Determinant Factor Analysis of Foreign Direct Investment In Asean-6 Countries Period 2004-2012

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Abstract: Region of Association of South East Asian (ASEAN) has become an attractive region as an investment destination and regional production base in the last two decades. As a whole region, ASEAN with a total population of 567.6 million peoples and a total Gross Domestic Product (GDP) reached about USD1.1 trillion in 2012, promises enormous economic and a huge market potential. In addition to favorable demographic factors as well as the growing purchasing power of regional, natural resources, also offers promise. Hence, inflows of foreign direct investment (FDI) continually were increasing from year to year.

In 2010, the inflow of FDI in ASEAN reached about USD 75.7 billion (double incerease) compare to the year 2009, which amounted to USD 37.8 billion. The amount in 2010 has exceeded the highest level achieved in the period before crisis of 2008, which reached approximately USD75.6 billion. In the last decade (period of 2002 to 2010), the inflow of FDI in ASEAN grew by an average of 19%. This is very helpful for countries in the ASEAN region to develop their own potency.

FDI is one of the sources of financing or capital that important for a country, especially for developing countries. This investment also provides a great contribution to development through the transfer of assets, management improving, and transfer of technology in enhancing the economy of a country. In the other side currently in Asean countries emerge the interestng phenomenom where some big producers are re-locate their basic production among those countries.

This research is aimed to analyze the factors that affect capital inflows of foreign direct investment into the 6 ASEAN countries (Indonesia, Malaysia, Singapore, Thailand, Philiphines, and Vietnam) in period 2004-2012. This study uses panel data analysis to determine the factors that affect of foreign direct investment in 6 ASEAN. The factors that affect of foreign direct investment (FDI) are the gross domestic product (GDP), global competitiveness (GCI), interest rate, exchange rate and trade openess (TO).

Based on the statistical tests results, there are three of five independent variables (ie: global competitiveness, GDP, and trade openness) are positive and significant effect on the entry of FDI in ASEAN-6. Among these three variables, GDP is a variable that has the greatest influence on the inflow of FDI in ASEAN-6. However, the ease and attractiveness of investment between ASEAN countries is quite diverse. Currently, the European Union countries as the highest source of investment in ASEAN countries, is hit by the crisis. In anticipation of a possible reduction of investment into ASEAN due to the crisis, ASEAN needs to attract greater investment from another region. The facilities that have been provided by ASEAN Investment Forum, like: investment promotion, investment services, after-care for investment, fiscal and non-fiscal incentives, co-investment, and the Public-Private Partnership is as a strategic steps in attracting investment into ASEAN.

Keywords : foreign direct investment, the gross domestic product, global competitiveness, interest rate, exchange rate, trade openness, panel data analysis.

Introduction

Region of Association of South East Asian (ASEAN) has become an attractive region as an investment destination and regional production base. As a whole region, ASEAN promises enormous economic potential. With a total population of 567.6 million peoples and a total Gross Domestic Product (GDP) reached about USD1.1 trillion in 2012, ASEAN promising a huge market potential. In addition to favorable demographic factors as well as the growing purchasing power of regional, natural resources that owned by the ASEAN region, also offers promise. Hence, inflows of foreign direct investment (FDI) continued to increase from year to year.

In 2010, the inflow of FDI in ASEAN reached about USD 75.7 billion (double incerease) compare to the year 2009, which amounted to USD 37.8 billion. The amount in 2010 has exceeded the highest level achieved in the period before crisis of 2008, which reached approximately USD75.6 billion. In the last decade (period of 2002 to 2010), the inflow of FDI in ASEAN grew by an average of 19%. This is very helpful for countries in the ASEAN region. As known, the typical problems is faced by developing countries is the scarcity of domestic funds which is usually closed from foreign funds.

There are three main sources of foreign capital in a country with an open economy, ie: *first*, foreign loans (debt); where foreign loans made by government bilaterally and multilaterally. *Second*, FDI; where FDI is a foreign private investment made into a country; like: a branch of multinational corporations, multinational subsidiaries, licensing, or joint venture. *Third*, the investment portfolio; which is conducted through the capital market. Conceptually, foreign investment is considered more advantageous because it requires no repayment obligations for foreigners as well as foreign debt. Besides, investments are also able to give a great contribution to development through the transfer of assets, improved management, and transfer of technology.

Due to ASEAN Economics Community in the next 2015, policy or regulation in the field of investment is increasingly important for countries that joined in the ASEAN Economics Community. Therefore, it is very important to know the factors that affect FDI in ASEAN countries. The policies should be set forth in encouraging increased flow of FDI is effectively directed at the factors which aims to stimulate foreign investors to invest in ASEAN countries such as: a country 's competitiveness, economic growth of a country, a country's trade openness thus gain wider market access, policy of interest rates, exchange rate stability and others. So the ASEAN region is able to compete in attracting the FDI; either among the ASEAN countries themselves and or among the other countries. By knowing the factors that affect FDI, it can determine the appropriate policies to support the growth of investment in ASEAN countries. Therefore, this study aimed to analyze the factors affecting FDI in selected 6 ASEAN countries (ASEAN-6) namely: Indonesia, Malaysia, Singapore, Thailand, Philipines, and Vietnam.

Theoretical Background And Previous Research

Basis Theory

To provide development funds and to drive the state economy, then the state government should seek to explore the sources of domestic financing and also seek for foreign financing. In Indonesia, for example, the State Law, number 25 of 2007 on capital investment, stating that foreign investment is investment activity to do business in the territory of the Republic of Indonesia by foreign investors; whether using foreign capital and or the joint venture with domestic investors. Krugman and Obstfeld (2002); Branson (1989) and Dornbusch, et al (2008) states that the definition of FDI in international capital flow is where a company from one country establishs or expands their organzaton in other countries. Prominent features of FDI is involved not only the resources but also the implementation of the transfer of control, which is a branch or subsidiary companies not only have a financial obligation to the parent company which is part of the same organizational structure.

Several theories about factors that affect FDI has been put forward by some experts, including the theory of Vernon (1966), theory of Dunning (2002), Eiteman theory (1989), and theory of Robock & Simmonds (1989). Vernon (1966) describes the FDI with a model called Product Cycle Model. In this model, the introduction and development of new products in the market are follows by three stages. Stage one, where all products are developed and marketed. It takes a close relationship between the design, production and marketing of the company and the market to be served by the company's products. Stage two, started thinking about the possibility of seeking new markets in some countries that are relatively advanced and export was started with the aim of third world. The advantage lies in the company's economies of scale in production, transportation and marketing. Pricing strategies and locations based on the actions and reactions of other multinational corporation and not on comparative costs. Stage three or the last stage, in which the product has been made with a standardized design, so that research and management skills are no longer important. Labor unskilled and semi skilled started to get a place and consequently, the product moves to countries that are developing, where labor costs are still lower. The products are produced in the developing countries to be imported back to the original country and also to the more developed markets. Therefore, the production location will be determined by the difference in the cost or market location (distance). FDI will be seen as a way to maintain the competitiveness of enterprises in innovative products.

Dunning (2002) describes the factors that affect foreign investment through eclectic plan theory. Eclectic theory establishes that a set of three requirements are necessary when a company will be involved in foreign investment. The first, is the existence of firm-specific advantages. Range of excellence that can arise the FDI are: (i). Technology ownership, due to research and development activities; (ii). Managerial skills, marketing, or other specific action for organization function of the company; (iii). Product differentiation, trademark or name stamp; (iv). Large size, which is reflects by the economies of scale; and (v). Substantial capital purposes to the plant with minimum efficient size. Second, is the hallmark of internalization. Conditions that promote internalization include: (i). High costs in making and carrying out the contract; (ii). Buyers uncertainty about technology value of good sold; (iii). The need to control the use or resale of the product; and (iv). The advantages of used the price discrimination or re-subsidies (cross-subsidization). Third, is a country-specific advantages. The advantages of specific location of the host country may include: (i). Natural resources; (ii). The power of low cost labor efficient and labor skilled; and (iii). Trade barriers in restricting imports. The first and second item could direct to production for export and the local market and the third one will only be associated with the local production.

Eiteman (1989) stated that there are three underlying motive on FDI, namely: strategic motives, behaviour motives and economic motive. Strategic motives are distinguished in: (i). Find the market; (ii). Look at the raw materials; (iii). Look at production efficiency; (iv). Seek at knowledge; and (v). Seek political security. Behavior motive is an external environmental stimulus for the organization that base on the needs and commitment of individuals or groups. While the economic motive is the motive for profit by maximizing long-term profitability and the market price of the company's stoc.

Robock & Simmonds (1989) stated that the FDI can be analyzed through a global approach and model of the product cycle. According to global approach, internal strength that effect FDI is the development of technologies or new products, dependency on raw materials sources, utilizing the outydated machinery, and or looking for a bigger market. While external forces that affect FDI is the customer, the government, overseas expansion of competitors and the formation of the European Economic Community (EEC). Meanwhile, according to the Product Cycle Model, FDI will go through three stages: the stage of new products, the stage of mature product and the stahe of standardized products. At the new product stage, the product is produced domestically and for overseas markets will serve by exports. In the mature product stage, the price of the product is important and overseas market has been served by local production. In the third stage, the competition becomes more important and the production is directed to the location or low cost place within the low-income countries.

Previous Research

There are several previous studies that examined the FDI. See among others: Benassy-Quere, et al (2001); Bende-Nabende (2002); Asiedu (2002); Fuad & Ekrem (2002); Bouoiyour (2003); Ambarsari dan Purnomo (2005); Nadia and Abubakar (2009); Ting and Tang (2009); and Marail and Teng (2009). Some explanations from some selected previous researchs can be seen below.

Nadia and Abubakar from Bank Indonesia (2009) examine the factors that influence FDI with data panel method. The object of their study is comprised of 10 countries, namely: Indonesia Brazil, Peru, Colombia, Turkey, Vietnam, Philippines, India, Mexico and Thailand). By using data from 2004-2008, this studi result that the economic fundamentals factors (represented by market size, trend of GDP and interest rate) proved statistically significant and positive impact on FDI. Similarly with the policy framework factors (represented by the degree of openness) and business facilities factors (represented by the Global Competitiveness Index, Corruption Perception Index and Ease of Doing Business), its empirically proven to affect investors' decision to invest.

Furthermore, Ting and Tang (2009) conducted a study which aims to examine the determine factors of FDI. They specifically care on two problems, namely: China joining the WTO in 2001, and the level of corruption. They found that trade openness, interest rates, inflation levels, China's joining the WTO in 2001, and the level of corruption give a significant determinant of FDI entry in Malaysia, both long term and short term. Meanwhile, the infrastructure also plays an important role in attracting FDI in the short term, but not in the long run. Market size (GDP) and exchange rate variables do not seem important in the decision of FDI.

Marail and Teng (2009) ran their study with title Estimating the Domestic Determinants of Foreign Direct Investments in Malaysia Flows: Evidence from Cointegration and Error-Correction Model. By using Malaysia using annual data over the period 1975-2006, they indicated that long-term inflows of FDI in Malaysia is positively influenced by the real exchange rate, economic growth and infrastructure but negative for export. In the short term, FDI inflows to be negatively affected by GDP, infrastructure, and exports, while positively influenced by economic openness and real exchange rate variable.

Research Methodology

Research Design and Modelling

As mentioned in the previous section, this research is only conducted on 6 selected Asean countries namely: Indonesia, Malaysia, Singapore, Thailand, Philipines, and Vietnam. The data used in this study is pooling data that combined from the time series and cross section data for period 2004 to 2012. Data obtained from the International Monetary Fund, International Financial Statistics and Balance of Payments databases, World Bank, International Debt Statistics, and World Bank and OECD National Accounts Data files, the World Economic Forum, Bloomberg LP, and other literature. The equations modelling that are used and will be tested in this study are as follows:

$$FDI = \alpha + \beta 1GDP + \beta 2GCI + \beta 3IR + \beta 4ER + \beta 5TO + \mu$$

Description:
FDI : Foreign Direct Investment
GDP : Gross Domestic Product
GCI : Global Competitiveness Index
IR : Interest Rate
ER : Exchange Rate
TO : The number of export and import growth
μ : Error term

Data Analysis Method

As usual we will do the stationary test before run the regression. Stationarity of the data is very important in the use of data analysis, because if the regression is done not stationary, will produce spurious regression (Gujarati, 2003). Stationarity data in this study were tested using the statistical test by using Stata software. Furthermore, the stages of data analysis will be conducted by a Panel Common Effect Model, Fixed Effects, and or Random Effects Model. The following tests will be carried out, namely: Chow test (used to determine a more precise model of the common effect model or fixed effects models); LM test (used to determine a better model between the common effects or random effects); and the Hausman test (used to determine the fixed effect model or random effect) (see: Pesaran et al, 2001 and Nair-Reichert and Weinhold, 2001). Further, statistical tests are carried out: Determination Coefficient Test (R^2) (used to see the extent to which the independent variables are able to explain the diversity of the dependent variable; testing Individuals or t-test (conducted to determine whether each of the independent variables are partial significant effect on the dependent variable in particular α); and simultaneous test or F-test (conducted to determine whether the independent variables jointly influence significant effect on the dependent variable at a certain level α).

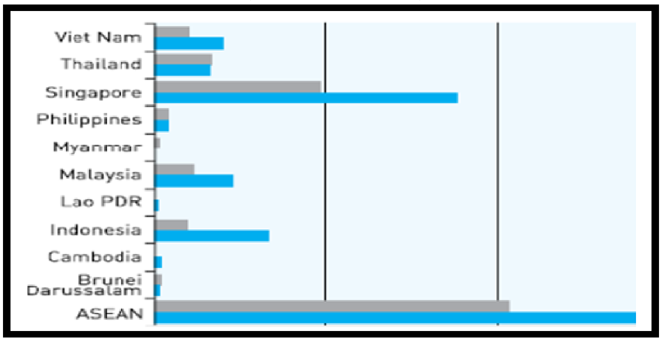
Analysis and Discussion

Overview

1. Investment flow of ASEAN 6 Countries

The creation of a free flow of investment is one of the objectives of the ASEAN Investment Forum. It is necessary to mapped firstly the magnitude of FDI flows to ASEAN countries. Figure 1 below shows the proportion of FDI in their respective ASEAN countries for the year 2011. FDI inflow into ASEAN countries shows that Singapore is still the main destination, followed by Indonesia and Malaysia. In 2010 there were FDI inflow amounted to USD75.8 million, is relatively larger when compared to the 2000-2010 average.

Figure 1. FDI Inflow ASEAN
(in Million USD)



Source: ASEAN secretary, 2011

Meanwhile, according to the World Investment Report 2011, FDI to ASEAN raised become USD 79 billion, exceeding of FDI in 2010 amounted to USD 75.8 billion. This increase was due to a sharp increase in FDI inflow in Malaysia (537%), Indonesia (173%) and Singapore (153%). Based on the report, noted that a proactive policy contributes to the good performance of the investment. For example, Indonesia streamline administrative procedures related to FDI, the Philippines provide measures to support the implementation of the PPP. Singapore itself as a regional hub in ASEAN, benefited from increase investment in ASEAN. Overall, FDI inflow into ASEAN by country of origin depicted can be seen as follows:

Table 1.
FDI Inflow in ASEAN from Various Countries, 2003-2009

Source Country	2003	2006	2007	2008	2009	Share in 2009
ASEAN	2,702	7,756	9,682	9,568	5,172	13.1
Australia	157	317	1,491	880	671	1.7
Canada	101	255	394	792	488	1.2
China	187	1,046	1,684	2,100	1,505	3.8
EU27	6,679	13,159	17,766	9,249	7,523	19.1
India	102	-282	1,466	591	970	2.5
Japan	3,908	10,440	8,829	4,582	5,961	15.1
New Zealand	88	-209	101	-177	231	0.6
Pakistan	2	10	21	6	8	0.0
Republic of Korea	550	1,246	2,716	1,553	1,500	3.8
Russia	n.a	1	31	82	157	0.4
USA	1,495	3,018	8,068	4,812	3,006	7.6
Rest of the World	8,096	18,001	21,180	15,122	11,499	29.2
Unspecified	168	1,597	967	309	695	1.8
Total	24,235	56,355	74,395	49,469	39,387	100.0

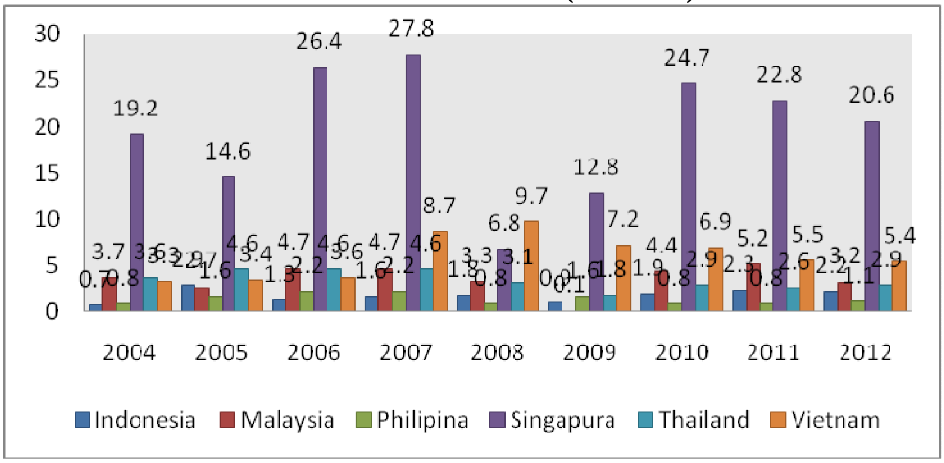
Source : ASEAN Community, 2010

Based on the above table, it is seen that portion of FDI between ASEAN countries show a fairly high percentage after the European Union (19.1%) and Japan (15.1%). Other FDI source countries in ASEAN is the United States reached 7.6%.

2. The development of FDI in ASEAN–6

United States of America is a country that is known as a center forward in the world economy. United States noted the dark history of the economy due to the economic crisis that began in 2008 with the bankruptcy of Leman Brothers, which is one investment company or senior financial bank and 4th largest in the United States. The global crisis that occurred in 2008 has resulted in a slowdown in world economic growth. In addition to causing global trade volumes fell sharply in 2009, will also have an impact on a large number of ailing industries, the decline in production capacity, and the surge in the number of unemployed world. For developing countries and emerging markets, this situation can damage the economic fundamentals, and trigger the economic crisis. Developing country is a country that is still highly depend on the flow of funds from foreign investors. The global crisis is automatically made foreign investors pull their funds out of the country. The result is the decrease of the domestic currency. The flow of foreign funds had to be used for economic development and for running companies will be missing, many companies become helpless, and ultimately, the state that must bear the bank debt and private companies.

Figure 2.
Growth of FDI in ASEAN-6 (2004-2012)



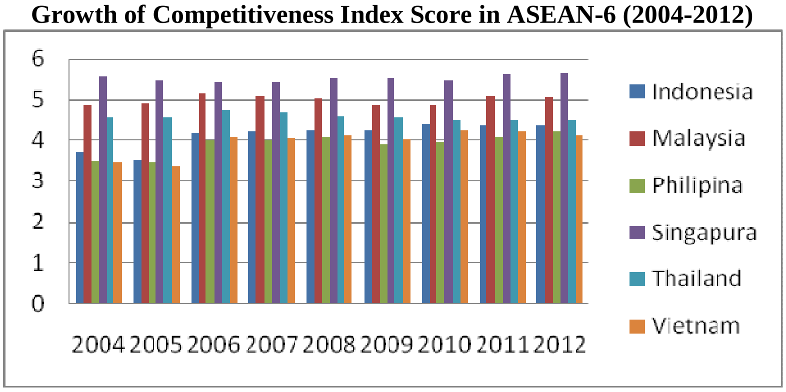
Source : IMF, IFS, World Bank, International Debt Statistics, and OECD GDP estimates

The above Figure 2, shows that from the ASEAN-6, Singapore is a state that has the highest FDI for each year where investment into the country continue to rise, but in 2008 and 2009, Singapore also experienced a quite sharp in foreign investment. It is caused by the crisis of 2008. On 2010 FDI was again increased by 24.7%, but in the last two years (2011 and 2012) down to 22.8% and 20.6%. Furthermore, the Vietnam was ranked second of the ASEAN-6 that have high levels of investment continued to increase since 2004-2012, but in 2009 to 2012 FDI that nflow into ths country continued to decline in the amount of 7.9% (2009), 6.9% (2010), 5.5% (2011), and 5.4% (2012). Thailand is the third country after Singapore and Vietnam. Foreign investment that come into this country tend to be stable since 2004-2012 (except in 2009 of course). FDI for the rest (Indonesia, Malaysia and Philippines) are likely to increase each year, with the exception of 2009.

3. The development of the Global Competitiveness in the ASEAN-6

In addition to macroeconomic factors, there are several other factors that determines the inflow of FDI into a country, among others are: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These factors are called as the twelve pillars of global competitiveness. Below is presenting a table showing the ranking of countries in the ASEAN-6, based on the 12 pillars.

Figure 3.
Growth of Competitiveness Index Score in ASEAN-6 (2004-2012)

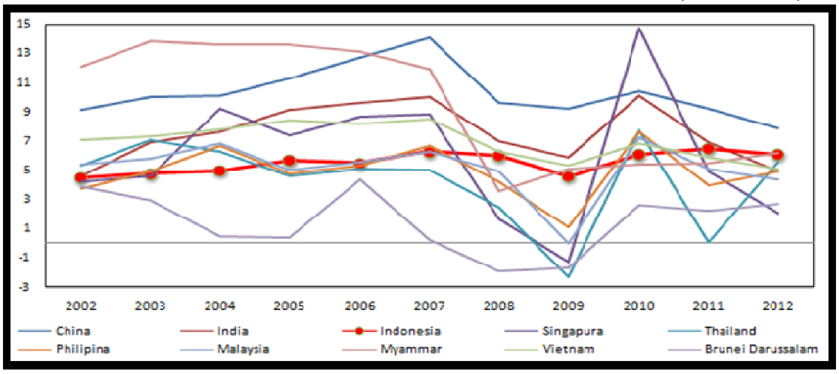


Source: World Economic Forum

Among the ASEAN-6, Singapore topped with the scores fluctuated in every each year. After Singapore, Malaysia is the second with scores increasing for most of the year 2004-2012. Followed by Thailand, ranked third with a score that experience fluctuations in each year, where a decline in scores in 2009 and 2010, ie: 4.56 in 2009 and 4.51 in 2010. Indonesia and the Philippines continue to increase score of competitiveness in during the years 2004-2012. In 2004 and 2009 Indonesian competitiveness scores respectively 3.72 and 4.4, while the Philippines 3.51 and 4.23 for the competitiveness score of 2004 and 2012. Vietnam is a country that scores in the last position among the ASEAN-6, where scores decreased in 2012 compared to the previous year, which is 4.11 for score in 2012 and 4.23 in 2011 for the score.

4.Gross Domestic Product Growth in Asean-6

Figure 4.
Economics Growth in Asean Countries, China and India (2002-2012)



Source : IMF and World Economic Outlook Datavase, 2012

From figure 4 above, in the last 10 years, economic growth in Indonesia is very stable at an average of 6%. From 2007 to 2012, the growth rate is always above 6% with the exception of 2009 (4.6%). This is in line with the global economic crisis due to the failure of the property sector loans (subprime crises) in which most countries experience a negative growth. The trend is different when compared with Singapore which has an average growth rate of 6.50%, but the fluctuation is very high ranging from 14.8% (2010) after a contraction of -0.8% (2009). Similarly, Thailand and Malaysia, has experienced negative growth. Vietnam's economic growth did show a level that is always higher than Indonesia from the period 2002 to 2010, but looks to start experiencing overheating and slowing growth

5. Trade Openness Developments in ASEAN-6

The higher volume of exports and imports of the country are increasingly active in international trade transactions. In terms of exports and imports, its value added is very depending on the technology of industry in producing goods and services. In general, in the developing countries, export value is low, where the transaction volumes are high. This is due to the developing countries that are only able to export raw materials where its economic value is still low, iInstead of importing goods and services that have a high economic value.

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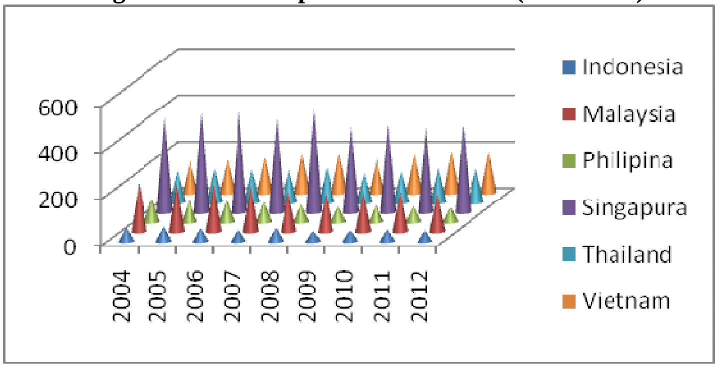
Figure 5.
Progress of Trade Openness in Asean-6 (2004-2012)



Source : World Bank and OECD National Accounts data files.

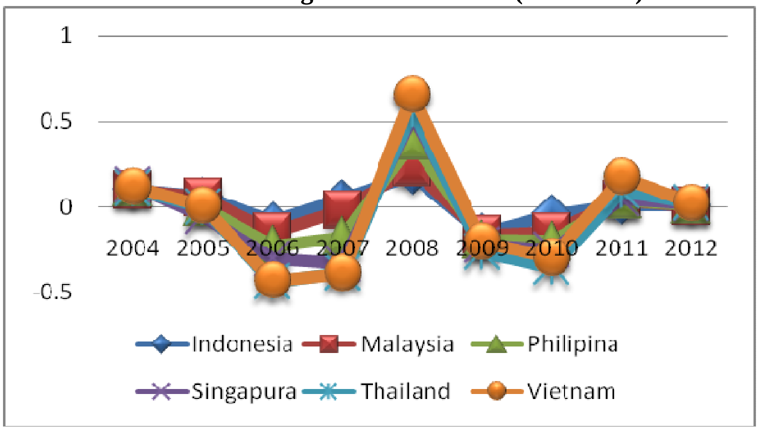
The above figure 5 shows that Indonesia has a positive value of trade openness from the beginning of the period 2004 until the end of the period 2012. In 2004 Indonesia had a trade openness of 60% of GDP. Although trade openness Indonesia in 2004-2012 positive, but from the value of Indonesian exports and imports, its lower than the export and import transactions of Malaysia, Singapore, and Thailand, Philipines, also as well as Vietnam. In the following years, Indonesian’s exports and imports continued to decline until year 2012. Indonesia's trade openness has been a 50% of GDP and still lower than the export and import transactions of Malaysia, Singapore, Thailand, and Vietnam. The same happened with Malaysia. Their export and import transactions tended to decline since 2004-2012. Where on 2004, the trade openness growth of Malaysia at 210% of GDP and in 2012 became 163% of GDP. The value of export and import transactions Malaysia ranks second among ASEAN-6 countries after Singapore.

Although Singapore is just a small country with only 4 million people population, their value of exports and imports is quite large. Eventhough, from year 2004 – 2012, Singapore’s exports is decline, but they still have a high rank of trade openness among Asean-6. Mostly, their score came from their trade in oil.

6. Growth of Exchange Rate in ASEAN-6.

A stable exchange rate is important so that investors can accurately calculate the cost of production that may occur during the production process, and hope to return back the capital that has been invest along with the profit that generated.

Figure 6.
Growth of Exchange Rate in Asean-6 (2004-2012)



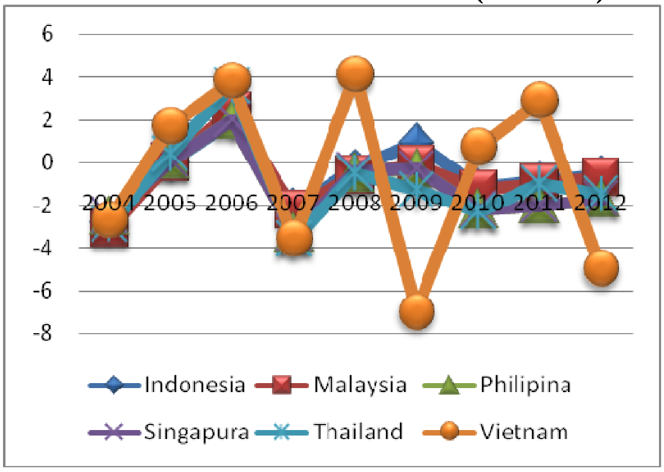
Source : Bloomberg L.P

From figure 6, it can be seen that the growth exchange rate of Indonesia is fluctuates each year, where growth in a few years could experience negative growth. Where in 2006 the growth rate experienced negative growth due to the value of the rupiah has appreciated or higher with a growth rate of -0.08 % , -0.15 % in 2009 and amounted to -0.04 % in 2010. The same thing happened in some other countries. Singapore is experience with the appreciation of exchange rate is five times, namely in the years 2005-2007 and 2009-2010. This experience also emerges in Philippines and Thailand. They are also experiencing in appreciation of exchange rate with the period 2004-2012 the Philippines and Thailand for the year 2012. Malaysian also experienced a considerable appreciation of the value of many exchanges, where the exchange rate appreciation occurs six times for the 2004-2012. Unlike the other five countries, Vietnam country just to appreciate the exchange rate, one-time only, with a growth rate of -0.00 % for the year 2007.

7. Growth of Interest Rate in ASEAN-6.

The interest rate is one of the important factors that affect investment. Interest rate fluctuations had been considered for investors. If the interest rate is lower than expected, then one would choose to invest their money

Figure 7.
Growth of Interest Rate in ASEAN-6 (2004-2012)



Source : IMF, IFS and data files

Figure 7 above, show that Indonesia is a country that has the largest borrowing rate among the other five ASEAN countries, and interest rates on loans in Indonesia fluctuated annually. Almost throughout the period 2004-2012 growth rate is negative. Where the growth rate of -0.6% in 2012 declined from the previous year (-0.9%). Furthermore Philippines has a loan interest rate also fluctuates each year, the growth rate is positive occurred in 2004 in the amount of 0.6%, and in 2012 growth rate that is equal to a negative -0.1%. Where the borrowing rate in this country since the 2004-2012 tended to decrease in the amount of 10.1% in 2004 and by 5.7% in 2012, which is almost double the decline that began in 2004 and in 2012

In contrast to the Philippines, Vietnam would have a interest rate that has increased in each year since 2004-2012, but in 2012 the growth rate in this country experienced negative growth of -0.35%. Menwhile, Malaysia and Thailand has an interest rate that fluctuates slightly each year but tends to stabilize the range of 4.8% to 6.0% for borrowing rate in Malaysia, with a growth rate of interest rate of -0.1% and 5.5% to the range of 7.0% to the loan interest rate in Thailand, with a growth rate of 0.2% interest rate. But different things happen in the state of Singapore, which is a country that has a growth rate that is stable in each year, where the rate of the loan interest rate by 5.3 per cent since 2004-2007, 2008-2012 while since loan interest rate amounted to 5.4%. The stable interest rate loans in the state of Singapore will further increase the interest of foreign investors to invest in the country.

Data Analysis

1. Test Result of Stationerity

The testing results of stationerity data in this study can be seen in this table below:

Table 2. Stationerity Test Result

No	Variable	Stationerity Test Model			
		levin-Lin-Chu		lm-Pesaran	
		Statistic	P-Value	Statistic	P-Value
1	FDI	-41.817	0.0000	-16.903	0.0455
2	GDP	-27.975	0.0026	-22.119	0.0135
3	GCI	-114.526	0.0000	-17.941	0.0364
4	IR	-71.275	0.0000	-25.285	0.0057
5	ER	-97.895	0.0000	-27.330	0.0031
6	TO	-23.907	0.0084	-18.327	0.0334

Source : data processed

Based on the test results of stationerity above, then all of the data are stationary at level. Where; either the simultaneous test for each variable (Levin-Lin-Chu) or individually test of stationerity data for each variable (lm-Pesaran-Shin), the p-value of all variables is smaller than 5% alpha. Although all the variables are stationary at level, but there are two variables in this study are stationary at level but with the trend, that are trade openness (TO) and global competitiveness (GCI) variables.

2. Test of Econometrics

a. Selection of Model Estimation

The panel data is a data analysis by using three approaches, namely the pooled least square (common effect), fixed effects and random effects. Furthermore, from the three approachesl then look for the most appropriate in explaining the model of this study, through a variety of tests that have been mentioned in the previous chapter.

Table 3.
Selection Results of Panel Regression Model

Method	Probability	Decission	Remark
	Chi-square		
Chow Test	0.0159	Ho reject	Individual Effect
Hausman Test	10.000	Ho accept	Random Effect

Source : data processed

By using the Chow test in order to examine the model, the significance value of Chi-square probability is equal to 0.0159, so the best model to estimate is the individual effects. Furthermore, Hausman test is performed. The results show that the probability of Chi-square is 1.0000 and it is greater than 0.05, so that Ho is accepted. It was concluded that the best model in estimating for this model is the Random Effects Model. Hence, after performed a statistical test, the results are as follow:

Table 4.
Estimation Result of Random Effect

Dependent Variable *Foreign direct investment (FDI)*		
Independent Variable	**Coefficien**	**Prob**
C	-1.635.669	0.000
GDP	0.5876933	0.000
GCI	2.854.492	0.009
IR	-0.0463666	0.868
ER	-6.077.871	0.297
TO IR	0.0381113	0.000
Adjusted R-squared	0.8286	
Prob F-stat	0.0000	

Source : data processed

b. Economic Criteria Analysis

Economic criteria are used to test the suitability of the sign and determine the influence of each independent variable on the dependent variable. A model is said to have met the economic criteria if the sign of the regression coefficient of independent variables consistent with the hypothesis. Except in a certain conditions that can be explained spesifically. In this study, a constant value and a negative significant effect is equal to -16.35669. This shows the low competitiveness of the ASEAN-6 in attracting the inflows of FDI into the country. Gross domestic product variable significantly influence the regression coefficients mark in accordance with the hypothesis, the magnitude of the regression coefficient is 0.58, means, at the time of growth of gross domestic product increased by 1% then the inflow of FDI in ASEAN-6 will also increase by 58%.

Trade openness variable is also positive and significant effect with a coefficient of 0.03. This means that if the variable trade openness increased by 1%, then the inflow of FDI into ASEAN-6 will also increase by 3.8%. The ratio of trade (exports + imports) to GDP is often used as a measure of trade openness. Global competitiveness variable is also positive and significant effect with a coefficient of 2.85. This means that if a country's competitiveness increases by one unit will increase the FDI coming into the ASEAN-6 at 285.4%. Investor perceptions on the investment climate of a country is often considered to be one of the factors that affect the flow of foreign capital into the country. Perception is represented internationally by the global competitiveness index (GCI) or global competitiveness index can also illustrate how a country's rank compared to other states that are useful for the government of each country because it can be used as benchmarking with other countries.

c. Statistical Test

Based on the regression results, all of independent variables in the model are smultaneously significant effect on FDI in the ASEAN-6 countries. Based on the t-test result, there are three variables that are significantly influence the inflow of FDI in the ASEAN - 6 countries, namely: variable of global competitiveness, GDP, and trade openness. This is indicated by the value of the probability of global competitiveness around 0.009, gross domestic product for 0.000, and trade openness for 0.000 with a significance level of 5%. The mark of regression coefficients of variable gross domestic product, global competitiveness, and trade openness in accordance with the theory, which have a sign that is consistent with the hypothesis. This means that the variable is positive and significant effect on the inflow of FDI in ASEAN-6 countries. While the variable interest rate and the exchange rate has no significant effect on the inflow of FDI in ASEAN-6. This condition may be caused by these variables are not representative of the conditions and the time described in this study. Based on the results obtained processing, the adjusted R- square value of 0.8286. This shows the ability of all the independent variables in explaining the variation of the dependent variable is equal to 82.86% and the remaining 17.14% is explained by other independent variables outside the model.

Conclusions and Implications for Research

Conclusion

Based on the statistical tests results, there are three of five independent variables (ie: global competitiveness, GDP, and trade openness) are positive and significant effect on the entry of FDI in ASEAN-6. Among these three variables, GDP is a variable that has the greatest influence on the inflow of FDI in ASEAN-6.

Implications for Research

The Potential of substantial investment in ASEAN is an opportunity that should be used by ASEAN-6 countries. But, the ease and attractiveness of investment between ASEAN countries is quite diverse. Currently, the European Union countries as the highest source of investment in ASEAN countries, is currently hit by the crisis. In anticipation of a possible reduction of investment into ASEAN due to the crisis, ASEAN needs to attract greater investment from another regions. The facilities that have been provided by ASEAN Investment Forum, like: investment promotion, investment services, after-care for investment, fiscal and non-fiscal incentives, co-investment, and the Public-Private Partnership is as a strategic steps in attracting investment into ASEAN. When implemented properly will increase investment into the ASEAN region. Through the ASEAN Investment Forum which act intensively, ASEAN countries are expected to help each other to make the investment and development of the ASEAN region as an area of major investment destination.

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