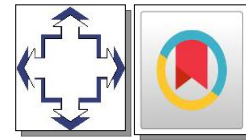


# Global Crisis and Economic Fundamentals: Its Impact on Foreign Direct Investment in ASEAN Countries



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## ABSTRACT

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Foreign direct investment has an important role in the running of a country's economy. This study aims to analyze the role of macro economic fundamentals consisting of Gross Domestic Product (GDP), interest rates, exchange rates, and exports in influencing Foreign Direct Investment (FDI) in the ASEAN 6 region (Indonesia, Malaysia, Singapore, Thailand, the Philippines, and Vietnamese). The data used are from 1990-2019 sourced from the World Bank and UNCTAD. The method used is panel data regression and time series with the best model selection, namely the Random Effect Model. The results of panel data analysis show that GDP, interest rates, exchange rates, and exports are the determinants of FDI in ASEAN 6 with a significant probability value. The positive direction coefficient is indicated by the GDP and exchange rate variables, while interest rates and exports indicate a negative direction coefficient. The results of the time-series data confirm that each country has similar results in the panel data analysis, but interest rates in Malaysia have the largest negative effect on FDI in Malaysia. Meanwhile, the exchange rate and exports contributed positively with the largest coefficient for Indonesia. The 1998 and 2008 economic crises were also found to have a negative impact on FDI but not significantly in some countries.

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## 1. Introduction

The era of globalization is an era where there are many advances in technology and information in the world. Rapid advances in technology and information can touch boundaries that facilitate the spread of crises and can more easily spread from one region to another so that a global crisis is born that is rife and has hit various parts of the world. The economic crisis does not only occur due to the failure of a government to regulate the country but can also occur as a result of the domino effect provided by other countries. Technology and communication that can be used freely will facilitate the occurrence of economic activity between one country and another, resulting in a financial system that is interrelated between countries.

Economic indicators that have a strong relationship in the occurrence of a crisis are macro economics, especially economic growth and inflation in a country. One example that occurred is that in 1997 the East Asian crisis occurred which resulted in countries in Asia experiencing a very significant decline in economic growth and even some countries that experienced negative growth rates in 1998 such as Indonesia, Singapore, Thailand, the Philippines, Vietnam, and Malaysia from the ASEAN Region. In contrast to the global financial crisis that occurred in 2008 which was caused by the collapse of international financial institutions in the western hemisphere, such as institutions in America and England. The collapse of the Institution gave a domino effect to countries that have integrated financial systems with countries experiencing economic turmoil so that several countries in ASIA experienced a fairly large financial burden.

A poor state of the financial system in a country will cause several variables that help the movement of the country's economy to be directly affected, such as the entry of foreign direct investment in a country. In unfavorable economic conditions, it will reduce the interest of both domestic and foreign investors in investing in countries affected by the crisis. This is quite realistic because all investors certainly have the same goal, namely to get profits in investing in a country, but in a state of crisis, the country will find it difficult to show the best performance and investors will get small profits and even lose at a certain point.

In a country, investment is an important thing in moving the wheels of the country's economy. Almost all countries, both developed and developing countries, are in dire need of investment. Developed countries initially require investment in order to develop as they are today, as well as developing countries that require investment to develop the country's economy. Countries that are part of Southeast Asia have an economic capacity that still tends to be a small open economy which makes the role of these countries still tend to have little influence on world trade so that in this condition Foreign Direct Investment (FDI) has an important role in moving the economy (Susanti, 2018)

Capital invested in a country will lift the movement for industry, so industrial growth in a country will continue to develop and will absorb labor. The performance of GDP, exports, and FDI have a simultaneous role in the movement of the national income of a country (Virtyani et al., (2021). It is a direct investment in a country that will have a major impact on a country, with direct investment an investor can establish a company and industry that will help the economy of a country.

There are several factors that can determine an investor's decision to make a foreign direct investment. According to Saifullah Malik, (2013) states that FDI inflow will have a significant influence on the macroeconomic performance of a country. Investors who want to make foreign direct investment in a country basically have the ability to understand macroeconomic conditions and can predict the economic future of a country so that they can provide benefits when foreign direct investment takes place.

In practice, the strength and international trade relations between countries also have an important role in foreign direct investment decisions in a country. The strength of international trade can be measured by the success of exports from a country. The success of exports is a measure because with exports investors can see how a country's international trade performs in managing resources in that country Dewata & Swara, (2013). In addition to exports, the strength of a country in the eyes of the international community can be seen from the exchange rate of a country's currency. An exchange rate that experiences appreciation will attract more foreign

investors to invest in that country. From previous empirical studies, it is known that foreign direct investment has several factors that can influence investors' interest in investing in a country. The novelty of this research is to see how the variables influence the interest of investors in investing in a country during an economic crisis. In addition, in this study, it is known how the conditions of foreign direct investment occur in each ASEAN 6 country.

## 2. Literature Review

Approaches that can be taken in analyzing investment can be divided into two ways of thinking, namely Keynesian and Hayekian thinking. In the Keynesian view, an investment is a way of how to behave more optimally in making investment decisions. Behavior that is considered optimal in making investment decisions is done by capitalists by assuming that investment is a business so that it only pays attention to the optimal amount of investment in a certain period. In contrast to Hayekian's view, which considers investment as an adjustment tool to a balance and an optimal investment is an effective investment that has an optimal speed of adjustment. Previous studies have focused on what determines an investment is optimal capital accumulation according to Jorgenson's neoclassical theory (1967). In this view, the owners of capital will see the capital stock as influenced by price and technology factors, which assume perfect competition and profit maximization. Capital owners can determine two choices of consideration in investing their capital, namely investing in order to maximize profits and investing in optimizing costs.

The owner of capital will see the state of the country's economy in order to maximize the profit to be received, this is related to the economic situation that reflects the purchasing power of the people. If the economic situation improves, it will have an impact on increasing people's income and will stimulate the purchasing power of the people themselves. The increase in people's purchasing power can be influenced by various economic variables, but basically, the increase in purchasing power is caused by an increase in people's income. Higher exports indicate that domestic production has increased so that it can increase worker wages which can increase people's income so that it will increase purchasing power in a country and can be considered by capital owners in investing (Amirsyah, 2020).

An empirical study conducted by Azhar et al., (2015); Febriana & Muqorobbin, (2014); Yulianti et al., (2017) analyzed foreign direct investment in a country and found that GDP can affect FDI in a significantly positive way. This statement is supported by Amirsyah, (2020) who examines the determinants of foreign direct investment in ASEAN, Japan, South Korea, and China finding that GDP and exports have a significant positive effect on foreign direct investment. Astuty & Siregar, (2018); Hoang Quoc Chi Duong Thi, (2018) also strengthen by analyzing the effect of GDP in Indonesia and Vietnam on FDI having a positive impact. In addition, Baskara & Sulasmiyati, (2017) have the same view that GDP can have a positive influence on FDI in Indonesia. This is different from the opinion of Mainita & Ahmad Soleh, (2019) who found GDP to have a negative influence on FDI in Indonesia.

Optimization of costs by owners of capital will look at the marginal efficiency of capital. Investment theory based on classical theory illustrates that investment will be associated with a country's interest rate (Marginal efficiency of capital) which causes supply to be equal to the income stream. John Maynard Keynes (1936) stated in his theory In general, the marginal efficiency of the company's capital will make a rule and order in assessing a project to be invested. The ranking of the projects to be implemented will be based on the internal rate of return or the marginal efficiency of investment by choosing projects that have a higher rate of return than the interest rate. efficiency can also be done by looking at the currency of the destination country. Basically, the exchange rate of a country's currency can affect the owners of capital in investing their capital in various ways. With a weak currency, production costs will decrease and can increase the interest of investors to invest in the country.

Empirical studies that support optimizing investor costs have been carried out by various researchers, such as Dewi & Cahyono, (2016); Sari & Baskara, (2018) who found interest rates to have a significant negative effect on FDI in Indonesia and confirmed by Faroh & Shen, (2015)

who found the exchange rate variable was the determining variable for FDI in Sierra Leone. In addition, the theory of exchange rates has a negative effect on FDI explained by Kawai & Naknoi, (2015) who found the exchange rate had a significant negative impact on FDI in the ASEAN economy. However, in the research conducted by Bilawal et al., (2014); Hsu et al., (2019) found that exchange rates in Pakistan and Nigeria have a positive effect on FDI.

The crisis is a global shock phenomenon that is reflected in the massive decline in the world economic sector so that its impact will spread from various social and economic aspects. The crisis has become a phenomenon that the world is wary of so that the phenomenon of past crises has become one of the provisions in designing policies and strategies as a defense effort when there are threats and attacks from the crisis, especially to maintain the stability of capital inflows as one of the drivers of the economy. Several countries in ASEAN are highly dependent on global activities so their domestic economy is very sensitive to global shocks.

This research is expected to contribute to thinking and understanding related to the role of macro economic instruments which are urgent to be considered in influencing investment inflows, especially when there is a global shock or crisis phenomenon that can pose a threat to investment flows. Investment is one of the components driving the economy of a country, especially in reviving the real sector in developing countries because capital turnover is very important to encourage demand while increasing a country's production output. A comprehensive strategy as a policy to deal with the threat of a crisis becomes very important to be implemented in every activity that intersects with global elements because currently increasing uncertainty is also one of the causes of the vulnerability of the domestic economy. Strengthening cooperation to achieve investment sustainability by all relevant stakeholders is very important, in addition to institutional improvement by all related parties to facilitate and encourage investor attractiveness it is also important to consider as a comprehensive effort such as social and political stability which can also be an element of consideration investors in maintaining the sustainability of their investments.

### 3. Research Method

In this study, the data will be processed using a methodology that examines the impact of the 1998 and 2008 financial crises on 6 countries in the ASEAN Region. This study collects data from the World Bank data website and UNCTAD for the period 1990-2019. The time period was chosen because of the crisis phenomenon that occurred in 1998 and 2008. The data to be used are FDI data and economic fundamental variables from 6 countries that are members of ASEAN (Indonesia, Singapore, Malaysia, Thailand, Vietnam, and the Philippines). There are 2 objectives in this study, namely to examine macro economic fundamental variables on FDI in ASEAN 6 together with panel data and examine macro economic fundamental variables in each ASEAN 6 country with time-series data.

Table 1. Description of Operational Variables

No	Variable	Information	Source
1	Foreign Direct Investment (FDI)	Foreign Direct Investment: Inflow and outflow period 1990-2019 in ASEAN 6 countries	United Nations Conference on Trade and Development (UNCTAD)
2	Gross Domestic Product Growth (GDP)	Economic Growth period from 1990-2019 in ASEAN 6 countries	United Nations Conference on Trade and Development (UNCTAD)
3	Real Interest Rate (RIR)	Rill interest rate based on interest rate policy of Bank Indonesia from 1990-2019 in ASEAN 6 countries	The World Bank Data

4	Exchange Rate (ER)	Official exchange rate (LCU per US\$, period average) period 1990- in ASEAN 6 countries	The World Bank Data
5	Export Growth (X)	Export Growth for Good and Service 1990-2019 in ASEAN 6 countries	The World Bank Data

Source: World Bank, UNCTAD, 2021.

FDI as the dependent variable with the data used in the form of inward and outward flows and stock data in the form of annual data sourced from UNCTAD. While the independent variables consist of Growth Gross Domestic Product/ GDP Growth (%) as a reference that describes an economic growth in a country; real interest rate to measure the number of loans for economic actors, especially foreign direct investors. The reason for using real interest rates is because investors are basically more interested in seeing opportunities in interest rates that do not include inflation problems in their calculations. This is also related to the interest rate which is a tool or price to be charged from a loan (Loanable Funds) which is determined from the loan source of economic actors (Fornah & Yuehua, 2017). The exchange rate as another independent variable is also used as a proxy for data on the exchange rate of each country as the country's financial strength. In addition, the variable of export growth as a proxy for international trade is also a reflection of a country's trade strength.

The test that will be carried out in this research is to examine the relationship between direct investment (FDI) and the economic crisis. Therefore, in research, it is necessary to develop the factors that will determine or influence FDI. Following from previous researchers Dewi & Cahyono (2016); Fornah & Yuehua, (2017) FDI will be determined by fundamental economic variables, namely economic growth, inflation, interest rates, the size of exports, and the exchange rate of the country's currency. In addition, this research model will add a dummy variable as a reference for the crisis that occurred. Based on the first problem formulation to see the effect of macroeconomic fundamentals and the global crisis on FDI performance in ASEAN 6, the model specifications are as follows:

$$FDI_{it} = \beta_0 + \beta_1 GDP_{it} - \beta_3 RIR_{it} + \beta_4 ER_{it} + \beta_5 X_{it} + \beta_6 Dummy_{it} + \mu_{it} \dots \dots \dots (3.1)$$

The data that will be used in this study will be tested using fixed effects and random effects as a reference in estimating the data to be studied. The fixed-effect model is used for reasons of the nature of the fixed effect which will prevent it from occurring heterogeneously and provide more consistent results (Raz et al., 2012). With a fixed-effect model that can control the occurrence of heterogeneity, it can be assumed that each country has a separate effect that will affect the dependent variable. The existence of a fixed-effect model in this study can be tested by performing the F test. In addition to the fixed effect, this study also uses random effects as a model in estimating the data. The random effect is chosen as the opposite or comparison of the fixed effect, i.e. it assumes that there are variations from each country under study that are random and do not have a relationship with one another between independent variables. Testing of random effects can be done using the Breusch-Pagan Lagrange Multiplier test.

Furthermore, to analyze the formulation of the second problem with the aim of looking at the effect of macroeconomic fundamentals and the global crisis in each of the ASEAN 6 countries (Indonesia, Malaysia, Thailand, the Philippines, Singapore, and Vietnam) the OLS method with time-series data is used. Then the modeling applies to the estimation model of 6 ASEAN countries (Indonesia, Malaysia, Thailand, Philippines, Singapore, and Vietnam) as follows

$$FDI_t = \beta_0 + \beta_1 GDP_t - \beta_3 RIR_t + \beta_4 ER_t + \beta_5 X_t + \beta_6 Dummy_t \dots \dots \dots (3.2)$$

Noted:

- FDI = Foreign Direct Investment / FDI (USD \$)
- GDP = Growth Gross Domestic Product / GDP Growth (%)
- RIR = Real interest rate (%)
- ER = Exchange rate (LCU per US\$, period average)
- X = Exports of goods and services (annual % growth)
- Dummy = Dummy for Crisis 1998 and 2008
- e = error term

#### 4. Results and Discussion

In this study there are two discussions, namely seeing how the dependent variable, namely FDI, will be influenced by the independent variables of economic growth, real interest rates, exchange rates, and overall export growth of 6 countries. In this first discussion, we will use panel data which will be tested first in determining the best model in order to determine the appropriate model and will be used in panel regression. Model selection will choose 3 models, namely CEM, FEM, or REM uses several tests.

Table 2. Testing of Model

Effects Test	Probability	Information
Chow Test	0.0000	FEM
Hausman Test	1.0000	REM
LM Test	0.0000	REM

Source: Processed Data, 2021.

From these results, it can be seen that the probability value is  $0.0000 < \text{sig. } 0.05$ , so it can be stated that the Chow test of the FEM model is the best model to use. From the results of the Hausman test, it is known that the probability value is  $1.0000 > \text{sig. } 0.05$ , so it can be stated that the REM model is the best model to use. In the LM test, the value of the Breusch-Pagan coefficient is  $0.0000 < \text{sig. } 0.05$ , so it can be stated that LM Breusch-Pagan will accept H1 and choose REM as the best model to use. Based on the selection of the best model from the three tests that have been carried out, it has found the best model to use, namely the Random Effect Model (REM). After getting the best panel model, an estimate is made with the following regression results:

Table 3. Panel EGLS Result (Cross-section Random Effects)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	0.031275	0.011522	2.714320	0.0073
RIR	-0.022344	0.007249	-3.082511	0.0024
ER	0.243818	0.084620	2.881340	0.0045
X	-0.011146	0.004352	-2.560816	0.0113
Dummy	-0.121659	0.087267	-1.394108	0.1651
C	3.255873	0.273175	11.91864	0.0000
R-squared	0.161076			
Adjusted R-squared	0.136969			
F-statistic	6.681722			
Prob(F-statistic)	0.000010			

Source: Processed Data, 2021.

The following is the equation for the regression results:

$$FDI = 3.26 + 0.031 GDP - 0.022 RIR + 0.243 ER - 0.011 X - 0.121 Dummy$$

Based on the results of the analysis, the discussion and discussion can be described as follows:

1. Effect of Economic Growth on FDI performance in ASEAN 6.

Based on the processed results, it was found that economic growth has a significant positive relationship with foreign direct investment which is confirmed with a probability value of 0.0073 and a coefficient of 0.031%. This result means that when there is an increase in the economic growth of 1%, it will increase investor interest in investing in ASEAN 6 countries by 0.031% and vice versa. This finding confirms the truth of the existing theory, namely that good economic conditions will create more secure economic prospects for the country and can increase people's purchasing power so as to attract investors' interest in investing. This result is also in line with the empirical study conducted by Susanti, (2018) with her finding that economic growth has a significant positive impact on foreign investment in ASEAN countries.

2. Effect of Real Interest Rates on FDI performance in ASEAN 6.

Interest rates are a factor that is sufficient to determine the actions of investors investing their capital. The results of the analysis show that real interest rates have a significant negative relationship with foreign direct investment in ASEAN 6. The real interest rate in this calculation has a probability value of 0.0024 and a coefficient of -0.022, which means that if the real interest rate increases by 1%, it will decrease investors' interest in investing in a country is -0.022%. This result is in line with the theory of cost optimization in investing for investors, with increasing interest rates will burden the owners of capital in obtaining capital in that country with high enough interest so that it will reduce the interest of investors. capital to invest. This result is also in line with the empirical study conducted by Mehmood & Hassan (2015) with its finding that interest rates in Pakistan have a significant negative impact on foreign investment in Pakistan.

3. The effect of the exchange rate on the performance of FDI in ASEAN 6.

The exchange rate is one of the variables that are considered by investors in investing in cost optimization. The results of the analysis confirm that the exchange rate has a probability value of 0.0045 and a coefficient value of 0.243. This result means that if the exchange rate increases 1% in the country's currency, it will increase investor interest in investing in a country by 0.243%. This calculation is in line with the theory of cost optimization in investing for investors because an increase in the exchange rate will have an impact on the weakening of the value of a country's currency against the dollar so that the cost of capital will be cheaper for foreign investors. For owners of capital, obtaining capital in a country that has low costs but sufficient natural resources will be able to maximize the profits of the owners of capital. These results are also in line with the empirical studies of Sari & Baskara, (2018) and Susanti, (2018) which found that the exchange rate in ASEAN has a negative impact on foreign investment in a country. In addition, Arize et al., (2000) have a view that is in line with this study, namely the exchange rate has a negative effect on investor interest in investing in a country. In addition, the empirical study of F. Agyire-Tettey, (2008) also found that the exchange rate has a negative effect on FDI in Sub-Saharan Africa.

4. The effect of export growth on FDI performance in ASEAN 6.

Export growth is a factor that can affect the level of profit maximization received by investors. The results of the analysis found that export growth has a significant negative relationship to foreign direct investment in ASEAN 6. Real export growth in this calculation has a value probability is 0.0013 and coefficient value is -0.011 so that if real export growth increases by 1%, it will reduce investor interest in investing in a country by -0.011%. However, this result is not in accordance with the theory of international trade and FDI which states that exports have a positive impact and FDI. From a theoretical point of view, it is assumed that increased exports will increase people's income so this will increase people's purchasing power, this condition can trigger an increase in demand. The increasing demand for goods and services can be a signal to investors' interest in investing their capital. However, in ASEAN 6 countries, each of which has a large dependence on other countries, and the majority are still unable to meet their own basic needs, this increase in income will be allocated to imports. This is in line

with the empirical study conducted by Febriana & Muqorobbin, (2014) which states that export growth in Indonesia has a negative impact on foreign investment in Indonesia.

5. The effect of the dummy variable for the global crisis on FDI performance in ASEAN

The global crisis is a phenomenon that often has a major impact on the economy. In this study, the global crisis is proxied by a dummy variable as an illustration of the 1998 and 2008 crises. The results of the analysis show that the dummy variable has a negative impact on FDI performance in ASEAN 6. This result is confirmed by the coefficient value of -0.121%. This result means that when a crisis occurs, it has an impact on decreasing FDI performance in ASEAN 6. This will not only have an impact on ASEAN 6 countries because the global crisis has had a major impact on the global economy on a massive scale which resulted in sluggishness and even economic recession as happened in 2015. 1998 and 2008 where there was a major global shock that resulted in a decline in economic growth to negative numbers in all countries. In addition, cost optimization will be more difficult to implement because of the high-interest rates regulated by the government so it will increase the costs that will be incurred by capital owners in investing. This result is in line with the theory that the crisis causes economic conditions to become unstable so it will be risky for investors to invest their capital during a crisis.

The second discussion will discuss how the conditions of each country are compared to the results in time series data. With this comparison, we will see the position of one country with another, so that it will show how things are in terms of the influence of economic fundamentals on foreign direct investment. This discussion will be carried out by regressing in each country so that the results of the coefficient and significance of each variable are obtained and the results are compared between one country and another.

Table 4. Foreign Direct Investment (FDI)

Negara	Coefficient	Variable					Adj-R <sup>2</sup>
		GDP	RIR	ER	X	Dummy	
Indonesia	-0.180979	0.133343 (0.0016) ***	-0.033612 (0.1299) *	0.890760 (0.0076) ***	-0.006274 (0.5766) *	-0.136444 (0.6365) *	0.395115
Malaysia	4.007867	0.038075 (0.1221) *	-0.041642 (0.0107) **	-0.455160 (0.6004) *	-0.015284 (0.1261) *	-0.092902 (0.5327) *	0.260796
Singapore	5.530444	-0.011105 (0.7566) *	-0.018632 (0.5743) *	-5.595314 (0.0003) ***	-0.005872 (0.7533) *	-0.135537 (0.4862) *	0.412316
Thailand	1.809833	0.002233 (0.8941) *	-0.031943 (0.0957) **	1.318936 (0.0932) **	-0.004971 (0.5344) *	0.098616 (0.5402) *	0.223030
Philippines	3.248367	0.093016 (0.0468) ***	-0.039886 (0.1772) *	-0.155228 (0.8306) *	0.000821 (0.9369) *	0.078368 (0.7185) *	0.238005
Vietnam	-11.78383	0.083130 (0.0365) **	0.003937 (0.6935) *	3.564558 (0.0000) ***	-0.016884 (0.0138) **	0.144842 (0.2374) *	0.833108
All	3.255873	0.031275 (0.0073) ***	-0.022344 (0.0024) ***	0.243818 (0.0045) ***	-0.011146 (0.0113) ***	-0.121659 (0.1651) *	0.136969

\*\*\* : 1%

\*\* : 5%

\* : 10%

Source: Processed Data, 2021.



Based on the results of the analysis, various results were found in each country in ASEAN 6. Indonesia has an average coefficient and significance of each variable which is similar to the results of panel calculations for all countries. If you look at GDP, the country with the largest coefficient in Indonesia which produces 0.133343% and is 1% significant. From the RIR variable, Malaysia is the country that has the biggest negative effect, which is -0.041642% on FDI and 5% significant. The variable exchange rate and exports have the best results in Indonesia. The Real Interest Rate variable in Vietnam is unique in that it is not following the theory and has a positive influence on foreign direct investment. This situation can occur if the interest rate in a country in the long or short term is in a lower position than the rate of return on capital for investors, so investors pay less attention to interest rates as consideration for margin of cost investment (Yuliarti et al, 2017). This causes interest rates to have a positive effect on FDI performance in Vietnam. Yuliarti et al., (2017). In addition, the results of the exchange rates in Malaysia, Singapore, and the Philippines are not following the existing theory, namely, the exchange rate has a positive influence on FDI which if a country's currency is increasing or depreciating will increase investor interest in investing because of production costs which tend to be low. The results of the analysis which show that the exchange rate has a negative effect for Malaysia, the Philippines and Singapore can be caused by the motive factor of investors who are more oriented towards maximizing lava by investing in the export sector so that production results are exported at a higher cost in accordance with the high exchange rate. and ignore the suppression of production costs. This kind of investment orientation tends to be carried out by investors in countries with higher exchange rates in order to obtain greater profits. Compared to other ASEAN 6 countries, Singapore, Malaysia and the Philippines have higher exchange rates.

Meanwhile, in terms of the impact of the crisis on each country, Indonesia has the largest negative crisis impact compared to other countries besides countries in the Asian region such as South Korea and Thailand. Indonesia's GDP growth in 1996 was 8% and decreased in 1997 and 1998 to 4.7% and -13.6%. This is different from the results that occurred in Vietnam, the Philippines, and Thailand. The Vietnamese government, for example, moved quickly in response to the global shock that occurred so that a policy was formulated that could relieve investors such as the policy carried out by the Central Bank of Vietnam for commercial banks to eliminate, reduce or postpone interest payments on loans to companies that have potential large in producing large public demand so that the company will continue to run in the production process and this can attract investors.

## 5. Conclusion

Based on panel data analysis, this study finds that macroeconomic fundamentals have a significant effect on FDI performance in ASEAN 6. The main findings from panel data analysis can be concluded that the determinants of FDI performance in ASEAN 6 include economic growth and exchange rates which show a positive influence. While the real interest rate variable, export growth on FDI performance in ASEAN 6. The findings in the time series analysis confirm that each country has different determinants in influencing FDI performance in their respective countries. In Indonesia and Thailand, the determinants of FDI performance are economic growth and the exchange rate which is indicated by a positive coefficient, while real interest rates, export growth, and the global crisis have a negative effect on FDI performance in Indonesia, but the global crisis has a positive impact on FDI performance in Thailand. . In Vietnam, the determinants of FDI performance include economic growth, real interest rates, the exchange rate as indicated by a positive coefficient. In the Philippines, economic growth and export growth are the determinants of FDI performance, while in Singapore, low-interest rates are the determinants of improving FDI performance, indicated by a negative coefficient. The results of the analysis of panel data and time series also confirm that the global crisis that occurred in 1998 and 2008 did not affect the performance of FDI in ASEAN 6 and each ASEAN 6 country

In facing the crisis, strategic policies are needed especially in maintaining demand that can affect economic growth and maintaining stability in real interest rates so that investors have more confidence in making investment decisions. Furthermore, this study has limitations related to the data used because it does not distinguish between the 1998 crisis data and the 2008 crisis, so it is recommended that further research can be used as a reference for the use of research data for each crisis so that the results can be seen more clearly the impact of the crisis on FDI performance.

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