr>
<td>CONSS</td>
<td>0.29***</td>
</tr>
<tr>
<td>R Adjust R Square</td>
<td>0.55</td>
</tr>
<tr>
<td>R square change</td>
<td>0.25</td>
</tr>
<tr>
<td>F</td>
<td>5.67***</td>
</tr>
<tr>
<td>F Δ R Square</td>
<td>18.99***</td>
</tr>
</tbody>
</table>

Note: Significant at **<0.01, ***p<0.001

**DISCUSSION AND IMPLICATION**

This study shows that PBLP and CONSS act as an important predictor of personal outcomes. In the context of the study, leaders have used people based leadership to manage followers in order to accomplish strategic business vision and missions as outlined by their stakeholders. Majority participants view that the levels of PBLP, CONSS, JOBS and ORGC are high. This situation explains that leaders have sufficient capabilities to carry out PBLP and CONSS in executing daily job and this may lead to higher JOBS and ORGC in the organization.

This study provides three major implications: theoretical contribution, robustness of research methodology, and contribution to practitioners. In terms of theoretical contribution, this study reveals that ability of leaders to appropriately implement PBLP and CONSS in performing day to day job operation may lead to greater JOBS and ORGC in the organization. This result is consistent with studies done by Yousef (2000), Yiing and Ahmad (2009), Tabbodi (2009), and Ismail, Zainuddin and Ibrahim (2010).
With respect to the robustness of research methodology, the survey questionnaire data have met the acceptable standards of validity and reliability analyses, this may lead to produced accurate and reliable findings. Regarding to practical contribution, the findings of this study can be used as guidelines by practitioners to improve the leadership behavior in organizations. In order to perform this objective, top management should pay more attention of the following aspects: first, promotion criteria for management positions should be revised in order to recognize employees who have good academic qualifications, management skills, service records, proactive personalities and good moral values. Second, performance pay rises for excellent management employees should be upgraded in order to appreciate their efforts in developing and facilitating followers to achieve key performance indicators. Third, leadership development program curriculum should be updated according to current organizational transformation strategies and goals. For example, the content of development program should focus on equipping leaders with necessary knowledge, up to date skills, latest cognitive and emotional abilities, positive attitudes and other capabilities needed in present organizations. Hence, interactive development methods, such as team building, soft skills and case studies should be well organized to enable leaders mastering the learning content and apply it to solve problems in the real workplace. Four, the type, level and/or amount of reward should be increased in order to help employees fulfill basic necessities and decrease their financial burdens. If these suggestions are given attention this may motivate followers to realize their stakeholders’ needs and expectations.

CONCLUSION
This study shows that PARTS and CONSS are important predictor of JOBS and ORGC in the organizational sample. This finding also has supported and broadened previous studies mostly published in Western countries. Therefore, the current research and practice in workplace leadership need to consider PARTS and CONSS as crucial elements of PBLP thrust. The results of this study further suggest that the capability of leaders to appropriately implement people based leadership in performing daily job may strongly enhance positive employee outcomes (e.g., satisfaction, commitment, performance and service quality). Thus, these positive outcomes may lead to maintaining and enhancing the organizational competitiveness and performance in an era of globalization and borderless world. The above conclusion should cautious with several limitations of this study. First, a cross-sectional research design used in this study has not explained detail causal relationships amongst sub-samples within the sample of this study. Second, potential respondent characteristics are included in testing the relationship between the independent variable and the dependent variable. Third, this study has not assessed the relationship between dimensions for the independent variable and the dependent variable. Four, response bias cannot be escaped because the participants’ answers are often affected by their personal judgements and emotions. Lastly, survey questionnaire data taken from a purposive sampling plan are only able to represent general perceptions of certain participant characteristics in the organization. These limitations may decrease the ability to generalize the results of this study to other organizational settings.
REFERENCES


DETERMINANTS OF HOUSEHOLD POVERTY AMONG FEMALE HEADED-HOUSEHOLDS IN GERBANGKERTOSUSILA PLUS REGION, INDONESIA

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ABSTRACT

Poverty is a problem often faced by developing countries. Multidimensional factors make poverty a complex issue. The factors such as economic, social, demographic variables and location influences household poverty. The aim of this study is to analyse the influence of household characteristics on poverty status of households headed by female in Gerbangkertosusila Plus Region in Indonesia. This study uses cross sectional data from 12 districts/cities in Gerbangkertosusila Plus Region. Data is obtained from the National Socio-Economic Survey (SUSENAS) for the year 2014. This study uses logistic regression method to examine binary dependent variable. Based on the regression analysis, all of the independent variables used in this model significantly influences poverty status of female headed-households simultaneously. Then partially, variable of household size, employment status of household head and location of household living is significant and positively influence poverty status of female headed-households in Gerbangkertosusila Plus Region. While, the variable age of household head and education of household head does not significant influence poverty status of female headed-households in Gerbangkertosusila Plus Region.

Keywords: Poverty status, household poverty, female headed-households, logistic regression
SUSTAINABLE FOREIGN DIRECT INVESTMENT: THE DETERMINANTS

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ABSTRACT

Foreign Direct Investment (FDI) is one of the economic indicators of a country. Having a sustainable FDI would lead to a sustainable economy. To sustain the FDI, its determinants and how those determinants affect the FDI must be known and analyzed carefully before taking any actions or making any decisions or policies. Different from previous studies, this paper examined the impact of tertiary education, natural environment in terms of carbon dioxide emissions (CO2 emissions), population, natural resources rents and infrastructure in terms of patent applications by residents on the inflows of FDI. We used annual time series data from 1984 to 2013 from Malaysia Department of Statistics and Data Bank of The World Bank Group using the least square regression and Granger causality analyses. The findings show that carbon dioxide, gross enrollment ratio of tertiary education, infrastructure, and population give positive impact to FDI, even though only carbon dioxide has significant relationship. Meanwhile, total natural resources rents have no relationship with FDI. The result suggests that Malaysia should improve the level of education and infrastructure in order to sustain the inflows of FDI.

Keywords: Foreign Direct Investment, tertiary education, carbon dioxide emissions
ENTREPRENEURIAL ORIENTATION AND MARKET ORIENTATION ON PERFORMANCE: THE ROLE OF SOCIAL MEDIA USAGE AMONG SMEs IN INDONESIA

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ABSTRACT

Social media is becoming an effective tool in business operations, however many studies explore social media from the perspective of marketing strategy. In many industries, most SMEs are highly engaged in social media and being the majority that forms the industry, SMEs are predominantly shaping the competitive landscape. From the perspective of dynamic capability theory in competitive market, social media element is becoming a concern for many researchers. Besides entrepreneurial orientation and marketing orientation that are extensively discussed in SMEs performance studies, many researchers are also looking into social media related abilities that may be strategically positioned to support SMEs performance. To address this issue, the purpose of this study is to investigate the effect of entrepreneurial orientation (EO) and market orientation (MO) on SME’s performance and the role of social media usage as moderating variable within the context of dynamic market. This paper presents the conceptual framework and preliminary findings that can be used to explore the workings of a dynamic business environment. The paper will explicate the relationship between EO and MO constructs with SME’s performance taking into consideration the plausible moderation of social media usage in developing countries context such as Indonesia.

Keywords: Entrepreneurial orientation, market capability, SME’s performance, environment factors and social media usage
MAKE OR BUY DECISION AND THE CHOICE OF TECHNOLOGY IN OLIGOPOLY COMPETITION

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ABSTRACT

Conventional wisdom suggests that the sourcing decision may simply be a matter of comparing internal production costs with the prices charged by external suppliers and choosing the least costly alternative. However, the make-or-buy decision can be far more complex in practice. This paper focuses on the strategic considerations that can influence firm's sourcing decisions, demonstrating that these considerations influence the choice of supplier's production technology. This paper demonstrates that a rival's reliance on a supplier may prompt a firm to produce input internally rather than to outsource to the same supplier even when the internal production is more costly than outsourcing. Firm's preference to produce input internally arises because it can induce the supplier to choose a less advanced technology. The supplier's choice of less advanced technology provides the firm with more competitive advantage. With the less advanced technology, the higher marginal cost of production leads to the higher price of input to the rival. This paper also shows that the production industry is inefficient, because the least-cost producer of the inputs does not supply the critical inputs in equilibrium.

Keywords: Make-Or-Buy Decision, Technology Choice, Strategic Considerations
ENTREPRENEURIAL PROPENSITY: A FIELD STUDY ON MALAYSIAN UNIVERSITY STUDENTS

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ABSTRACT

The study of entrepreneurial propensity among UKM students is carried out with the aim of identifying the level of entrepreneurship propensity among the students as well as the factors that contribute toward that. This study is important because the entrepreneurship propensity is the starting point for them to become entrepreneurs after graduating. Additionally, UKM policy now require all of its students to take Entrepreneurship and Innovation course that has been introduced since few years ago. A total of 310 students from various faculties and years of study have been selected as sample surveys. From literature studies, 4 main constructs have been selected as factors that might have a relationship with entrepreneurial propensity. These constructs are entrepreneurial motivation, self-confidence, perceptions of entrepreneurship knowledge, and perceptions of entrepreneurial opportunities and support. The entrepreneurial propensity is measured using the Likert-scale 1 to 5 where the higher the score is obtained, the higher the respondents tend to become entrepreneurs. T-test, ANOVA and Correlation were used to answer both the objectives of the study. The findings reveal that the level of entrepreneurial propensity among students is at a moderate level. The average entrepreneurial propensity score does not differ significantly for almost all respondents' profile variables except for past experience in business activities and faculty where they are studying. The propensity score was high among students who had experienced in business with significantly higher than those with no business experience, while the students from Faculty of Economics Management and Faculty of Science and Information Technology both scored significantly higher than students from other faculties. As for factors, motivation and self-confidence factors have a stronger positive relationship with the propensity of entrepreneurship as compared to entrepreneurship knowledge and perceptions of opportunities and support.

Keywords: Entrepreneurial Propensity, Motivation, Self-confidence, Perceived opportunities and support, Perceived entrepreneurship knowledge
THE MODERATING EFFECT OF MANAGERS’ COMMITMENT ON MANAGEMENT CONTROL SYSTEMS AND MANAGERIAL PERFORMANCE IN MALAYSIA ZAKAT INSTITUTIONS

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ABSTRACT

This study was undertaken to understand the design of Management Control Systems (MCS) in Malaysian Zakat Institutions (ZI). Three elements of MCS studied include action & output controls and personnel controls. It is proposed that employees’ commitment, namely affective and normative commitment will have an effect on the relationship between the MCS design choices and managers’ performance. Questionnaires were administered to middle managers of Zakat Institutions operating in Malaysia. Moderated regression analysis was utilized to test the hypotheses. The findings indicate that normative organizational commitment moderates the relationship between personnel controls and managerial performance. Affective organizational commitment however, did not moderate the relationship between action and output control and managerial performance. The findings of this study provide insights into the MCS design in a religious-based non-profit organization. It extends the MCS literature on the role of informal control particularly personnel control and contribute to our understanding on the effect of organizational commitment on MCS and managerial performance relationship.

Keywords: Management Control Systems; Organizational Commitment; Zakat Institutions; Malaysia
CONTROLLING SHAREHOLDERS’ NETWORKS AND RELATED PARTY TRANSACTIONS: MODERATING ROLE OF DIRECTOR REMUNERATION IN MALAYSIA

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ABSTRACT

Past research suggested that controlling shareholders opportunistically use their power to transfer firm’s resources to the benefit of their own firms through related-party transactions (RPT). The controlling shareholders also can use their network via proxy and multiple-directorship to execute RPT. The opportunistic behaviour can lead to reduce minority shareholder wealth and increase agency costs. As directors are rewarded with compensations, this study argues that the director remuneration could be effective to minimize the agency conflict. Thus this study examines the impact of remuneration as a moderator of the relationship between controlling shareholder’s proxy and multiple directorships, and RPT. The hypotheses are tested by using a sample consists of 622 listed companies in Malaysian over the period 2012-2014 with a total of 1,866 observations. Controlling shareholder’s proxy and controlling shareholder's multi-directorship are found positive associated with RPTs. However, the results show director remuneration package is significant to moderate RPT engagement by the controlling shareholders via the proxy and multiple-directorship. This evidence suggests that the director remuneration is effective monitoring costs to reduce the abusive RPT engagement by the opportunistic controlling shareholders via their networking, proxy and multiple-directorship. These findings raise concerns to the regulators and policy makers, specifically the firm’s remuneration committee, the importance of determining the attractive compensation packages for the directors. In contrast, the controlling shareholders may utilize their posts, power, position and networks opportunistically to expropriate firm resources to compensate the non-attractive remuneration.

Keywords: Controlling shareholder, proxy, multiple directorship, related party transactions, director remuneration
FINANCIAL PROFITABILITY AND ENVIRONMENTAL SUSTAINABILITY OF MALAYSIAN SHARIAH-COMPLIANT PALM OIL COMPANIES

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ABSTRACT

As the second largest palm oil producer in the world, Malaysian palm oil contributes 30.1% of world production in 2016 but this industry has been criticized for the environmental issues such as deforestation and open burning. Regarding to these issues, palm oil companies are pressured by stakeholders to operate and produce sustainably. Hence, Certified Sustainable Palm Oil (CSPO) certification has been introduced as a guarantee to more sustainable operation and production as encouraged by United Nations’ Sustainable Development Goals (Goal 12). The most practiced certifications of CSPO in Malaysia are Roundtable on Sustainable Palm Oil (RSPO) certification and Malaysian Sustainable Palm Oil (MSPO) certification. In the context of Malaysia, more than 80% of listed palm oil companies are shariah-compliant. However, the number of companies which subscribed to CSPO is relatively low due to the additional cost, which then could affect firm profitability. As shariah-compliant companies, the preservation of environment and life should be the main priorities. Hence, the main concern of the companies is how to remain profitable yet sustainable if they subscribe to CSPO. Therefore, this study aims to examine the effect of the CSPO certifications toward financial profitability of 32 shariah-compliant palm oil companies in Bursa Malaysia from 2009-2015. The finding shows that CSPO is significant to give higher profits to the member companies as compared to a non-member. Thus, sustainable certifications matter for the shariah-compliant palm oil companies in respect of their financial profitability, meeting the shariah requirements and encourage the non-member companies to subscribe to the most applicable CSPO that benefit more their profitability.

Keywords: CSPO; Malaysia; MSPO; palm oil; profitability; RSPO; sustainability
THE GOVERNMENT REVENUE AND GOVERNMENT EXPENDITURE NEXUS: EMPIRICAL EVIDENCE FROM MALAYSIA

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ABSTRACT

This study examines a potential government revenue and government expenditure nexus accounting for possible asymmetric process either in the long- or short-run in Malaysia. To achieve the objective, this paper uses annually time series data namely government expenditure and revenue covering the period 1976 to 2015. Using Nonlinear Autoregressive Distributed Lagged model, the findings show the presence of asymmetries relationship between government revenues and expenditure in Malaysia in Model 1 but not in Model 2. The findings support tax-spend hypothesis that indicates the government or policy makers in Malaysia implements hard and soft budget constraint strategies in fiscal policy. Mix budget constraint strategies had been implemented in Malaysia that appropriate with current economic situation. In other words, the Malaysian Government practices budget surplus and budget deficit in the long-term. The findings are important to the policy makers to prepare and plan the strategies for fiscal reform in the future to ensure the fiscal sustainability and to promote economic growth.

Keywords: government revenue, government expenditure, asymmetric process, Nonlinear Autoregressive Distributed Lagged model
THE EFFECTS OF FISCAL POLICY SHOCKS ON PRIVATE EXPENDITURE: A PANEL VAR STUDY FROM SELECTED DEVELOPING COUNTRIES

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ABSTRACT

This paper aims to examine the effect of fiscal policy shocks on private expenditure. Fiscal variables are identified using the composition of government expenditure, namely defense, economic, and social expenditure. The study employs a panel VAR methodology by combining both data, i.e. the cross-sectional data covering 60 developing countries and the time-series data spanning from 1990 to 2012. The main results showed that a positive shock of defense expenditure lead to crowding out on private expenditure and domestic income. Meanwhile, the economic and social expenditure have a crowding in effect upon private consumption and domestic income. These findings indicate that defense expenditure is a non-productive expenditure, while economic and social expenditure are classified as productive expenditure to increase an economic activity. The policy implication from this study has suggested that the government should precisely spending on productive sectors and try to minimize spending on unproductive sectors in maximizing the overall impact of fiscal policy on economic growth.

Keywords: Fiscal policy, PVAR model, crowding out effect, unproductive expenditure
THE DETERMINANT OF MSME READINESS ON THE IMPLEMENTATION OF MSME ACCOUNTING STANDARD

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ABSTRACT

To support Micro, Small and Medium Enterprise (MSME) in achieving bankable level, Indonesian Financial Accounting Standards Board (DSAK) has approved the Exposure Draft – Accounting Standards of Micro, Small and Medium Enterprises (ED SAK EMKM) to be Financial Accounting Standards of Micro, Small and Medium Enterprises (SAK EMKM) on 24 October 2016. The standard has to be implemented by 1 January 2018. Since the implementation of new standards trigger many aspects to investigate, this research attempt to examine the determinant of MSME readiness on the implementation of the standard: human resources management, infrastructure, owner commitment on the implementation of standard, manager’s educational background, and company size. Using logistic regression analysis, the result found that only human resource management and organizational commitment do affect MSMEs readiness on the implementation of MSME accounting standard.

Keywords: MSME, bankable level, Indonesian MSME Accounting Standard (ED SAK EMKM), MSME readiness
THE PRICING SYSTEM OF CORN AND SOYBEANS IN THE TRADITIONAL MARKETS

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Heny K Daryanto  
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ABSTRACT

This study aimed to analyze the pricing of corn and soybeans at the consumer level by using the Vector Error Correction Model and to analyze the market behavior in East Jakarta in determining consumer prices by using the game theory. The results showed that corn prices at the consumer level are positively influenced by producer price, wholesale price, as well as gasoline price shocks and are also negatively affected by supply shocks. Soybean prices at the consumer level are negatively influenced by producer price shocks and are positively affected by wholesale price shocks. Shocks in terms of supply result in the fluctuating prices received by the consumers. This happens due to the dominant pricing strategy, which is through collusion performed by the corn and soybean retailers.

Keywords: game theory, corn, soybeans, VECM
THE EFFECT OF THE SOCIOECONOMIC FACTORS AGAINST ABILITY TO SAVE FOR FARMERS IN DISTRICT DELI SERDANG

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ABSTRACT

The ability of farmers in the context of economic life in the village varies greatly and tends to be in a very weak position especially in terms of saving ability. This study aims to determine the influence of socioeconomic factors on the ability to save, the pull factors and push factors for farmers to save and source of funds saving the farmers. Determination of the sample was by snowball sampling method.

The results showed that simultaneous social factors: the number of dependents, education, experience and age of farmers significantly affect the ability to save. While the partial number of dependents and experience significantly affect the ability to save, while the education and age of farmers have no significant effect on the ability to save. Simultaneously economic factors: land area, income, price and consumption significantly affect the ability to save. Partially consumption significantly affect the ability to save, while the area of land, income and prices have no significant effect on the ability to save. The pull factors of farmers to save include security, lowering, prizes, close to residence and familiar with bank officials. While the push factors that farmers to save, among others, the desire to change lives, sending children, expanding business, inventory of sudden needs and old age pension. Sources of farmers’ savings come from farm income, off-farm income and other family income.

Research recommends that farmers improve farming skills to better income so that the ability to save better. It is expected that farmers can utilize the existing financial institutions as much as possible for the purposes of farming.

Keywords: socio-economic factors, ability to save farmers
INTRODUCTION

Indonesia is an agricultural country where the sector still plays an important role in the overall national economy. This can be seen from the number of residents working in the agricultural sector (Daniel, 1999). The success of agricultural development will affect the national development, because the successful development of agriculture will improve the welfare of farmers and rural communities, which also means improving the living standard of Indonesian society (Mubyarto, 1999).

Farmers are the most important food producers in Indonesia, where according to Siswono Yudohusodo (2003) said that food is an essential human need for survival. Food should always be available in residential areas in sufficient quantities, of reasonable quality and medically safe for consumption. These factors are economically related to people's purchasing power, so food prices must be reachable by the people or consumers. Affordable food prices do not mean to be cheap, because such policies have proven to be causing many losses to farmers and national food security capabilities of the country. Food prices must benefit the producers, so farmers have an incentive to increase the production (Novita, 2015).

Indonesian people mostly have livelihood as farmers, but farmers only have a land area of less than one hectare. Even now the area of agricultural land is less than 0.2 hectares per head of family continues to increase and very ironic again there are also farmers who do not have land so that the farmers rent land (Soekartawi, 2004). If this continues, of course, Indonesia's agricultural capability will continue to decline and will enter food insecurity in the sense that dependence on imported food continues to increase.

The peasants themselves continue to be within the sphere of vicious circles, whose income conditions are very low. Automatic low income causes farmers to live in poverty. According Soerjono (1990), poverty can be interpreted as a condition that a person is not able to maintain themselves in accordance with the living standard of the group's life and also unable to utilize the mental and physical energy in the group. According to Mubyarto (1990), poverty can lead to changes in social and political status, the movement of human reason and their understanding of what is happening in the world. This situation causes the farmers' inability to save to improve their lives (Sugihen, 1999).

In the context of a person's ability to save, can be seen from two factors that influence social factors and economic factors, where these two factors affect each other. Low income makes farmers less have the ability to save. This is reasonable given the needs of high enough farmer families and the number of dependents is usually quite a lot so that income is only sufficient for everyday life. Then usually farmers who live in the village do their farming in accordance with their hereditary habits from their parents and difficult or reluctant to use new technology which in the end is difficult to increase the acceptance of farming (Saleh, 2004)

The ability to save farmers is influenced by various socio-economic factors. High low social factors such as the number of dependents, education level, experience and age of farmers allegedly affect the ability to save farmers (Pikiran Rakyat, 2012). Likewise, economic factors such as land area, income level, price and consumption level are also suspected to affect the ability to save. Therefore it is important to examine the influence of socio-economic factors on farmers’ saving ability and the factors of attraction and incentive of farmers to save.
Minister of Agriculture Bungaran Saragih once launched a conscious movement to save for farmers. Through this movement, KTNA will mobilize farmers' funds handed over to BRI in the form of agribusiness savings. The first priority is the farmers who are members of about 250,000 farmer groups with members reaching 25 million farmers. But the problem can be farmers save money with socioeconomic conditions are still apprehensive (Micro Finance, 2012).

The government has launched several saving movements such as the National Saving Savings Movement. Through Gemes Agribusiness, it is expected that farmers throughout Indonesia can have their own capital saved in BRI. Gemes also helps the government to overcome the burden of the budget that is felt very heavy. With Gemes Agribusiness farmers can capitalize their own agribusiness business, so the government felt helped to reduce the budget burden (Hanani, 2012).

Basically, all policies aimed at helping farmers are always welcomed by most farmers themselves. Moreover, saving, without moving the farmers will try to set aside some of his income to save in order to meet the needs of his family in the future or in difficult times, especially the needs of his children's school. However, farmers' saving ability is strongly influenced by socio-economic factors owned by farming families. In addition, the willingness of saving farmers can also be influenced by the pull factors coming from financial institutions where they save and the driving factors that come from farmers and their families (Faisal, 2005).
**RESEARCH METHODS**

The study is a case study that is implemented by looking directly at the problems that develop in the field (Arikunto, 2010). This research was done purposively (purposive) where the research was conducted in District Beringin Deli Serdang District where the majority of the population work as rice farmers.

The research population is all paddy farmers in Sidodadi Village Beringin District, amounting to 312 Head of Family and for research sample counted 30 farmers taken by purposive sampling. The method used to analyze the research problem is by using multiple regression linear function analysis and descriptively.

**RESULTS AND DISCUSSION**

Age of farmers who become the object of research dominated by farmers aged less than 55 years as much as 66.7%. The length of the experience of farmers average of 30 years. While the level of education of most graduates of primary school and junior high school as much as 80%. The average number of dependents is 4 to 5 persons per household.

<table>
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<th>t Stat</th>
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From the above test results can be made estimation models as:

\[ Y = 4.29 - 0.81X_1 - 0.32X_2 + 0.79X_3 + 0.94X_4 \]

It can be seen that \( F_{\text{count}} > F_{\text{table}} \) or \( \text{sig } F < \alpha (0.05) \), hence received H\( \text{a} \) and rejected H\( \text{0} \), meaning simultaneously variable of dependent number, children education, experience and age have real effect on saving ability at 95% confidence level. The coefficient of adjusted R square shows 0.54, meaning that the variation of the rise and fall of the variable saving ability is influenced by the variation of the rise and fall of dependent variable, children education, experience and age by 54%, while the remaining 46% is influenced by other variables not included in the research model. The estimation result explains that the elasticity of the dependent variable, children's education, experience and age to the saving ability is 0.6, meaning that the increase of saving is less equal to the increase of the dependent number, the education of children, the experience of law of decreasing returns to scale, dependent variable, education of children, experience and age increase 1% each, then savings increased 0.6%.
Partially, dependent variables have a negative effect on saving ability where its elasticity is -0.81, meaning if the number of dependents increases 1% (ceteris paribus), the saving ability will decrease by 0.81% and significantly influence the ability of saving at 95% confidence level. From interviews it is known that most farmers use income to meet family needs.

Educational variables negatively affect the ability to save because the elasticity of -0.32 which means if education rose 1% (ceteris paribus) then the ability to save will be reduced by 0.32%, but did not show a real effect on the level of confidence 95%. From the results of interviews with farmers obtained information that the high cost of education makes farmers do not have the ability to save for residual income after they are used to meet the daily needs are mostly used for the cost of school children.

While the experience of farming has a positive influence on the ability to save where the elasticity is 0.79 which means that if the experience increases 1% (ceteris paribus) then the ability to save will increase by 0.79% and have a real effect on the 95% confidence level. These results illustrate that more experienced farmers will have better skills in the management of their farms so that their production and income will be higher. For the results of the interviews note that farmers save after harvest, where the income is saved for the stock of capital stock in the next season.

The age factor has a positive effect on the ability of saving where the elasticity is 0.94 which means when the age increases 1% (ceteris paribus) the saving ability increases by 0.94%, but no significant effect on the 95% confidence level. The older the more aware that the ability to work is reduced so try to save for the needs of old age. The older the cost usually to meet the needs of the family the less because the dependents are reduced.

### Effect of Economic Factors on Farmers Saving Ability

The test results by using multiple regression linear function analysis obtained the following results:

**Table 2. The Results of Analysis Influence Economic Factors on Farmers’ Ability to Save**

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Coefficient</th>
<th>t_stat</th>
<th>P-Value</th>
<th>t_table</th>
<th>Sig F</th>
<th>F_table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Intercept</td>
<td>1.270</td>
<td>0.090</td>
<td>0.93</td>
<td>2.06</td>
<td>0.00</td>
<td>9.730</td>
</tr>
<tr>
<td>2.</td>
<td>Land area</td>
<td>0.004</td>
<td>0.002</td>
<td>1.00</td>
<td>2.06</td>
<td>0.63</td>
<td>2.62</td>
</tr>
<tr>
<td>3.</td>
<td>Income</td>
<td>1.130</td>
<td>0.630</td>
<td>0.53</td>
<td>2.06</td>
<td>0.90</td>
<td>2.62</td>
</tr>
<tr>
<td>4.</td>
<td>Price</td>
<td>2.620</td>
<td>0.480</td>
<td>0.63</td>
<td>2.06</td>
<td>0.90</td>
<td>2.62</td>
</tr>
<tr>
<td>5.</td>
<td>Consumption</td>
<td>-1.860</td>
<td>-3.970</td>
<td>0.00</td>
<td>2.06</td>
<td>0.00</td>
<td>2.62</td>
</tr>
<tr>
<td>6.</td>
<td>R Square</td>
<td>0.610</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Adj. R square</td>
<td>0.550</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Standard error</td>
<td>0.220</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the above test results can be made estimation models as:

\[ Y = 1.27 + 0.004X_1 + 1.13X_2 + 2.62X_3 - 1.86X_4 \]
It can be seen that Fcount > Ftable or sig F value (0.00) < α (0.05), then accept Ha and reject H0, meaning simultaneously variable of land area, income, price and consumption significantly influence to saving ability at 95% confidence level. The adjusted coefficient R square shows 0.55, meaning that the variation of the rise and fall of saving ability is influenced by the variation of the rise and fall of land area, income, price and consumption of farmers by 55%, while the remaining 45% is influenced by other variables not included in the research model. The estimation result explains that the elasticity of variable of land area, income, price and consumption to saving ability equal to 1.89, it means that the increase of saving is directly proportional to the increase of land area, income, price and consumption (law of increasing returns to scale) income, price and consumption of farmers increased by 1%, then savings increased by 1.89%.

Partially, the land area has a positive influence on the ability of saving where the elasticity is 0.004 which means if the land area increases 1% (ceteris paribus) then the saving ability increases by 0.004%, but the effect is not real at 95% confidence level. From the interviews obtained information that the average land area is only 0.71 hectares or smaller than one hectare. This means that if the land area increases then the ability to save will also increase. Thus in accordance with the results of the analysis that the area of land to contribute positively to the improvement of saving capability.

The income variable is positive influence to the variable of saving ability because its elasticity is 1.13 which means if the income increase 1% (ceteris paribus) then the saving ability will increase by 1.13% but based on the result of t test and P-value table test there is no real influence between income on the ability to save at a 95% confidence level. Interview results obtained information that the desire to save is actually very strong but very dependent on the income obtained by farmers.

Variable selling price of grain has a positive effect on the ability of saving where elasticity 2.62, meaning if experience increases 1% (ceteris paribus) then the ability to save will increase 2.62% but based on t test and P-value table test showed no real effect between the selling price grain on the ability to save at 95% confidence level. High low income farming is not only determined by the production but also determined by the selling price so as to contribute positively to the ability to save.

Consumption variable has a negative effect on the ability of saving where elasticity -1.86, meaning if the consumption of the family increased by 1% (ceteris paribus) then the ability to save is reduced 1.86%. But based on the results of the t-test and P-value table test where – t count <- t table or value P-value <value of α (0.05), then accept Ha and reject H0 which means real reversed, the upside between consumption to saving ability at 95% confidence level. Consumption is the most dominant factor in influencing the ability of saving, especially for farmer community whose majority of subsistence farming system and low income, so the consumption contribute negatively to the ability of saving.
Pulling Factors and Incentive for Farmers to Save

From the research results obtained information that there are several factors that make farmers interested to save as shown in the following table:

Table 3. Farmers Response Against Attractor Factors For Saving

<table>
<thead>
<tr>
<th>No.</th>
<th>Farmers Pulling Factors for Saving</th>
<th>Number of Samples (Person)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Secure</td>
<td>30</td>
<td>100.00</td>
</tr>
<tr>
<td>2.</td>
<td>Flowering</td>
<td>26</td>
<td>86.67</td>
</tr>
<tr>
<td>3.</td>
<td>The prize</td>
<td>20</td>
<td>66.67</td>
</tr>
<tr>
<td>4.</td>
<td>Close to Residence</td>
<td>21</td>
<td>70.00</td>
</tr>
<tr>
<td>5.</td>
<td>Familiar With The Officer</td>
<td>11</td>
<td>36.67</td>
</tr>
</tbody>
</table>

From the table shows that all the farmers stated that safety is the most attractive factor to save in the bank, because the security is more secure to save in the bank than outside the house, either from the danger of disaster such as fire, the danger of crime theft. The second pull factor is flowering, because according to the interview results in addition to safe saving in the bank is also flowering, so the amount of savings can be increased.

From the research result, it is found that besides pull factor there are also some driving factors that influence farmers to save as can be seen in the following table:

Table 4. Farmers’ Response to Saving Factors

<table>
<thead>
<tr>
<th>No.</th>
<th>Factors Driving Farmers Saving</th>
<th>Number of Samples (Person)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Desire to Change Life Better</td>
<td>25</td>
<td>83.33</td>
</tr>
<tr>
<td>2.</td>
<td>The Desire of Studying Children</td>
<td>28</td>
<td>93.33</td>
</tr>
<tr>
<td>3.</td>
<td>Desire to Expand Business</td>
<td>19</td>
<td>63.33</td>
</tr>
<tr>
<td>4.</td>
<td>Sudden Supplies Supplies</td>
<td>23</td>
<td>76.67</td>
</tr>
<tr>
<td>5.</td>
<td>Pension plan</td>
<td>17</td>
<td>56.67</td>
</tr>
</tbody>
</table>

From the table shows that the main driving factor to save is the desire to send their children to school, because according to the interview results obtained information that the child is the largest investment that is the obligation of parents. Therefore, farmers try to send their children as high as possible so that their children's lives better. By saving farmers hoping to teach their children to the higher levels of schooling. While the second driving factor is the desire of farmers to change lives to the better, because saving can improve the needs of primary and secondary. Besides saving and saving is the most realistic way to improve the lives of farmers.
CONCLUSION

Simultaneously, social factors have significant effect on farmers’ saving ability and partially the number of dependents and farming experiences have an effect on saving ability, while education and age have no significant effect on saving ability at 95% confidence level.

Simultaneously, economic factors have significant effect on saving ability, while partially consumption variable has significant effect on saving ability, but land area, income and price have no significant effect on saving ability at 95% confidence level. The pull factor for saving is the feeling of security, flowering, prizes, close to home and familiar with bank officials. While the driving factor for saving is the desire to change lives, send children, expand business, inventory of sudden needs and old age pension.

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2017