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Dynamics of Foreign Direct Investment Manufacturing Sector in Indonesia

Saparuddin Mukhtar[1], Dicky Iranto[2], Riana Raudha Adni[3]
[1,2,3]*Faculty of Economics, Universitas Negeri Jakarta, Indonesia*

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Abstract

This research was conducted to determine the short-term and long-term effects between Gross Domestic Product, Interest Rates, and Inflation on Foreign Direct Investment in the manufacturing sector for the period 2004-2017. Study applied VECM (Vector Error Correction Model), secondary data obtained from Bank Indonesia, BPS, and Bappenas. Based on the statistical results it can be concluded that: first, GDP has a positive and not significant effect in the short term, then in the long run, it has a negative effect toward FDI. Second, in the short term interest rates have a negative and not significant while in the long term interest rates have a negative and significant effect on FDI in the manufacturing sector. Lastly, inflation has a negative and insignificant effect, while, in the long-run inflation has a positive and significant effect on FDI in the manufacturing sector.

Abstrak

Penelitian ini bertujuan untuk mengetahui efek jangka pendek dan jangka panjang antara Produk Domestik Bruto, Suku Bunga, dan Inflasi terhadap Investasi Langsung Asing di sektor manufaktur pada periode 2004-2017. Studi menerapkan VECM (Vector Error Correction Model) data sekunder yang diperoleh dari Bank Indonesia, BPS, dan Bappenas. Berdasarkan hasil statistik dapat disimpulkan bahwa: pertama, GDP memiliki pengaruh positif dan tidak signifikan dalam jangka pendek, kemudian pada jangka panjang, memiliki efek negatif terhadap FDI Kedua, dalam jangka pendek suku bunga memiliki negatif dan tidak signifikan sedangkan dalam jangka panjang suku bunga memiliki efek negatif dan signifikan terhadap FDI di sektor manufaktur. Terakhir, inflasi memiliki efek negatif dan tidak signifikan, sementara itu, dalam jangka panjang inflasi memiliki efek positif dan signifikan terhadap FDI di sektor manufaktur.

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* Corresponding Author.
saparuddin@unj.ac.id, Saparuddin Mukhtar

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INTRODUCTION

Foreign investment from tradeis needed for both well-developed countries and developing countries like Indonesia (Alfarisy, 2016).Indonesia has a sufficient level of manufacturing industry rapid development requires high capital and aid from foreign countries in the form of investment. Foreign direct investment is an investment that is best suited to enhance the growth of manufacturing industries for FDI, including investment into assets substantially in the form of construction of factories, supplying a wide range of capital goods, the purchase of land for the purposes of production, and so foth.

*Foreign Direct Investment (FDI)*is the flow of long-term capital and relatively vulnerable to economic turmoil, but this time the realization of FDI experienced a fluctuating trend tends to decrease. The Investment Coordinating Board (BKPM) reported the results of the realization of the third quarter of 2018 as a whole the total investment in the third quarter fell 1.6 persen compared to the third quarter of 2017. The total investment to Rp 173.8 trillion in the third quarter of 2018. The amount of the portion of foreign direct investment (FDI) amounted to Rp 89.1 trillion. While investment in the country rose to Rp 84.7 trillion, or about 30.5 persen over the same period the previous year which amounted to Rp 64.9 trillion (BKPM, 2018).

Factors sluggish investment from abroad such as fluctuation of the rupiah against the US dollar, triggered by rising US interest rates and the strengthening of the dollar in global markets, trade war between the US and China caused investors to wait and see and indirectly delay the realization of the investment planned, The proportion of FDI realization itself a lot invested in the manufacturing sector that has great thrust in exports and economic growth, so that with the decline in FDI will impact on other sectors (Dewi, 2016).

Factors sluggish foreign investment from the domestic policy is about FDI itself especially on foreign manufacturing industry which operates in Indonesia. Keep in mind over time, Indonesia felt disadvantaged by only become without benefit more from foreign manufacturing companies that set up the company in Indonesia and therefore created the policy of Domestic Component in Indonesia. This policy requires that each foreign manufacturing companies that want to invest in Indonesia should follow the standards applicable DCL, namely component manufacturing of products of both physical and non-physical must have a domestic content of 60 persen of the products to be sold (Devanty et al., 2018).

The policy benefits Indonesia because no longer only to land for foreign firms but also benefit from the products sold the company. Unlike the case with a view of foreign investors who want to build a company in Indonesia, difficulties arise from the foreign companies now think twice to invest in Indonesia because of the presence of the DCL rules. The main factors that affect their hesitation to invest by following per under the rules of Domestic Component (DCL) are the high price of the component materials and a small market share found in Indonesia, these factors can be reflected by GDP growth, interest rates, and inflation. Foreign investors who want to build a manufacturing company in Indonesia reflected the value of the FDI manufacturing sector.

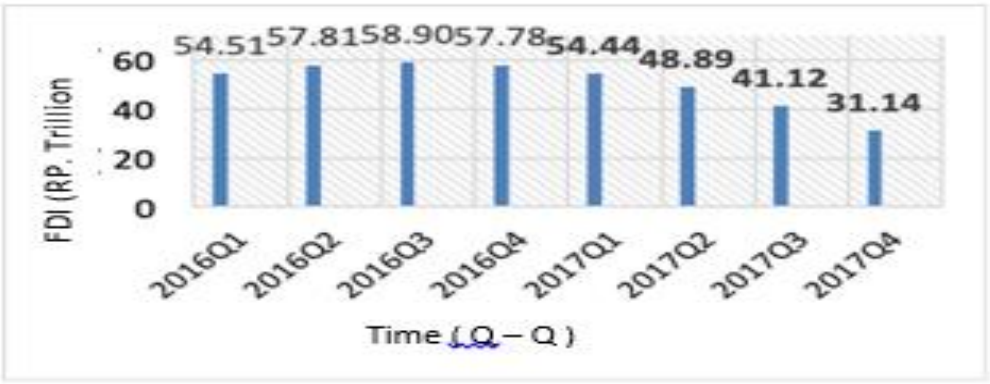

Figure 1. Realized FDI Manufacturing Sector Year2016Q1-2017Q4

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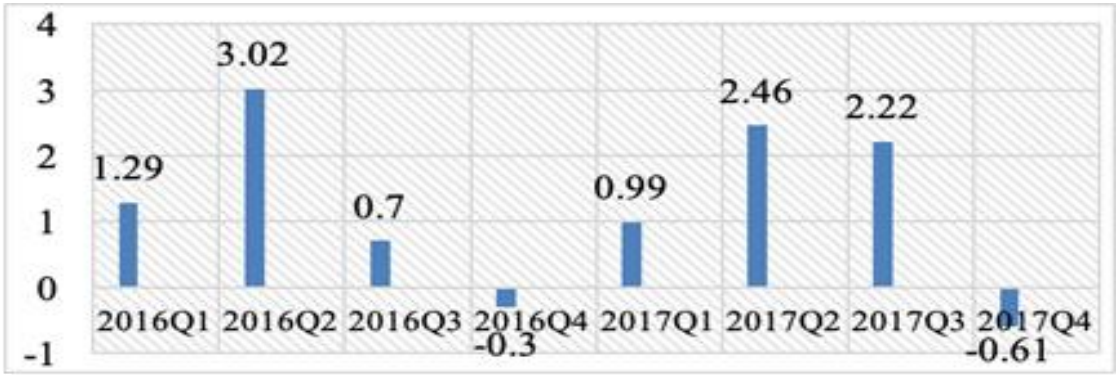
Realized FDI in the manufacturing sector from 2016-2017 (q-q) experienced a fluctuating trend, but there was no significant difference in the value of FDI from quartal-quarter. The realization of the value of the highest FDI in 2016-2017 (q-q) was 58.9 trillion rupiahs. Since the beginning of 2017Q1 to 2017Q4 continues to decline, the smallest number is 31.14 persen. This decline is unquestionable because it can affect the growth of the manufacturing industry which can be an incentive for economic growth in Indonesia. The realization of this FDI plays an important role in supporting industrial sectors, especially the manufacturing industry, and several factors affect the growth of the manufacturing sector FDI. The decline in FDI realization that happens reflected by a decrease in the growth of large and medium manufacturing industry, (Figure 2).



Source: BPS, processed by researchers

Figure 2. Production Growth of Large and Medium Manufacturing Industry (Q-to-q), 2016-2017 (%)

Growth in industrial production of large and medium manufacturing the third quarter (q-to-q) decreased by 2.95 persen against the second quarter of 2016, but an increase from the first quarter (q-to-q) of -1.29% to 3,02%. This shows that manufacturing industry production growth in quarterly I, II, II (q-to-q) fluctuation. Likewise with 2017, from the first quarter to the fourth quarter it fluctuated sharply. The decline in the growth of large and medium manufacturing industry in 2017 in the third quarter to the fourth is very significant at all of the 2.22% declines until towards a negative number, that is equal to -0.61%.

Overseas community to invest in another country would require several of considerations, one of which is the country's economic growth, as reflected in Gross Domestic Product (GDP). GDP could affect the FDI growth rate for GDP to reflect the broad market and market growth. Foreign communities who want to invest in another country would have been more interested in the broad market growth and the country is high so that GDP could affect the growth of a foreign direct investment.

In addition to GDP, other factors that affect FDI growth rate is the interest rate and inflation. Interest rates affect the community in investing because the interest rate is a reflection of the costs of investing that has a negative correlation with FDI. The higher interest rate means higher investment costs, the declining level of FDI in a country. This was confirmed by previous studies (Kurniati, Prasmuko, and Yanfitri, 2007; Tulong et al, 2013) which states the higher the interest rate, the amount of Foreign Direct Investment into Indonesia may decline. Further factors that can affect FDI is inflation. Inflation is regarded as a phenomenon of the economic problems in society because of inflation rising prices of goods and services in general and continuously.

In this study the influence of the discrepancy between the GDP, interest rates, and inflation on foreign direct investment in the manufacturing sector in Indonesia when measured by using the parameters of the short term and long term. Based on the things that need their dimensional measurements based on short term and long term in measuring the impact of GDP, interest rates, and inflation on foreign direct investment in the manufacturing sector in Indonesia.

According to Qoyum (2015) and Wang & Le (2018), macroeconomic performance in the

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measure of the two major indicators, namely GDP and inflation. These two factors are growth factors for foreign investors to invest directly in a country. According to Verma (2017), meaning that GDP measures the market value of final goods and services produced by resources that are within a country during a given period time is usually one year. According to Sukirno (2004) GDP describ to the country's production levels achieved in a given year and change from year to year. So he has an important role in describing the level of economic activity and changes achieved growth from year to year. According Timmer (2016) national product or national income is a term that applies on the value of goods and services produced within a country in a particular year.

According to Samuelson (1995) the interest payment for the use of money, while the interest rate is the amount of interest paid per unit of time is referred to as a percentage of the amount of money lent. In other words, people have to pay for the opportunity to borrow money. The cost of borrowing money, measured in dollars per year per dollar borrowed is called the interest rate.

Meanwhile, according to Mankiw et al. (2013) that the amount of investment is influenced by the level of interest rates. The need for in-depth studies related to specifying the size of the interest rate in a country that according to the state of the economy, which will affect foreign and domestic investment.

According to Rahardja & Manurung (2004), mentioned that an economy is said to have inflation if the following three characteristics are met, namely: 1) an increase in the price, 2) the increase in the price of a general nature, and 3) takes place continuously. The several indicators that can be used to determine whether an economy is being hit by inflation or not.

Based on the scientific and empirical facts above shows that, there is a mismatch between GDP growth, interest rates, and inflation on the growth of foreign direct investment in the manufacturing sector in Indonesia. As found by Ruth, et al (2014), in her study it was suggested that FDI was significantly affected by GDP growth, trade openness, interest rates, and inflation rates, where these influential factors had a direction of influence in accordance with theories and hypotheses submitted. The same thing was conveyed by Marpaung (2013) that the real GDP had a significant effect and had a positive impact on FDI in ASEAN countries, while inflation and real interest rates had a significant effect and had a negative impact on FDI in ASEAN countries.

METHOD

The analysis used in this study methods VECM (Vector Error Correction Model). The dependent variable in this study is the Foreign Direct Investment in Indonesia's manufacturing sector in the period 2004 to 2017, while the independent variable in this study is the Gross Domestic Product, interest rate, and inflation in the period 2004 to 2017.The steps performed in the method of this study is the stationary test, Optimum Lag Test, VAR Stability Test, Granger Test, Co-integration Test, then the last Test ECM.

Canova (2019), and Campbell (1994) introduced a VAR model as an alternative to the macro-economic analysis. VAR model is a model of non-structural because it is atheory. VAR models have a simpler model structure with variable amounts of minimalist where all the variables are endogenous variables with the independent variable is the lag. VAR models are designed for stationary variables that do not contain the trend. The stochastic trend in the data indicates that there is a component of long-run and short-run in the time series data. In 1987, together Engle Granger developed the concept of cointegration and error correction (error correction). Then, in 1990, Johansen and Juselius developed the concept VECM. VECM offers an easy working procedure to separate the components of a long-term and the short-term component of the process of establishing the data. Thus, different VECM with VAR where VECM can be used to model the data time series cointegrated and not stationary. VECM often referred to as a form of these restricted VAR (Sinay, 2014).

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RESULTS AND DISCUSSION

The initial step of the study of time series data is to examine the data stasioneries of each variable. Massing stationary testing each test variable were tested using the ADF (Augmented Dickey Fuller). This test is based on the value of SIC (Schwarz Information Criterion), then the next step is to compare the value of t-statistic to the critical value (critical value) 99% and 95%. If the level I (0) value of t-statistic greater than the critical value, the data stastioner on level I (0) is possible using of VAR alone but if smaller than the critical value, the data is not stationary and must be tested on grade 1 or first difference I (1). Here are the results of testing the unit root of each variable is shown in the following table:

Table 1. Stationary Test Results

ADF Test Statistic	I (0)	I (1)
FDI	-0.755982	-4.981043 *
GDP	-0.871885	-5.040237 *
IR	-2.117985	-3.200444 *
INF	-8.239488 *	-43.65548 *
Critical Value 5%	-2.916566	

Information:
FDI :Variable manufacturing sector Foreign Direct Investment
GDP : Variable of Gross Domestic Product
IR : Variable Interest Rates
INF : Variable Inflation
I (0) : Tes unit root level
I (1) : Test unit root in grade 1 (First difference)
* : Significant at 5%

The test results show that the variable FDI, GDP, and IR is not stationary at the current level for the value of t-statistics on these three variables is less than the critical value (5%), while for the variable INF already stasioner at the level of proven value t- statistically greater than the critical value (8.239488> -2.916566). Variables that are not stationary at a level should be continued with the unit root test in grade 1 (the first difference). Results of testing the unit root on the 1st level shows that all variables of FDI (4.981043), GDP (5.040237), IR (3.200444), And inflation (43.65548) Is significant at least at 5% or greater than the critical value (2.916566), So that testing can be continued by using VECM models.

Determination of optimum lag using the value Aike Information Criterion (AIC) of the VAR model. AIC value, the lowest level that can indicate the amount of lag is most optimal for research. The test results lag using the application eviews 8 obtained as follows:

Table 2. Determination of Optimum Lag

lag	LogL	LR	FPE	AIC	SC	HQ
0	0.731664	NA	1.34e-05	0.128170	0.279686	0.186069
1	260.5492	468.6905	9.43e-10	-9.433303	-8.675724	-9.143810
2	295.2851	57.21202	4.58e-10	-10.16804	-8.804401	-9.646955
3	321.9281	39.70337	3.11e-10	-10.58542	-8.615713	-9.832735
4	365.4117	57.97802	1.12e-10	-11.66320	-9.087435 *	-10.67893
5	391.2956	30.45169 *	8.45e-11 *	**-12.05081 ***	-8.868977	-10.83494 *

The test results memnunjukan that AIC (Aike Information Criterion) lies in the lowest fifth lag, the researchers used the lag 5 as a model in this study because of the lag 5 will obtain the most excellent research model. Therefore, when the first period (lag 1) has not produced a good relationship between the variables in this study was only in the time during the period of 5 (lag 5) The fourth new variables in this study have a strong relationship.

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VAR stability needs to be tested because if the VAR unstable stability estimate then analyzes Impulse Response Function (IRF) and Variance decompositions become invalid. Based on these test results, a VAR system is stable if the entire root has a modulus smaller than one, but if rootsnya has a modulus greater than one, then stability VAR unstable. Here are the results of VAR:

Table 3. Stability Testing Results VAR

ROOT	MODULUS
0.973219	0.973219
0.795291 - 0.262593i	0.837522
0.795291 + 0.262593i	0.837522
0.744506	0.744506
0.531285 - 0.293771i	0.607096
0.531285 + 0.293771i	0.607096
-0.036322 - 0.183625i	0.187183
-0.036322 + 0.183625i	0.187183

Based on VAR stability test, this study showed that the estimated VAR stabilitass be used for IRF and variance decompositions has been stable since the range of modulus has a magnitude of less than one.

Cointegration test is to determine whether there tidaknnya long-term effect on variables to be studied. If proven to exist cointegration, then stages VECM can continue, but if it is not proven, the VECM can not continue. Cointegration testing criteria in this study was based on statistical trace. If the trace statistic values greater than 5% critical value then the alternative hypothesis which states the number of cointegrating received so that it can be known how many cointegrated equation in the system.

Table 4. Johansen Cointegration Test Results Method 'Cointegration Test *(Trace statistic)*

Hypothesized No. of CE (s)	Eigenvalue	Trace Statistic	Critical Value (0.05)	Prob. **
none *	0.628958	113.9133	47.85613	0.0000
At most 1 *	0.478175	64.34136	29.79707	0.0000
At most 2 *	0.353431	31.82025	15.49471	0.0001
At most 3 *	0.181538	10.01644	3.841466	0.0015

Trace test indicates three cointegrating eqn (s) at the 0:05 level
* Denotes rejection of the hypothesis at the 0:05 level
** MacKinnon-Haug-Michelis (1999) p-values

Based on Table 4 it can be seen that the value of the trace statistic is greater than the critical value at the 5% significance level, ie113.9133> 47.85613. This means there is cointegration shows a long-term relationship between the variables so as to form a linear relationship.Thus, the Vector Error Correction Model (VECM) is an exact model used for this study.

Vector Error Correction **Model (**VECM) estimation results will be obtained short-term relationships and long-term between the variables in this study. On the results of this test, the Foreign Direct Investment manufacturing sector is the dependent variable while the independent variable is the Gross Domestic Product, interest rate, and inflation. VECM estimation results to analyze the effect of short-term and long-term effects of the dependent variable to the independent variables.

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a. The test results Short Term

The VECM method to resume testing of each data, presented in the form of vector autoregressive and regressed by themselves and other variables. In this case, the test is carried out on lag 4, this is because this study used data so that the first derivative obtained optimum lag minus one. The test results obtained are as follows:

Table 5. Results of Short Term VECM Estimated

	Variables	Coefficient	T-Stat	T-Tab
D (FDI)	EC	-0.095701	[-3.97890]	2.00665
	D (FDI (-4))	0.137629	[1.04187]	
	D (GDP (-4))	0.055142	[0.95766]]	
	D (IR (-4))	-0.013918	[-1.63510]	
	D (INF (-4))	-0.093682	[-0.75288]	
	C	0.005193	[1.33936]	

The test results showed that the model error correlation can be written as follows: ΔFDIt-1= 0.005193+ 0.137629ΔFDI$_{t-4}$ - 0.055142ΔPDB$_{t-1}$ -0.013918 ΔIR$_t$ 4-0.093682INF$_{t-4}$ -0.095701***EC***. The above equation explains that of all independent variables did not significantly affect FDI lag 4, this is not a problem because the error correction model variables (EC) has significant proven with (t-stat =3.97890> t-table = 2.00665).

Significant EC explained that the vector autoregression the suitability of FDI towards its long-term relationship with the explanatory variables, namely GDP, Interest Rates and Inflation significant effect on the manufacturing sector FDI. The results of the short-term equation, we can conclude that: (1) Variable GDP in the short-term positive effect on FDI at 5% level of 0.055142 indicating in the short term if there is an increased GDP by 1 percent and ceteris paribus, it will raise the FDI of 12:55 percent; (2) The variable interest rate in the short-term negative effect on FDI at 5% level of -0.013918 indicating in the short term if there is an increase in interest rates at 1 percent and ceteris paribus, the lower the FDI of 0.14 percent; (3) Variable inflation in the short-term negative effect on FDI at 5% level of 0.093682 in the short term if an increase in inflation of 1 percent and ceteris paribus, it will lower the FDI amounted to 0.94 percent, and (4) Variable error correction (EC) showed a significant number evidenced by the t-statistic value that is greater than t-table (3.97890>2.00665) this indicates a long-term adjustments to the lack of significant mengartikann that can still be taken into account kesignifikannya towards the long term.

b. Results of testing the Long Term

Table 6. VECM Esitimasi Long-Term Results

Cointegrating Eq:	CointEq1	T-Tab
FDI (-4)	1.000000	
GDP (-4)	-0.318392	
SE	(0.14401)	
T-stat	[-2.21090]	
IR (-4)	-0.093255	
SE	(0.03348)	2.00665
T-stat	[-2.78547]	
INF (-4)	2.712161	
SE	(1.19349)	
T-stat	[2.27245]	
C	-10.31254	

Autoregresi vekktor estimation results in long-term yields the equation that has one kointergrasi as follows: **FDI =** -10.31254 **+** 1.000000FDI- 0.318392**PDB**-0.093255**IR +**2.712161INF
VECM estimation of test results above indicate the following results: (1) In the long term

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statistically GDP variable has a negative sign and significant FDI as evidenced by the results of the t-statistic greater than t-table (2.21090 > 2.00665). This indicates the long-term changes in the Gross Domestic Product (GDP) will always be followed by foreign direct investment (FDI) in the negative direction, in other words, if there is an increase of 1% in GDP will decrease by 1% FDI amounted to0:32%, And vice versa if there is a decrease in GDP of 1% would result in an increase in FDI as much as 1% of 0:32%; (2) Variable interest rate (IR) has a negative sign and significant FDI as evidenced by the t-statistic value that is greater than t-table (2.78547>2.00665). This indicates the long-term changes in interest rates will always be followed by foreign direct investment (FDI) in the negative direction, in other words, if there is an increase in interest rates of 1% would reduce FDI of0.093% and vice versa if there is a decrease of 1% in interest rates would raise the FDI amounted to 0.93%, and (3) Variable inflation (INF) has a positive and significant sign on FDI as evidenced by the t-statistic value that is greater than t-table proved(2.27245 > 2.00665). This indicates the long-term changes in inflation (INF) will always be followed by foreign direct investment (FDI) in the positive direction, in other words if there is an increase of 1% in inflation will be followed by an increase in FDI as much as 1% of2.71% And vice versa if there is a reduction of 1% would result in a decrease of 1% FDI amounted to 2.71%.

Impulse Response Function (IRF) analysis will explain the impact of shocks or shock to one variable against another, where the analysis is not only in the short term watu but can analyze for some future horizon as informassi long term. IRF analysis also serves to see how long these effects occur. The horizontal axis is dalamm year period, while the vertical axis shows the percentage response value.

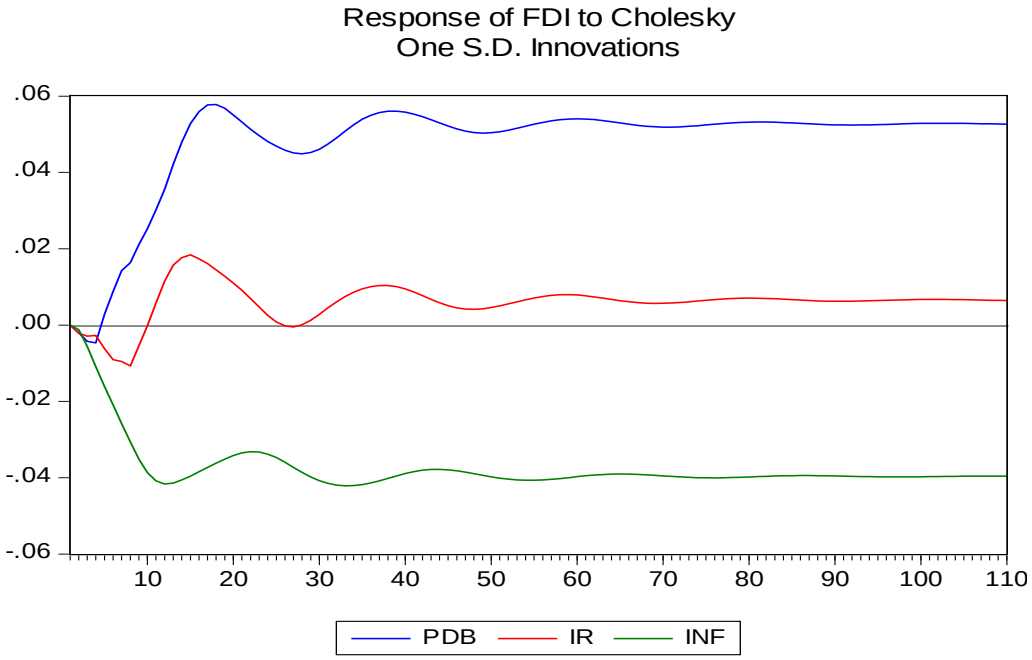

Figure 3. Impulse Response Function

Based on the picture above shows the response of each independent variable on the FDI variable with a shock that occurs can be summarized as follows: (1) The response given by the FDI due to the shocking GDP showed a negative response in the short term, but it does not take long until the whole period is beyond the response of FDI due to the shocking GDP showed a positive response. This means that in the short term increase in GDP will decrease the FDI, then in the next period the increase in GDP will increase FDI because GDP is an indicator of a market size of a country, if the country has a wider market size that is wider then foreign investors will be attracted to invest in the country so that the investment foreigners will increase; (2) The response given by the FDI as a result of shock interest rate (IR) showed a negative response to a period of 10, in the next period due to the shock response of FDI interest rate (IR) positive trends. This shows in the first period to period 10 increase in interest rates would reduce FDI because when interest rates

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increased investors tend to prefer to save their money in banks of the investing, then the next period a positive trend in interest rates did not have a significant influence on FDI because of the response given FDI during the shock variable interest rate (IR) is dominated by a negative response, and (3) The response given by the NII FDI due to the shock of inflation (INF) showed a negative response, this shows for the phenomenon of inflation will reduce FDI. The phenomenon of inflation in a country will raise the price of goods and services as a whole and lasts longer in the country, so it will reduce the interest of investors to invest in countries that are experiencing inflation.

Analysis of Variance Decomposition (VD) aims to measure the composition or contributions influence of independent variables on the dependent variable. In this study VD focused to see the influence of independent variables such as GDP, interest rate (IR), and inflation (INF) to the dependent variable is FDI manufacturing sector. The data used in this study were taken from the annual 2004-2017. This period is considered sufficient to explain the contribution of GDP, IR, and INF. VD following analytical results shown by the following table:

Table 7. Result Analysis of FDI VD

Period	FDI	GDP	IR	INF
1	100.0000	0.000000	0.000000	0.000000
2	99.01803	0.385940	0.450862	0.145165
5	87.72318	1.224034	1.389786	9.663001
10	53.23994	10.84695	2.433920	33.47919
15	29.65599	29.35664	3.946221	37.04115
20	21.13587	42.75955	3.983180	32.12140
30	21.72770	45.39514	2.440157	30.43700
40	19.51473	47.73116	2.109528	30.64458
50	19.23364	48.88538	1.755561	30.12542
60	18.74072	49.48105	1.589599	30.18863
70	18.50986	50.02652	1.458133	30.00548
80	18.32737	50.30182	1.365522	30.00529
90	18.17940	50.59114	1.298251	29.93121
100	18.08076	50.76271	1.242120	29.91440
110	17.98681	50.93390	1.200264	29.87903

Based on the above table is explained that the first period was strongly influenced by the shock FDI FDI itself by 100 percent. Meanwhile, in the first period of variables GDP, IR and INF not give effect to FDI. In the 2nd period, FDI variable is explained by the variable itself by99.01%, while 0.99% is explained by other variables, such as GDP, interest rate and inflation.

GDP variable is a dominant variable as an explanatory variable FDI, GDP variant showed a negative effect on FDI variable in the long-term period. When variant FDI declines followed by a rise in GDP variant significantly by delivering an average of 50% in the long term as an explanatory variable FDI. This is in line with the long-term results generated by VECM that GDP negatively affects FDI. IR variable contribution in explaining FDI variable in the long term by 1.2%, while the contribution of the inflation variable in explaining FDI in the long-term variable reaches 30%.

Based on the analysis VECM, variable Gross Domestic Product (GDP) had a positive effect and not significant in the short term on FDI as evidenced by the t-statistic values smaller than t-tabs (0.95766 <2.00665), this is not a problem because the EC is already a significant short-term proven with a t-statistic value that is greater than t-table (3.97890>2.00665), which means that there is a balance adjustment in the long term. The positive effects of GDP in the short-term variable explained that when there is an increase in GDP of 1 point will increase FDI as much as 0:55 points assuming variable interest rates and inflation remain. GDP is one indicator of interest for investors are reflected as the market size in a given country. In the short term if the broader market size in a country, the higher the value of foreign investment manufacturing sector that will go to those countries.

VECM research results in the long term to explain that the GDP had a negative and significant impact on FDI which is evident by the value of t-statistic greater than t-table

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(2.21090>2.00665), which defines the change in GDP in the long run, will always be followed by foreign direct investment with a negative direction. The negative effect on long-term GDP variables explained that when there is an increase in GDP of 1 point will decrease the valueDirect foreign investment manufacturing sector.

The analysis result VECM at variable interest rates shows that there is a negative influence, and not significant in the short term to variable FDI, whereas in the long term interest rate (IR) has a negative and significant impact on FDI proved to be evidenced by the value of t-statistic greater than t-table (2.78547>2.00665). IR variable negative influence on FDI in the long term to explain that when there is a rise in interest rates by 1 point will be loweredDirect foreign investment manufacturing sector as big as 0:09 points. This is because rising interest rates will make investors tend to choose to save their money in banks rather than invest because investment returns are lower than the interest rate. These results are consistent with the classical theory which says that the investment is a function of the interest rate, the higher the interest rates, hence the desire to invest will be smaller.

Based on the analysis VECM, variable Inflation has different effects in the short term and long term on foreign direct investment. Analysis of the short-term states that inflation has a negative and insignificant coefficient of 0.093682, which states that if in the short term when there is increase inflation by 1 point will lower foreign direct investment of the manufacturing sector amounted to 0094 points by assuming a variable GDP and fixed rates.

The long-term analysis states that inflation is a positive and significant impact on FDI, this is different from the previous hipotesis stating that inflation and FDI have negative relationships because when there is inflation, the price of goods and services will be more expensive, so lowering the interest of investors to invest. This positive effect is also suspected due to the level of inflation in Indonesia is still lower than the level of expectations of the investors. Therefore, although terjai rising inflation, investors kept adding to their investment activities with consideration of expected profit rate is still higher than the rate of inflation.

This study is in line with Onyeiwu and Shrestha (2004) found that in 29 countries in Africa during the time period 1975-1999 economic growth, inflation, economic openness, international reserves, and the availability of resources affect the influx of foreign direct investment. However, conventional wisdom factor, rights and political infrastructure was not essential to the flow of FDI into Africa.

CONCLUSIONS AND SUGGESTION

The conclusion of this study reflects that the results of analysis of the effect of GDP on foreign direct investment in the manufacturing sector shows that the GDP short-term positive effect and not significant then in the long term GDP a significant negative effect on FDI manufacture sector.The analysis results in interest rates on foreign direct investment in the manufacturing sector show that short-term interest rates negative and not significant then in the long term negative aberpengaruh daan bung rate significantly to the manufacturing sector FDI.The results of analysis of the effect of inflation on foreign direct investment in the manufacturing sector show that short-term inflation and no significant negative effect in the long term inflation then positive and significant impact on the manufacturing sector FDI.

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