GLOBALIZATION AND GROSS DOMESTIC PRODUCT CONSTRUCTION IN ASEAN

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Abstract

There is no more doubt about the importance of economic growth, which can be calculated from Gross Domestic Product (GDP). This research analyzes the role of globalization on GDP in ASEAN-5 by estimating panel data. It uses a fixed effect approach to accommodate various characteristics in the countries. To accommodate such variation, it assumes that the intercepts varies across these countries, while the slopes remain similar. Based on the estimation result, it suggests thatnet export and foreign direct investment represent the globalization process. Both have positive and significant influences on GDP in the corresponding countries.

Keywords: Globalization, international trade, foreign direct investment, gross domestic product
JEL classification numbers: E01, F51, F43

Abstrak

Arti penting pertumbuhan ekonomi, yang bisa dihitung dari Produk Domestik Bruto (PDB), tidak diragukan lagi. Penelitian ini menganalisis peran globalisasi terhadap PDB di ASEAN-5 dengan menganalisis data panel. Penelitian ini menggunakan pendekatan *fixed effect* untuk mengakomodasi berbagai karakteristik di negara-negara yang dianalisis. Untuk mengakomodasi variasi tersebut, penelitian ini menganggap bahwa intersep-intersep dari negara-negara tersebut berbeda, sedangkan slopenya sama. Berdasarkan hasil analisis penelitian ini menunjukkan bahwa ekspor bersih dan investasi asing langsung mampu menjadi cerminan proses globalisasi. Keduanya memiliki pengaruh positif dan signifikan terhadap PDB di negara-negara yang diteliti.

Keywords: Globalisasi , perdagangan internasional, investasi asing langsung, produk domestik bruto
JEL classification numbers: E01, F51, F43

INTRODUCTION

One of main indicators in economic development is economic growth. Economic growth indicates the progress of economic activities in a certain year. Economic growth can be defined as the growth of a country's gross domestic product (*GDP*).

In an open economy, economic sector covers four sectors, namely corporate, household, government, and international. The use of production inputs by corporations will provide incomes to the household sector in terms of salaries and wages, rent, interest, and profit. Household and economy will utilize their income for transactions, such as purchasing goods and services produced by corporate sector which

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then be spent for goods and services produced domestically, paying tax on income to government, importing which means purchasing goods (commodity) produced by other countries, and saving the rest of income in a financial institution.

International trade is sometimes regarded as the engine of the growth in the context of an open economy. In this case, an open economy is about export, import, and foreign capital flow intake. This might work under the condition that the efficiency created by the free market is there. In this case, trade barrier should be minimized. A good paper on the international trade as an engine of growth is the one by Álvarez-Albelo et al. (2009).

Countries export and import goods and services. The interdependence among countries in the world has been growing for decades as shown by the fact that world trade has been growing faster. Based on International Trade Statistics 2009, the rate of *GDP* growth in the world is only 3.33% whereas export growth of commodity in the world is 6%.

International trade has played an important part in the strategy of economic development. This can be seen from its contribution to economic growth and economic stability. In addition to international trade, there has been a long phenomenon of capital inflow and capital outflow. This has been motivated by attempt to find location with lower cost of production.

Foreign Direct Investment (*FDI*) is considered as more effective ways to encourage economic growth in a country. Foreign Direct Investment involves investors directly in an operational exertion, so the exertion dynamics related to the policy of company determined objective which is going to be attained are not apart from foreign investor. By using *FDI*, foreign capital can provide better contribution into development process.

To boost economic growth, a country needs to invest on social overhead capital which are giant projects including highways, train rails, irrigation and weir project, and standard health facilities. All projects are capital intensive in nature, and usually should be conducted by the government.

Direct investment will increase job opportunity and alleviate unemployment which government has. The ability of foreign companies in using higher technology will cause their productivity getting higher as well.

External factor on current world economics points out contribution that is progressively significant to economics in developing a state. It relates with getting its open-ended economics universalize as well as to world economic as a whole economic area.

The world economy has been changing since 1970s to 2000s, with various basic or structural characteristic and long term inclinations. The progress has been characterized by a globalization. Globalization is characterized by enhancement and dependence among nations and people through trading, investment, journey, popularity, culture, and other kinds of interaction.

In many cases, globalization has a lot of similar characteristics with internationalization, and this term is often exchanged each other. Some parties often use the term of globalization which is related to the shrinkage of country's role or boundaries in the country (for further discussion on globalization, please see Antras and Helpman, 2004; Harrison et al., 2004; and Alfaro et al., 2010; among others).

When economic globalization becomes a reality, boundaries in a country will be vague. Economic globalization opens international markets, which opens new markets for exports. However, it also opens opportunity for global products to penetrate domestic markets.

Globalization has been the most discussed topic in the last two decades.

Globalization, which is a comprehensive economic integration, will show its form to the ASEAN countries in ASEAN Economic Societies.

According to WTO, there are about 200 available regional economic agreements in the world which run effectively until year 2006. International trade volume involved in regional economic agreement has comprised half of the total global trade (Bank of Indonesia, 2008).

These days, as the effect of globalization era, economy in a country will be more integrated with other countries. The economic integration degree varies from preferential trade arrangement, which might evolve into a free trade area, customs office alliance, joint market, and eventually an economic union.

Preferential Trade Arrangements is formed by countries agree to decrease barriers of trade among them, and differentiate it with everything put into effect toward foreign countries which are not members. An example for such scheme is the British Commonwealth Preference Scheme which was formed by British Kingdom. Its affiliation covers regions under its directory and some of them are ex - colonial territories.

Free Trade Area (FTA) is a form of high economic integration where all barriers of tariff and non tariff trade among member countries had been omitted utterly, however each member country deserves to decide whether they intend to maintain or omit the trade barriers implemented toward non – member foreign countries. The examples of such an FTA are European Free Trade Association (EFTA) which was established by England, Austria, Denmark, Norway, Portugal, Sweden, and Swiss in 1960, and. North American Free Trade Agreement (NAFTA) which was established by USA, Canada, and Mexico in 1993.

Furthermore, customs union compels all member countries to omit not only all kinds of trade among them, but also treat their trade policy the same as non member foreign countries. For example, European Union or which was known as European Common Market which was established in 1957 by West Germany, France, Italy, Belgium, Netherland and Luxemburg.

On the next stage, the economic integration became a common market. With this economic integration, not only commodity trade which are liberating, but also current of production factors such as labor and capital. On the highest level of economic integration, that is economic union, harmonization was carried out further, even by treating the monetary and fiscal policy of each member country the same. The example of this economic union is Benelux, which is economic union of Belgium, Netherland, and Luxemburg. In addition to that, the example of comprehensive economic and monetary union is United States of America.

Theoretically, economic integration pledges prosperity enhancement for those countries included, such as opening larger market access, encouragement in attaining efficiency and higher economy competitiveness, included bigger manpower absorption.

One of the existing economic integration is ASEAN. Lloyd and Smith (2004) had a notion that these globalization and regionalization process are general challenge for ASEAN Economy and ASEAN Area collectively. Based on ASEAN meeting on January 2007 in Cebu, Philippines (Bank of Indonesia, 2008), ASEAN chiefs agreed to accelerate an ambitious initiative to integrate their economy and build ASEAN Economic Community in 2015.

Establishment of a fully integrated economy (club) can change economy output distribution of countries engaged. It means, in a composite of integrated economy where the mobility of production factor does not have any barrier and technology utilization for production needs can be

said of one kind, so that segment of total output, total physical capital, and total human capital in a country are predicted to be identical.

Countries with small segment of output will have small proportion of capital stock (either physical or human capital) as well. Sturdier economic integration expected will result in international trade current and Foreign Direct Investment (*FDI*) are getting free and increase. Thereby, it is expected that international trade enhancement and *FDI* will be able to enhance national income or Gross Domestic Bruto (*GDP*) as the national income calculation in general. There are some researches to examine relationship possibility among international trade, *FDI*, and economic growth which are common.

History of world economy gave a guideline that there is a close relationship between export and economic growth. Therefore, many economists are convinced that international trade has important role in the development process in a country as a whole. Classic economists believed that development can be reached through what we called 'trade', as shown by experience in a number of developed countries have.

Adam Smith emphasized on the importance on international trade as event for surplus and as a plane of life in extending domestic markets, so it can improve division of labor and heighten productivity level in general. Robertson (1938) introduced concept of engine of growth which means high growth in a country as a central was brought into undeveloped areas surround through trades.

Athukorala (2003) in his research about *FDI* effect toward the economic growth with case study in Sri Lanka produced result that there was close relationship between *FDI* and economic growth in Sri Lanka.

Empirical results from Krisharianto and Hartono (2007) about the relationship among economic growth, international

trade, and foreign direct investment in Indonesia by using approximation method of granger causality and VAR, which resulted that relationship between export and economic growth was bi-directional causation which are growth driven export and export led growth, among *FDI*, international trade and economic growth was economic growth, international trade caused or impacted *FDI*.

Ahmed et al., (2008) researched on the role of Export, *FDI*, and Import toward development in Sub Saharan of African Countries by using approximation method of autoregressive distributed lag (ARDL), Pedroni Estimation and granger causality which was resulted that export and FDI have significant impact toward economic growth.

Jawas (2008) conducted a research about the impact of foreign investment and export toward economic growth in Moslem countries by using data panel model which resulted foreign investment variables which had negative impact but significant toward economic growth in Moslem countries. And then estimation result of export variable had positive and significant impact toward economic growth in the Moslem countries in 2004 – 2005.

Zhang (2007) investigate the link between foreign direct investment (FDI) and economic growth in developing countries, especially causal patterns of the two variables has. Although FDI is expected to boost host economic growth, it is shown that the extent to which FDI is growth-enhancing appears to depend on country-specific characteristics. Particularly, FDI tends to be more likely to promote economic growth when host countries adopt liberalized trade regime, improve education and thereby human capital conditions, encourage export-oriented FDI, and maintain macroeconomic stability.

Iqbal (2010) analyzed about causality relationship among *FDI*, trade, and economic growth in Pakistan by using causal-

ity and VECM approach, it was produced results of *FDI* and exports are two essential factors which added impacts from the economic growth.

Based on the explanation above, it was interesting to examine about the role of globalization which was represented from the influence of international trade and *FDI* toward the formation of *GDP* in ASEAN countries. If there is significant influence, policy in economic integration is necessary for supporting the enhancement of *GDP* formation.

METHODS

This research investigates the role of globalization in *GDP* formation in ASEAN countries. It conducts an empirical research on the ASEAN-5 (Indonesia, Malaysia, Singapore, Thailand, and Philippine) from 1990 to 2009, using secondary data from World Development Indicators.

The considered independent variables are net export and value of foreign direct investment representing globalization process, along with government expenditure and household consumption as controlling variables. The dependent variable is the GDP.

The following are definition of operational variables used: Gross Domestic Product is the amount of final commodity and service value produced by country's factors itself and foreigners live in the country; net export is from the whole export value in any sectors after being alleviated by import in the economy of a country, in other words, net export is the real export value which stated in million of USD; Foreign Direct Investment is a whole Foreign Direct Investment invested intake into ASEAN-5; Government Expenditure is all kinds of government expenditure involve routine expenditure and development expenditure; and household consumption is an expenditure value or expenditure which is committed by households to buy all kinds of daily needs in a certain year.

The exertion to answer questions about problem formula of this research, researchers used Data Panel method. This method combined cross sector observation and (stretches of) time, so the amount of observation was getting increased. Estimation of data panel will enhance degree of freedom, alleviate co linearity among variables (in getting clear) and reform estimation efficiency.

To be able to formulate empirical model, *GDP* for the next year (*Y**) is the function of household consumption, *FDI*, government expenditure, and net export at present. So, *GDP* in the next year is formulated on this following equation:

$$Y_{it}^* = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it}$$
$$+\beta_4 X_{4it} + e_{it}. \tag{1}$$

By using partial adjustment model (PAM) to formulate *Y**, because there is one period of lag, so the equity is written as follows:

$$Y_{it} - Y_{it-1} = \lambda(Y_{it}^* - Y_{it-1}). \tag{2}$$

$$Y_{it} = \lambda(Y_{it}^* - Y_{it-1}) + Y_{it-1} \tag{3}$$

$$Y_{it} = \lambda Y_{it}^* + (1 - \lambda)Y_{it-1} \tag{4}$$

where λ is an adjustment value which has value from $0 < \lambda < 1$. By substituting the equity (1) into equity (4), the equation turns into:

$$Y_{it} = \lambda(\beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e_{it}) + (1 - \lambda)Y_{it} - 1 \tag{5}$$

$$Y_{it} = \lambda\beta_0 + \lambda\beta_1 X_{1it} + \lambda\beta_2 X_{2it} + \lambda\beta_3 X_{3it} + \lambda\beta_4 X_{4it} + \lambda e_{it} + (1 - \lambda)Y_{it} - 1 \tag{6}$$

If $\alpha_0 = \lambda\beta_0$; $\alpha_1 = \lambda\beta_1$; $\alpha_2 = \lambda\beta_2$; $\alpha_3 = \lambda\beta_3$; $\alpha_4 = \lambda\beta_4$; $\alpha_5 = (1 - \lambda)$ *and* $\lambda eit = v_{it}$.

Equation (6) is the *GDP* empirical equation and by using regression model in the form of log, it can be written as follows:

$$ln\, Y_{it} = \alpha_0 + \alpha_1\, ln\, X_{1it} + \alpha_2\, ln\, X_{2it} +$$
$$\alpha_3\, ln\, X_{3it} + \alpha_4\, ln\, X_{4it} +$$
$$\alpha_5\, ln\, Y_{it-1} + v_{it} \qquad (7)$$

where, Y = gross domestic product; X_1 = household consumption; X_2 = foreign direct investment; X_3 = government expenditure; X_4 = net export; i = country; and t = period of time.

There are two basic approaches used to analyze the panel data. First, Fixed Effect approach, which is a technique used to estimate panel data by using dummy variable to seize the difference of intercept. Secondly, Random Effect approach, which is panel data estimation where the residual is related to each other (time and individual). Before the model is estimated by using the proper model, it is necessary to give specification test, whether Fixed Effect or Random Effect or both which is going to give the same result. The option between Fixed Effect and Random Effect is going to be determined by using Hausman's test.

The stipulation of Hausman's test is if the statistical value of Hausman is bigger than its critical value, the proper model is Fixed Effect model, on the contrary, if the statistic value of Hausman is smaller than its critical value, the proper model is going to be Random Effect.

The significance test in this research was committed partially and simultaneously. Partially, it was committed t test, and simultaneously it was committed F test.

The t test is used to know whether each dependent variable has significant influence partially toward independent variable. If t stat test > t table or –t stat < -t table, the result is going to be significant and it means that H_0 is refused and H_1 is accepted. Whereas, if t stat < t table or –t stat > -t table, the result is not going to be sig-

nificant and it means that H_0 is accpeted and H_1 is refused.

F test or model testing is used to know whether the result of the analysis is going to be significant or not, on the other words, the inferred model is going to be proper or not. If the result is significant, H_0 is going to be refused and H_1 is accepted. If the result is not significant, H_0 is accepted and H_1 is refused. It can be said as follows: H_0 is refused if F stat > F table; H_0 is accepted if F stat < F table.

RESULTS DISCUSSION

The formation of ASEAN was based on the consideration that South East Asian countries had main responsibility to strengthen the stability of economy and social in the area and warrant the reconciliation and national development progression of each member. In addition to that, it was bent on warranting the stability and safety to face the intervention from outside in any kind or maintaining the national personality of member country according to the people's ideas and aspiration.

The cooperation of ASEAN is in the ways of trade expansion, product exchange, and project allocation. The main proportion is introducing the economy condition and enhancing national economic growth by using superiority on grand scale of production and superiority because of the different location, so it can give raw material, skill, and other different resources.

On the economic sector, it was agreed that cooperation on economy is necessary to be prioritized into other consolidations intake, because economic sector is the weakest part related to the condition of each ASEAN country. On the economic sector, it was agreed to perform cooperation on commodities, especially food and energy, cooperation on trade sector, collective approach toward other economic problems and also apparatus in economic sectors.
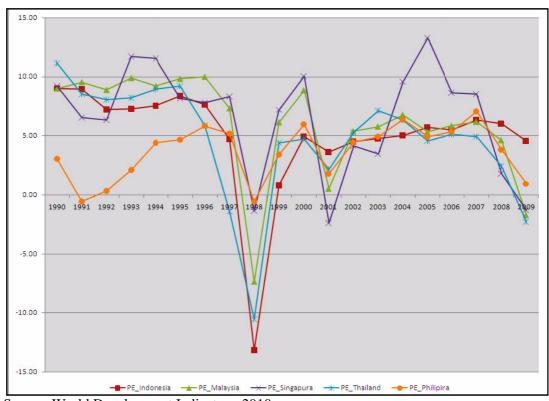
As one unity of area, ASEAN promised big potential of economy. Based on the Information of Bank of Indonesia (2008), total amount of population reached 567,6 million people (compared to European Union which rising 500 million of people), and total *GDP* reached USD 1,1 trillion, ASEAN passed word on big potential of market. The economic growth of ASEAN-5 (Indonesia, Malaysia, Singapore, Thailand, and Philippine) can be shown on Figure 1.

In general, the fluctuation of economic growth in ASEAN-5 in the year of 1990-2009 was relatively the constant. In 1998, all ASEAN-5 experienced decreasing economic growth because in that year Asian countries got crisis which came from the fall of Thailand Baht, and followed by Philippine Peso, Malaysian Ringgit, Indonesian Rupiah, and even Singapore Dollar. And it was influenced on the economic growth in those countries, from those countries, Indonesia had the biggest descent

which decreased 13.13%, Thailand 10.51%, Malaysia 7.36%, and Singapore was only 1.38%.

In the year of 2008 and 2009, the ASEAN-5 also experienced the decreasing economic growth. It was an influence of monetary crisis in USA which came from the case of failed in payment of KPR (Credit of House Proprietary) or known as the term of Subprime Mortgage. Monetary crisis in USA, number one performer of world economy today, has influence on many sectors and involves many countries included Indonesia.

The flaming of global monetary market because of the continuation effect of subprime mortgage crisis caused global investors made re-estimation toward its investment risk profile. Fund withdrawing from the investment of financial market in developing countries considered as the fully risk one was getting higher, so it caused oppression toward currencies in most developing countries.

Source: World Development Indicators, 2010.
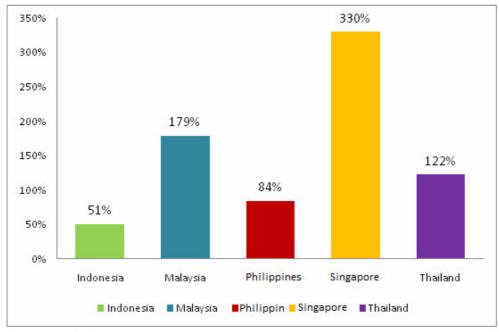
Figure 1: Economic Growth in ASEAN-5

In addition to that, the fund withdrawing of global investors was an exertion to cover the loss from the investment in financial market of advanced country which was getting fall incisively. So it also had influence on economic growth in a country. However, the influence toward the economic growth in Indonesia was not exceedingly in serious condition as happened in 1998. Several depictions which showed that in this globalization era, the condition of other countries will give influence to other countries because there is economic relationship among countries.

In addition to that, total segment of trade toward *GDP* of each ASEAN-5 was also high, which showed how active this area was in this international trade. How far the role of foreign trade is can be seen from the ratio of export plus import toward *GDP*. The export segment plus import in *GDP* of ASEAN-5 can be shown on Figure 2.

Based on Figure 2, it can be known that the biggest segment of export and import among the ASEAN-5 is Singapore with 330%, and then followed by Malaysia 179%, Thailand 122%, Philippine 84%, and Indonesia 51%.

From the side of international capital flow, the ASEAN-5 regions were also considered as the interesting ones, as shown from the *FDI* flow intake which was tended to increase from year to year. It also showed the rate of potential of ASEAN-5 as production base. The condition of *FDI* in the ASEAN-5 can be seen in Table 1.

The measurement on the rate of influence on each variable toward *GDP* (*Y*) in the ASEAN-5, it was committed analysis of panel data by using Fixed Effect approach. This model was chosen because of characteristic in each country is obviously different, so it was assumed that intercept is differ among the countries, whereas the slope is going to be the same among the countries. The act of determining this approach was also committed with Hausman's test, with statistical value of Hausman is 226, 9371; whereas the critical value of chi-squares with $df = 5$ on $\alpha = 5\%$, it was gotten 11, 0705. According to the stipulation of Hausman's test, it was gotten that the proper model to the analysis was Fixed Effect model than Random Effect. The model of analysis result of each country can be interpreted on Table 2.

Source: Swindi (2009).

Figure 2: Segments of Export and Import in GDP of ASEAN-5

Table 1: The Value of Foreign Direct Investment, Net Inflows (BoP, current US$) in the ASEAN-5

Country	1990 - 1995	1996 – 2001	2002 - 2007	2008	2009
Indonesia	2,135,166,667	206,138,649	3,603,863,856	9,318,453,650	4,877,369,178
Malaysia	4,173,324,152	3,435,862,241	4,799,448,346	7,375,907,983	1,609,310,000
Singapore	6,239,653,404	13,149,636,627	19,943,667,558	10,911,744,559	16,808,767,745
Thailand	1,968,162,637	4,680,205,520	7,211,068,037	8,570,117,257	5,955,595,700
Philippine	934,833,333	1,451,333,333	1,735,333,333	1,544,000,000	1,948,000,000

Source: World Development Indicators, 2010.

Table 2: Formation Model of GDP in theASEAN -5

Country	Estimation Result
Indonesia	$\ln Y = 1.7133 + 0.7171 \ln X_1 + 0.0253 \ln X_2 + 0.0802 \ln X_3 + 0.0130 \ln X_4 + 0.1269 \ln Y_{t-1}$
Malaysia	$\ln Y = 1.8190 + 0.7171 \ln X_1 + 0.0253 \ln X_2 + 0.0802 \ln X_3 + 0.0130 \ln X_4 + 0.1269 \ln Y_{t-1}$
Singapore	$\ln Y = 1.8230 + 0.7171 \ln X_1 + 0.0253 \ln X_2 + 0.0802 \ln X_3 + 0.0130 \ln X_4 + 0.1269 \ln Y_{t-1}$
Thailand	$\ln Y = 1.6715 + 0.7171 \ln X_1 + 0.0253 \ln X_2 + 0.0802 \ln X_3 + 0.0130 \ln X_4 + 0.1269 \ln Y_{t-1}$
Philippine	$\ln Y = 1.5699 + 0.7171 \ln X_1 + 0.0253 \ln X_2 + 0.0802 \ln X_3 + 0.0130 \ln X_4 + 0.1269 \ln Y_{t-1}$

Source: Data estimation.

Based on Table 2, it can be shown that the constant value for Indonesia = 1,7133 which means *GDP* ($\ln Y$) in Indonesia is 1,7133% when consumption ($\ln X_1$), *FDI* ($\ln X_2$), Government Expenditure ($\ln X_3$) and the net export ($\ln X_4$) equal zero. The constant value for Malaysia is 1.8190 which means *GDP* ($\ln Y$) in Malaysia is 1,8190% when consumption ($\ln X_1$), *FDI* ($\ln X_2$), Government Expenditure ($\ln X_3$) and the net export ($\ln X_4$) equal zero. The constant value for Singapore is 1,8230 which means *GDP* ($\ln Y$) in Singapore is 1,8230% when consumption ($\ln X_1$), *FDI* ($\ln X_2$), Government Expenditure ($\ln X_3$) and the net export ($\ln X_4$) equal zero.

The constant value for Thailand is 1,6715 which means *GDP* ($\ln Y$) in Thailand is 1,6715% when consumption ($\ln X_1$), *FDI* ($\ln X_2$), Government Expenditure ($\ln X_3$) and the net export ($\ln X_4$) equal zero. The constant value for Philippine is 1,5699 which means *GDP* ($\ln$) in Philippine is 1,5699% when consumption ($\ln X_1$), *FDI* ($\ln X_2$), Government Expenditure ($\ln X_3$) and the net export ($\ln X_4$) equal zero.

The difference of constant value of each country indicates that there is difference on input factors of each country. Out from labor and capital, there was a factor which is known as Total Factor Productivity (*TFP*) which influenced the economic growth. In other words, total *TFP* explained the role of another factor out from labor and capital. Concept of *TFP* is the influence of technological progress such as technological mastery of production, education level and labor skill, ability in technological mastery and the like toward economic growth.

As supporting data of those differences, here is the rank of technological mastery in companies and the rank of global competitiveness index in each ASEAN-5.

Table 3: The Rank of Technological Mastery in Companies and The Rank of Global Competitiveness Index in the ASEAN-5

Country	Constant	The Rank of Techno-logical Utilizing in Companies	Global Competitiveness Index	
			Rank	Value
Indonesia	1.7133	65	44	4.43
Malaysia	1.8190	30	26	5.48
Singapore	1.8230	15	3	4.88
Thailand	1.6715	66	38	4.51
Philippine	1.5699	59	85	3.96

Source: The Global Competitiveness Report 2010-2011, World Economic Forum.

Based on Table 3, it can be seen that Singapore has the highest coefficient value of constant in the point of 1,8230 in the formation of *GDP* according to the height of rank in technological utilizing in companies in Singapore, which is in the 15th rank that is the highest rank of ASEAN-5. Malaysia take the second place and the coefficient value of constant was 1,8190 which was accord with the height of the rank of technological utilizing in the companies in Malaysia which took 30th place which means took the second place among those ASEAN-5.

Whereas, the coefficient value of constant in the formation of *GDP* for Indonesia, Thailand, and Philippine successively are 1.7133, 1.6715, and 1.5699 with the rank of technological utilizing are 65, 66, and 59. Although the Philippines has better technology than Indonesia and Thailand, its rank of global competitiveness index is lower than those of Indonesia and Thailand.

The main variables discussed in this research are the variables which are a representative of globalization, and they are net export variable and *FDI* variable. The value of α_4 is variable regression coefficient of net export in a short term (ln X_4) for all ASEAN-5 which is in the number of 0,0130, it means that there is positive influence between net export toward *GDP* in the number of 0,0130%. If the net export (ln X_4) increased 1%, *GDP* (ln *Y*) will also de-crease in the percentage of 0.0130%. On the contrary, if net export (ln X_4) decreased at the percentage of 1%, *GDP* (ln *Y*) will also decrease in the percentage of 0,0130%.

Whereas, the value of α_2 which is variable regression coefficient of *FDI* in short term (ln X_2) for all ASEAN-5 in the number of 0.0253, it means there is signifi-cant influence between *FDI* toward *GDP* in the percentage of 0,0253%. If *FDI* (ln X_2) increases 1%, GDP (ln *Y*) will also increase in the percentage of 0.0253%. On the con-trary if *FDI* (ln X_2) decreases 1%, *GDP* (ln *Y*) will also decrease in the percentage of 0.0253%.

Whereas, for long term coefficient by using the formula of independent vari-able coefficient/(1-lag variable coefficient) which was gotten 0,0149 for net export and 0,0290 for *FDI*. Based on the calculation result of long term coefficient from PAM above, it could be explained that in the long term, if net export increases 1%, it will cause *GDP* increasing in the percentage of 0,0149%. And if there is descent of net ex-port 1%, it will cause *GDP* decreasing in the percentage of 0,0149%.

Whereas, for *FDI* variable increased 1% will cause *GDP* increasing in the per-centage of 0.0290%, and if *FDI* decreased 1%, it would cause *GDP* decreasing in the percentage of 0,0290%. On how those vari-ables had an effect on *GDP* in the ASEAN-5 can be seen in this following table:

Table 4: The Influence of Each Variable on GDP in the ASEAN-5

Variable	Short Term Coefficient	Long Term Coefficient	Probability
Consumption	0.7171*	0.8213	0.0000
Foreign Direct Investment (*FDI*)	0.0253*	0.0290	0.0044
Government	0.0802**	0.0919	0.1728
Net Ekspor	0.0130*	0.0149	0.0790
Gross Domestic Product $_{t-1}$	0.1269*	-	0.0162
R^2 = 99.28%			
F-stat = 468732.5			

Notes: Entries in * and ** are significant at 5% and 20%, respectively.
Source: Data estimation.

From the result of panel data regression can be concluded that partially, net export (X_4) and *FDI* (X_2) which were indicators of globalization process had positive and significance influence at α 5% toward dependent variable (*GDP*). Whereas, simultaneously, F stat value was in the number of 468732,5. *F* table (α = 0.05; regression db = 5: residual db = 15) was 2,90. Because *F* stat > *F* table which was 468732,5>2,90, the analysis of regression was significance. So, simultaneously, the influence of all variables to *GDP* (*Y*) was big.

The next step was to see the coefficient value of determination which was used to find out the contribution of independent variable toward dependent variable. Determination coefficient (R^2) and also adjusted determination showed that variable (of clarifying) in explaining the variation of dependent variable. If R^2 value is getting closer to 1, it can be clarified that the model is getting better with assumption there is no false regression.

The determination coefficient value of R^2 was in the number of 0,9928 which means 99,28% of *GDP* variable will be explained by independent variable, they were consumption, *FDI*, government expenditure, and net export. And the residue which was in the number 0,72%; *GDP* variable would be explained by other variables which were not included in this research.

To know about the variable which had the biggest influence toward *GDP* among the ASEAN-5 during the research year of 1990 – 2009 can be seen from the probability value. Independent variable had the lowest probability value which showed that the variable is a variable which had biggest influence toward dependent variables.

Based on the calculation result and can be seen in the table 4, by comparing the probability value of each variable could be concluded that the variable which has biggest influence toward *GDP* is household consumption. Whereas, the second and fourth lowest are *FDI* and net export. It means that globalization process had strong influence toward the formation of *GDP* in the ASEAN-5 after household consumption.

Thereby, the globalization of economy which is a process of economic and trade activity, where countries over the world become a market power which is more integrated without barrier on territorial boundaries, a country will be able to give contribution in enhancing *GDP* of a country.

CONCLUSION

Foreign direct investment (*FDI*) and net export were proven to have significant influence on the formation of gross domestic

product in the ASEAN-5. *FDI* and net export were also proven to have an important role in household consumption in the formation of *GDP*. It means that the globalization process had a strong role toward the formation of *GDP* in the ASEAN-5.

Thereby, there were two implications that can be extended. The first implication was that *FDI* had a direct influence on the formation of *GDP*. Therefore, the policy to enhance *FDI* inflow was necessary.

The second implication was that the government should increase the product competitiveness in order to boost the exports, which will eventually help increasing the GDP. One of the ways to enhance the international export is by joining the Free Trade Area. Urata (2002) insisted without actively participating in such area, a country would get disadvantage.

Economic integration which has been done by ASEAN constituted one of the polices enabled to enhance the *GDP*, providing the creation effect was bigger than the diversion effect. Economic integration was also expected to increase the *FDI* inflow. Worth (1997) stated that trade liberalization with Regional Trade Agreements (RTA) would be able to enhance economic growth in those member countries.

In a globalized world, corporate and country's activities will be a part of a global system. In such condition, Indonesia should effectively combine the ability of competing and cooperating.

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