

## Analysis of Trade Openness and Macroeconomic Variables on Foreign Direct Investment in Indonesia for the Period 1980-2022

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**Abstract:** This study analyzes trade openness and macroeconomic variables on foreign investment in Indonesia. This study uses Indonesian time series data from 1980 to 2022. The data analysis technique uses the Autoregressive Distributed Lag (ARDL) method. Data were analyzed using data stationarity test, optimal lag test, CUSUM test, classical assumption test, cointegration test and ARDL estimation processed with Eviews 10. The results showed that indirect trade openness has a positive and significant effect on Foreign Direct Investment (FDI) in the short term and long term. The exchange rate (IDR to USD) has a negative and significant effect on Foreign Direct Investment (FDI) in the short and long term. Inflation rate in the short term has a positive and significant effect but in the long term has a negative and insignificant effect on Foreign Direct Investment (FDI). GDP has a negative and significant effect in the short term but in the long term has a significant positive effect on Foreign Direct Investment (FDI).

**Keywords:** *Trade Openness, Exchange Rate, Inflation, GDP, Foreign Investment.*

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### Introduction

Foreign investment has been carried out by several developed countries in developing countries. As one of the developing countries, Indonesia has a variety of resources but the utilization of these resources is not optimal due to limited capital (Eliza, 2013). Foreign investment has a crucial role in spurring economic growth and development of a country. Foreign investment not only provides additional capital, but also brings technology, management and employment opportunities that contribute to economic diversification and increased competitiveness of national industries (Nugroho, 2017). In Indonesia, foreign investment has been a major driver of economic growth and investment in recent decades.

According to Salvatore (2006), Foreign Investment or often called foreign investment is an economic activity in the form of long-term investment by parties from foreign countries to other countries to conduct a business in the recipient country. Another definition, foreign investment is the flow of foreign capital, where foreign companies expand their companies in a country (Krugman, 2012).

Based on data from the Central Statistics Agency (BPS), the graph of foreign investment in Indonesia for the period 2006-2021 fluctuates and tends to increase. The highest investment occurred in the 2017 period, amounting to US\$ 32,239.80 million and the highest portfolio investment occurred in the 2020 period, amounting to US\$ 56,729.00 million. In 2019, there was a decrease in investment of US\$ 28,208.80 million, but there was a significant increase in project investment in the period 2019 to 2020 before a significant decline due to the Covid-19 pandemic.

Several factors are directly or indirectly related to foreign investment activities in the country, one of which is trade openness. Trade openness is the sum of the ratio of export and import trade to GDP, which is a measure of trade restrictions (Hoang, 2012). Increasing trade openness through various international trade agreements and international trade policy reforms. According to Jufri et al. (2021), trade openness creates opportunities for foreign companies to enter the domestic market more easily

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and export their products, and vice versa. Supported by Lee et al. (2021), that a country's high trade openness can encourage the country's economic growth through foreign investment or foreign direct investment.

In addition, foreign investment can also be influenced by the economic conditions of a country as a recipient of investment capital. Gross Domestic Product (GDP) as an indicator of economic growth can affect foreign investment. According to Dr. M Aprilinafiah & Basalamah (2020), GDP is an increase or decrease in output that can be produced by people in a country which is influenced by an increase in people's income through increased purchasing power. According to Hendra Permana & Rivani (2013), the increasing value of GDP, the higher the value of foreign direct investment in the long run.

In addition, a high level of GDP often has a positive impact on economic stability which can increase the attractiveness of foreign investment because investors tend to look for a stable environment to invest (Hendra Permana & Rivani, 2013). However, it is different in Jayachandran & Seilan's (2010) research that economic growth has no effect on foreign direct investment.

In addition to the level of GDP, the exchange rate is one of the factors that can affect foreign investment. According to Mankiw (2006), exchange rate is the value of a country's currency against the value of another country's currency. When a country's exchange rate depreciates, it makes Indonesian products cheaper for foreign buyers and workers' wages and production costs will decrease. This can increase the flow of foreign capital into Indonesia (Dwi Resti Pratiwi, 2020).

On the other hand, a high exchange rate can be an obstacle for foreign investors who want to invest in Indonesia, because it makes products more expensive and less attractive to foreign buyers. In Hena's research (2021), the exchange rate has a relationship with foreign investment which has an impact on the development of the Rupiah exchange rate against foreign currencies. In addition, according to Lainawa et al. (2021), an unstable exchange rate can also cause doubts for foreign investors in investing in Indonesia.

Apart from exchange rates, a country's inflation rate can affect foreign investment. Dwi Resti Pratiwi (2020) states that with a high inflation rate, production costs tend to increase, which can reduce company profitability, thereby reducing economic competitiveness and making investment less attractive. On the other hand, a low inflation rate can create price stability, which is an important factor for investors to invest in a particular country and is attractive to foreign investors (Ruth & Syofyan, 2014).

According to data obtained by Word Bank, the inflation rate in Indonesia from 2010 to 2020 has decreased. The inflation rate in 2011 reached 7.5 percent, which was lower than the inflation rate in the previous year which reached 15.3 percent. A decrease in the inflation rate triggers an increase in trade activities in the export and import sectors, which has an impact on increasing economic growth. However, in contrast to the research of Letarisky et al. (2014), found that the inflation rate has no influence on foreign investment. The high cost of investment itself can affect the inflation rate which has an impact on reducing the level of investment. These results are in line with the research of Kok & Ersoy (2009), where the inflation variable has a negative effect on foreign direct investment.

The difference in results from previous studies proves that the factors to be examined in this study are inconsistent in their effect on foreign direct investment. Some previous studies only consider external factors such as domestic economic conditions and do not consider internal factors such as international trade policies and changes in the global economy while both of these are factors that can affect how trade openness, currency exchange rates, inflation and economic growth as measured by GDP are able to affect foreign investment in Indonesia.

Therefore, this research raises the following problem formulation:

1. How does trade openness affect foreign investment in Indonesia?
2. What is the effect of changes in exchange rates on foreign investment in Indonesia?
3. How does inflation rate affect foreign investment in Indonesia?
4. How does the level of Gross Domestic Product (GDP) affect foreign investment in Indonesia?

## Literature Review and Hypothesis

### Foreign Direct Investment

Foreign direct investment (FDI) is an investment from foreign countries to the private sector through direct investment or indirect investment in the form of a portfolio (Suyatno, 2017). In the view of Islam, investment is the utilization, management, productivity of resources (assets) in order to provide benefits to mankind in the words of Allah SWT:

﴿كَيْ لَا يَكُونَ دُولَةً بَيْنَ الْأَغْنِيَاءِ مِنْكُمْ﴾

"so that wealth does not circulate among the wealthy among you". (QS. al-Hasyr [59]: 7). From the words of Allah SWT, economic activities such as investment are allowed or encouraged in the Qur'an. The above verse teaches that, some wealth is used for more important purposes such as preparing for the future and benefiting others.

In Foreign Direct Investment Theory, it assumes the reasons multinational companies choose to invest their capital directly abroad. Factors such as comparative advantage, production costs, political stability, and government policies have the ability to influence investors' decisions in terms of foreign direct investment. Whereas Thaler & Rosen's (1976) research, investors tend to prefer long-term investments over financial instruments because they are considered more profitable.

### Trade Openness

Trade openness in Squalli & Wilson (2006) is the ratio of the sum of exports and imports of a country's GDP. Trade openness can promote economic growth, which can increase the attractiveness for foreign investment. By allowing greater access to global markets, the country's exports can increase, generating additional revenue and creating more attractive business opportunities for foreign investors. In the Islamic view, as mentioned in the Qur'an Surah An-Nisa' (4) verse 29, trade is the process of buying and selling and obtaining assets that are legalized by Allah SWT.

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا أَمْوَالِكُمْ بَيْنَكُمْ بِالْبَاطِلِ إِلَّا أَنْ تَكُونَ تِجَارَةً عَنْ تَرَاضٍ مِنْكُمْ وَلَا تَقْتُلُوا أَنْفُسَكُمْ إِنَّ اللَّهَ كَانَ بِكُمْ رَحِيمًا﴾

The verse explains that Allah SWT prohibits believers from gaining profits by unlawful means, such as usury, stealing, depriving others of their property, and so on. Trading on a consensual basis is the best way to seek wealth. Trade between Indonesia and other countries is done voluntarily, in accordance with the legal basis that allows trade transactions.

David Ricardo's Theory of Comparative Advantage which states, a country to focus on the production of goods and services in which they have a comparative advantage (low cost of production) and import goods that the country is unable to produce efficiently. Trade openness can promote economic growth, which can increase the attractiveness for foreign investment. By allowing greater access to global markets, the country's exports can increase, generating additional revenue and creating more attractive business opportunities for foreign investors. This is in line with Novitasari et al. (2015), with a high level of openness it can mean that a country's economy is more open.

### Exchange Rate

Exchange Rate is the price of a country's currency that has been agreed upon to conduct trade and become a reference exchange rate against other countries' currencies. The word of Allah SWT in Surah Al-Baqarah verse 275, foreign exchange transactions in Islam (al-sharf) are considered valid in Islam.

﴿الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ذَلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَاللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا﴾

"Those who eat usury cannot stand up except as one who is demonized with madness stands up. That is because they say that buying and selling is the same as usury. Whereas Allah has justified buying and selling and forbidden usury" QS Al-Baqarah verse 275.

Aliber (1970) in The Currency Areas Hypothesis Theory, explains that foreign companies are more likely to invest in countries with stronger currencies, while countries that have weak currencies generally have limitations in terms of investing due to higher risks. As a result, foreign direct investment comes from countries with strong currencies, while countries with weaker currencies become the destination of investment. According to Kuncoro (2004), the exchange rate is a benchmark for a

country's economy, where a stable economy is indicated by a relatively stable currency value. Therefore, the exchange rate is one of the determining factors for investors in deciding to invest.

**Inflation**

In addition to exchange rates, a country's inflation rate can affect foreign investment. Where, increasing inflation can reduce domestic purchasing power due to increasingly expensive production costs, making the investment less attractive to foreign investors. It can reduce the flow of foreign investment as investors tend to allocate capital to countries with lower inflation rates (Ruth & Syofyan, 2014). A high inflation rate indicates unstable growth.

According to Keynes' theory, inflation occurs because a society wants to increase its economic capacity limit, resulting in the demand for goods always exceeding the amount available (Inflationary Gap). Keynes' theory is used to explain inflation in the short term. While this Structuralist Theory explains about the long term inflation, because of the cause of inflation that sees the rigidity of the economic structure. Because in the growth structure there is a slow growth in the production of goods and services compared to the needs of society, as a result the supply of goods is less than what is needed by society, so that the price of goods and services increases (Boediono, 1998).

**Gross Domestic Product (GDP)**

Gross Domestic Product (GDP) in Neo-Classical Theory Robert Solow and T.W. Swan developed that one of the main drivers of economic development and growth is foreign investment. Where the faster it encourages foreign investment, the higher the production capacity so that resource utilization is more efficient. In the research of Aprilinafiah & Basalamah (2020), the greater the level of GDP, the greater the flow of incoming foreign direct investment. GDP has a significant effect in the long run and at a certain level of confidence on foreign direct investment.

**Theoretical Framework**

Based on the analysis of research that has been conducted by previous studies and relevant theories, it shows the relationship between trade openness and macroeconomic variables on foreign investment in Indonesia, which can be formulated as a framework as follows:

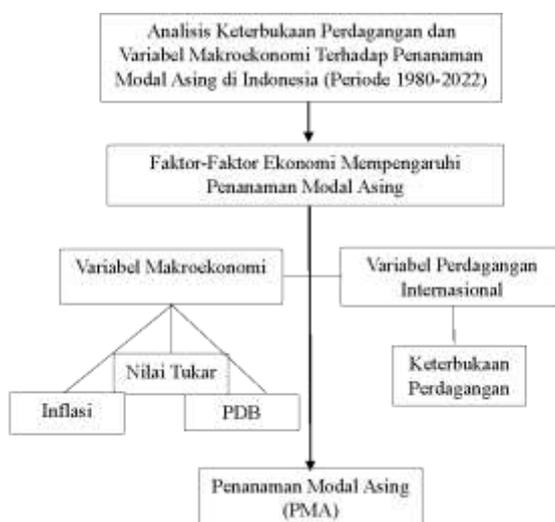


Figure 1. Theoretical Framework

The hypotheses in this study are as follows:

a. *Relationship between Trade Openness and Foreign Investment*

The more trade openness, the more international economic activity. With increased global economic activity, the production of goods and services becomes more efficient, resulting in increased inflows of foreign direct investment. In addition, as countries' trade barriers lower, this encourages competition in international markets, creating a more efficient market with

lower production costs and easier access to needs, making it attractive for investors who want to invest (Ruth & Syofyan, 2014).

*H1: Trade Openness has a positive and significant effect on foreign investment in Indonesia.*

b. *Relationship between Exchange Rate and Foreign Investment*

The weakening value of the rupiah causes an increase in the price of domestic goods so that it has an impact on the decline in the level of public consumption. The decline in public consumption reduces the company's revenue so that investors discourage investment. Supported in the research of Letarisky et al., (2014), where the exchange rate has a negative and significant effect on Foreign Direct Investment (FDI).

*H2: Exchange rate has a negative and significant effect on foreign investment in Indonesia.*

c. *Inflation Relationship to Foreign Investment*

According to Dr. Nugroho (2017), the direct impact of inflation includes an increase in production costs and a decrease in consumer demand, which can reduce the competitiveness of the industry and reduce the interest of foreign investors. Indirect impacts involve macroeconomic stability and monetary policy that can affect foreign investor confidence.

*H3: Inflation has a negative and significant effect on foreign investment in Indonesia.*

d. *Relationship between GDP and Foreign Direct Investment*

The process of increasing output per capita in the long run is one of the factors that affect foreign investment. The higher the increase in GDP, the higher the value of incoming investment. In the research of Aprilinafiah & Basalamah (2020), it was found that the Gross Domestic Product (GDP) variable had a positive and significant effect on foreign investment in Indonesia.

*H4: GDP has a positive and significant effect on foreign investment in Indonesia.*

## Results

### Stationarity Test

The following are the results of data stationarity testing for trade openness and macro variables on foreign investment in Indonesia.

Table 1. Stationarity Test at the Level

Variable	ADF Value	MacKinnon Critical Value			Prob.
		1 %	5 %	10 %	
FDI	-1.359726	-3.596616	-2.933158	-2.604867	0.5927
Trade Openness	-3.079878	-3.596616	-2.933158	-2.604867	0.0358
Exchange rate	-0.570856	-3.596616	-2.933158	-2.604867	0.8662
Inflation	-5.637386	-3.596616	-2.933158	-2.604867	0.0000
GDP	2.116277	-3.596616	-2.933158	-2.604867	0.9999

Source: Secondary Data, processed 2023

Based on the results of stationarity testing using ADF above, it shows that the foreign investment (FDI), exchange rate and GDP variables are not stationary at the level level seen from the Prob value. Greater than 0.05 and indicates that the mean, variance and constant value of the variables used are not constant. So it is necessary to test again at the first difference level with the previous method, namely the Augmented Dickey-Fuller (ADF) method.

Table 2. Stationarity Test at the First Difference Level

Variable	ADF Value	MacKinnon Critical Value			Prob.
		1 %	5 %	10 %	
FDI	-8.361866	-3.600987	-2.935001	-2.605836	0.0000

Trade Openness	-9.619666	-3.600987	-2.935001	-2.605836	0.0000
Exchange rate	-7.715885	-3.600987	-2.935001	-2.605836	0.0000
Inflation	-10.82457	-3.600987	-2.935001	-2.605836	0.0000
GDP	-4.333573	-3.600987	-2.935001	-2.605836	0.0013

Source: Secondary Data, processed 2023

Based on the results of stationary testing at the First Difference level, it is found that all variables have a value of Prob. lower than 0.05 so it can be said that all variables are stationary at the First Difference level. In the ARDL model, stationary testing at the Second Difference level is avoided.

**Optimal Lag (Uji Panjang Kelambanan)**

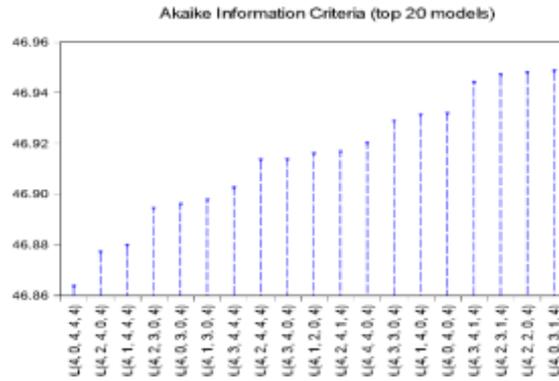


Figure 2. Optimal Lag Results AIC Approach

Source: Secondary Data, processed 2023

Based on the results of the optimal lag testing graph above, the smallest value of Akaike Information Criteria (AIC) is the best capital of the 20 best models given. The graph above, shows the selected model is ARDL (4, 0, 4, 4, 4), where Foreign Direct Investment as variable Y amounts to 4 lags (FDI(-1), FDI(-2), FDI(-3), FDI(-4)). Trade Openness as variable X1 amounts to 0 lags. Furthermore, Exchange Rate as variable X2 amounts to 4 lags (Exchange Rate(-1), Exchange Rate(-2), Exchange Rate(-3), Exchange Rate(-4)). While Inflation as variable X3 amounts to 4 lags (Inflation(-1), Inflation(-2), Inflation(-3), Inflation(-4)). And Gross Domestic Product (GDP) as variable X4 amounts to 4 lags (GDP(-1), GDP(-2), GDP(-3), GDP(-4)).

**CUSUM Test**

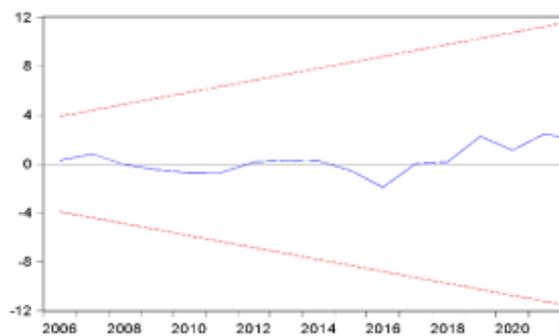


Figure 3. CUSUM Test Result

Source: Secondary Data, processed 2023

The overall results of the model above show that the estimated model has stable parameters with a significant 5%. The model mentioned above in the optimal lag can still be categorized as a model that estimates stable parameters. This illustrates the existence of a constant  $\beta$  vector estimated from period to period ( $E(W_t)=0$ ).

### Heteroscedasticity Test

Table 3. Heteroscedasticity Test *Breusch-Pagan-Godfrey*

F-Statistic	0.582154	Prob. F(20,17)	0.8766
Obs *R-Squared	15.44656	Prob. Chi-Square(20)	0.7503
Scaled Explained SS	4.796702	Prob. Chi-Square(20)	0.9998

Source: Secondary Data, processed 2023

Based on the results of the Heteroscedasticity test, the Breusch-Pagan-Godfrey test explains that the Probability Chi-Square (20) value of 0.7503 is greater than 0.05. Which means that there is no heteroscedasticity problem in the model so that it can be fulfilled.

### Autocorrelation Test

Table 4. Autocorrelation Test

F-Statistic	0.845481	Prob. F(2,15)	0.4488
Obs *R-Squared	3.849780	Prob. Chi-Square(2)	0.1459

Source: Secondary Data, processed 2023

Based on the table above, testing autocorrelation using the Lagrange Multiplier Test (LM-test) shows that the Probability Chi-Square (2) value is 0.1459. From these results, it means that the value is greater than 0.05 so it can be concluded that the data in this research variable does not have autocorrelation.

### Cointegration Test

Table 5. Cointegration *Bound Test*

Test Statistic	Value	K
F-Statistic	8.703200	4
Signifikansi	I (0) Bound	I (1) Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: Secondary Data, processed 2023

The results of the Bound Test Cointegration Test above show that the F-statistic value of 8.703200 is greater than I(0) and I(1). This shows that the ARDL model estimation results can use the reference level of significance up to  $\alpha = 1\%$ ,  $5\%$  and  $10\%$ , and these results are able to show the existence of long-term relationships between variables in this study.

### Partial Test (t test)

Table 6. ARDL Model Estimation Test Results

Variable	Coefficient	t-Statistic	Prob.	Results
C	-1.10E+10*	-2.091643	0.0518	Significant
D(PMA (-1))	-	-6.405280	0.0000	Significant
	1.281151***			
Trade Openness	2.73E+08*	2.020229	0.0594	Significant
D(Exchange rate (-4))	3488236**	2.311364	0.0336	Significant
Inflation (-4))	-2.72E+08**	-2.170351	0.0444	Significant
D(PDB (-4))	0.128291***	3.463909	0.0030	Significant
R-Square	0.809927			
F-Statistic	3.621958			
Prob(F-statistic)	0.004891			

Source: Secondary Data, processed 2023

The test results above show that:

1. Foreign Investment (FDI) has a probability value of 0.0000 smaller than the 1% significance level (0.01). So, it can be said that H0 is rejected and Ha is accepted,
2. Trade openness has a probability value of 0.0594 greater than the 5% significance level (0.05), but smaller than the 10% significance level (0.10). So, it can be said that H0 is rejected and Ha is accepted.
3. The Exchange Rate has a probability value of 0.0336 which is smaller than the 5% significance level (0.05). So, it can be said that H0 is rejected and Ha is accepted.
4. Inflation has a probability value of 0.0444 less than the 5% significance level (0.05). So, it can be said that H0 is rejected and Ha is accepted,
5. Gross Domestic Product (GDP) has a probability value of 0.0030 less than the 1% significance level (0.01). So, it can be said that H0 is rejected and Ha is accepted.

**Simultaneous Test (f Test)**

Based on the results of the F-Statistics of the ARDL Estimation Test in table 6. above, the F-Count value of 3.621958 is greater than the F-table of 2.62. So that in the long term and short term together have a significant influence on foreign investment in Indonesia. In addition, it can be seen that the probability value of F-statistic is 0.004891 < 0.05. So it can be concluded that the independent variables used in this study jointly affect the dependent variable, namely Foreign Direct Investment (FDI) in Indonesia.

**Determinant Test R-Square (R2)**

From the R-Square results in the ARDL estimation test in table 4.8 above, the R-square value is 0.809927. This means that 80.9% of trade openness variables, exchange rates, inflation and GDP affect foreign investment in Indonesia, the remaining 19.1% is influenced by other variables not included in this study.

**Short-Term ARDL Estimation**

The ARDL (*Autoregressive Distributed Lag*) model is a dynamic model that can look at the influence of independent variables and dependent variables over time. This includes the influence of the dependent variable from the past on the value of the current dependent variable. In other words, the ARDL model can see the relationship between long-term and short-term. A variable can be said to be significant, if the Probability value is less than the significance levels of 1% (0.01), 5% (0.05), and 10% (0.10).

Table 7. Short Term Estimation Test Results

Variable	Coefficient	t-Statistic	Prob.
C	-1.10E+10	0.000000	0.0000
D(FDI (-1))*	-5.280084	-7.046782	0.0000
Trade Openness**	2.73E+08	0.000000	0.0000
D(Exchange rate (-1))	-9986541	0.000000	0.0000
Inflation (-1)	-63240022	0.000000	0.0000
D(GDP (-1))	0.174672	5.802863	0.0000
D(FDI (-1))	2.998933	4.953618	0.0001
D(FDI (-2))	1.776409	4.363037	0.0004
D(FDI (-3))	0.588681	2.675839	0.0160
D(Exchange rate, 2)	-5659997.	0.000000	0.0000
D(Exchange rate (-1))	581679.9	0.000000	0.0000
D(Exchange rate (-2))	-1751160.	0.000000	0.0000
D(Exchange rate (-3))	-3488236.	0.000000	0.0000
D(Inflation)	2.37E+08	0.000000	0.0000
D(Inflation (-1))	3.15E+08	0.000000	0.0000
D(Inflation (-2))	1.96E+08	0.000000	0.0000
D(Inflation (-3))	2.72E+08	0.000000	0.0000
D(GDP, 2)	-0.043448	-1.513533	0.1485
D(GDP(-1))	-0.212125	-4.637772	0.0002

D(GDP(-2))	-0.178233	-4.075745	0.0008
D(GDP(-3))	-0.128291	-3.463909	0.0030

Source: Secondary Data, processed 2023

Table 8. Long-Term Estimation Test Results

Variable	Coefficient	t-Statistic	Prob.
Trade Openness	51753123	2.049715	0.0561
D(Exchange rate)	-1891360.	-5.601743	0.0000
Inflation	-11977087	-0.275992	0.7859
D(PDB)	0.033081	8.282579	0.0000
C	-2.09E+09	-2.104032	0.0506

$$EC = D(FDI) - (51753122.7681 * TRADEOPENNESS - 1891360.3431 * D(EXCHANGERATE) - 11977086.6642 * INFLATION + 0.0331 * D(GDP) - 2086027964.7451)$$

Source: Secondary Data, processed 2023

Based on the results of estimation tests in the short and long term, it is known that:

- a. The Effect of Trade Openness Variables on Foreign Investment in Indonesia.  
In the results of the T Test described above, individual trade openness has a positive and significant influence on foreign investment in Indonesia. In the short term, increasing trade openness by 1% will also increase foreign investment by 2.73% although indirectly. In the long run, trade openness increased by 1% while foreign investment increased by 5.17%. So it can be said that trade openness has a positive and significant effect on foreign investment in Indonesia.
- b. The Effect of Exchange Rate Variables on Foreign Investment in Indonesia.  
Based on the results of testing with *Autoregressive Distributed Lag* (ARDL) shows that the exchange rate has a negative and significant effect on Foreign Direct Investment (FDI) in Indonesia in the short and long term. The higher the exchange rate indicates that the exchange rate is weakening, which can reduce foreign investment. In the short term, the exchange rate in the previous three periods increased by one rupiah, which will reduce foreign investment by USD 3488236. In the long run, the exchange rate increases by one rupiah, which will reduce foreign investment by USD 1891360. So it can be said that the exchange rate has a negative and significant effect on foreign investment in Indonesia.
- c. Variable inflation in the short run  
Based on the results of testing with *Autoregressive Distributed Lag* (ARDL) inflation has a positive and significant effect on Foreign Direct Investment (FDI) in Indonesia in the short term. Where, the inflation rate in the previous three periods increased by 1%, so it can increase foreign investment by 2.72% with a probability of 0.0000. However, in the long run, the inflation rate has a negative and insignificant effect on foreign investment. Where, an increase in the inflation rate of 1% causes a decrease in foreign investment by 1.19% with a probability value of 0.7859 greater than the significance level of 5% (0.05).
- d. GDP Variables in the Short Run  
Based on the results of testing with *Autoregressive Distributed Lag* (ARDL) in the short term, Gross Domestic Product (GDP) has a negative and significant effect on Foreign Direct Investment (FDI) in Indonesia. Where, GDP in the previous three periods increased by USD 1, it will reduce foreign investment by USD 0.128291 with a probability of 0.0003. However, in the long run, GDP has a positive and significant effect on foreign investment. Where, an increase in GDP of USD 1 causes an increase in foreign investment of USD 0.033081 with a probability value of 0.0000 smaller than the significance level of 5% (0.05).

## Conclusion, Limitations, and Suggestions

Based on the results of research that has been conducted on the analysis of trade openness and macroeconomic variables on foreign investment in Indonesia with the Autoregressive Distributed Lag (ARDL) approach, several conclusions are obtained as follows:

1. Trade openness exerts an indirect positive and significant influence both in the short and long term. This shows that even any increase in trade openness can increase foreign investment in Indonesia.

Where, increasing the openness of trade of a country not only encourages an increase in foreign investment with easy import and export activities of goods, but trade openness can increase the flow of new technology and knowledge into the host country.

2. The exchange rate (Rupiah to USD) has a negative and significant influence on foreign investment in Indonesia. Where, if there is an increase in the exchange rate (weakening), it will reduce foreign investment. This is because, the weakening of the exchange rate which has an impact on the company's costs is getting bigger, thus suppressing the profits obtained by the company.
3. Inflation has a positive and significant influence on foreign investment in the short term. However, in the long run, inflation has a negative and insignificant effect on foreign investment. This is because, the high inflation rate makes production costs increase and causes goods and services to be less competitive so that the profits that will be obtained by companies decrease, reducing the interest of foreign investors to invest in the country. GDP has a negative and significant influence on foreign investment in the short term. However, in the long run, GDP has a positive and significant effect on foreign investment. This shows that the increasing economic growth of a country, the more interested investors are to invest their capital. This is because, a more promising market can provide higher returns or capital gains for investors.

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