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The Impact of Foreign Direct Investment and Financial Sector Development on Economic Growth in Indonesia

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Abstract

The research analysis aims to determine whether Foreign Direct Investment (FDI) and the Development of the Financial Sector have a significant impact on the short-term and long-term economic growth of Indonesia. The data analysis technique used is the quantitative method with the ARDL approach. Secondary data collection is derived from BI (Bank Indonesia), BPS (Badan Pusat Statistik), and OJK (Otoritas Jasa Keuangan) for the period from the first quarter of 2013 to the second quarter of 2022, totaling 40 data points.The research results indicate that in the short term, financial sector development has a negative and significant impact on Indonesia's economic growth, while foreign direct investment has a positive and significant effect on Indonesia's economic growth. And the result in the long term, financial sector development has a negative and significant impact on Indonesia's economic growth, but on foreign direct investment, has a negative but not significant effect on Indonesia's economic growth. Key strategies to enhance the role of FDI and financial development on economic growth in developing and least developed Indonesia also discussed in the paper.

Keywords: FDI; financial development; GDP; economic growth

1. Introduction

Economic growth serves as a crucial indicator for the long-term success of a country's economy. This is reflected in the development of potential Gross National Product (GNP) and the increase in per capita output, which influences the standard of living for citizens. Investment, particularly Foreign Direct Investment (FDI), plays a pivotal role in boosting production, creating employment opportunities, and driving innovation. In Indonesia, understanding the impact of FDI and the development of the financial sector on economic growth is essential due to the country's significant economic potential as a developing nation. In this context, policies supporting foreign capital investment are endorsed to achieve stable economic growth. Furthermore, the development of the financial sector is also crucial in enhancing resource allocation efficiency, innovation, and investment, which collectively impact overall economic growth. Despite economic challenges such as financial crises and the COVID-19 pandemic, understanding the interplay between FDI and the financial sector with economic growth is necessary for formulating effective and sustainable policies.

2. Literature Review

2.1. Gross Domestic Product (GDP)

The definition of profitability or what is often referred to GDP as is a process of long-term per capita output growth or a process of changing a country's economy on an ongoing basis towards better conditions by maximizing the potential and resources of a country. The indicator commonly used to measure economic growth is gross domestic product-GDP (Gross Domestic Product-GDP) data which measures the total income of each person in the economy.

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2.2. Foreign Direct Investment (FDI)

Foreign direct investment is concluded as reinvestment of company income and the provision of loans, both short and long term, between the parent company and its subsidiaries or affiliates. Foreign direct investment can be said to be a concrete manifestation of international capital flow expansion activities where companies from one country establish or expand their companies in other countries [1]. FDI relates to investment in productive assets, for example the purchase or construction of a factory, purchase of equipment, land, buildings, construction of new equipment or buildings by foreign companies.

2.3. Financial Sector

The financial sector is a set of institutions, instruments, markets and legal and regulatory frameworks that allow transactions to be carried out by providing credit [2]. Basically, financial sector development is about reducing costs that arise in the financial system. The process of reducing costs in obtaining information, enforcing contracts, and entering transactions resulted in the emergence of financial contracts, markets, and intermediaries. The financial market is a part of financial sector too. The financial market aims to efficiently allocate savings from fund owners to end fund users. Fund owners are those, both individuals and institutions or business entities, who set aside excess funds to be invested to make them more productive [3].

2.4. Financial Sector Development (FD)

According to [2], financial sector development can be defined as that a process of improvement in the quantity, quality and efficiency of financial intermediary services is called financial sector development. Good financial sector management will reduce transaction and information costs which will determine savings levels, investment decisions, technological innovation and economic growth in the long term. Financial sector development can spur economic growth through two channels, namely through its impact on the accumulation of both physical and human capital, and through its impact on the level of technological progress [3].

2.5. Foreign Direct Investment Theory

The foreign direct investment theory was proposed by Abbes et al., in 2015. This theory discuss how in all countries, especially developing countries, foreign direct investment has an important role and is even considered an engine of economic growth and development [4]. Under good conditions, foreign capital can help reduce the gap between capital needs and national savings, increase skill levels in the host economy, and increase market access as well as contribute to technology transfer and good governance. Foreign direct investment has a positive impact on economic development; in addition, economic scale, human resources, infrastructure and wage levels, and regional differences interact actively with foreign direct investment and economic growth [5].

2.6. Financial Sector Development Theory

The Financial Sector Development theory was proposed by Chee and Nair in 2010. This theory discuss how the development of the financial sector increases the contribution of foreign direct investment to economic growth in the region and the complementary role of foreign direct investment. Meanwhile, in less developed countries, the financial sector plays an important role in that region in spurring their country's economic growth.

3. Research Method

The research is type of quantitative descriptive research method. Descriptive research is a type of research that shows the characteristics of an object, either the population or the phenomenon to be studied. Meanwhile, the quantitative analysis method is a research method by collecting data and analysis results which aims to develop and use mathematical models, theories and hypotheses related to the phenomenon being raised.

The type of data used is secondary data, namely data or information obtained from other parties other parties, in the form of data that supports this research. Secondary data used is time series from 2013-2022 for the period from the first quarter of 2013 to the second quarter of 2022, totaling 40 data points. The data source used by the author in collecting data for this research is the OJK and BPS websites.

This study uses two variable dependent variable and one independent variables. The dependent variable in this study is foreign direct investment (FDI) and financial sector development (FD), while the independent variables in this study is Gross Domestic Bruto (GDP) of Indonesia. This research used ARDL method. For the model that will be used:

$$Y = C(1)*D(PE(-1)) + C(2)*D(FDI) + C(3)*D(FD) + C(4)$$

In the regression model estimation method which is the choice of model or estimation technique to test the regression equation to be estimated can be used five tests, namely Unit Root Test, Optimum Lag, Bound Test, ARDL Model and CUSUM Test. In this study, hypothesis testing was also carried out with tests, namely the Coefficient of Determination Test (Adjusted R-squared),

T Test (Partial), and F Test (Simultaneous).

4. Results and Discussion

Table 1. Result of ARDL Model

Selected Model: ARDL(1, 0, 0)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(PE(-1))	0.173680	0.142328	1.220279	0.2308
D(FDI)	0.040660	0.036996	1.099025	0.2795
D(FD)	-2.511662	0.539896	-4.652125	0.0000
C	-0.073943	0.283560	-0.260767	0.7958

R-squared	0.435152	Mean dependent var	-0.015263
Adjusted R-squared	0.385312	S.D. dependent var	2.059194
S.E. of regression	1.614450	Akaike info criterion	3.895166
Sum squared resid	88.61924	Schwarz criterion	4.067544
Log likelihood	-70.00816	Hannan-Quinn criter.	3.956497
F-statistic	8.731053	Durbin-Watson stat	2.057507
Prob(F-statistic)	0.000197		

Based on the regression results in the table, it can be seen that the results of the regression equation in this study are:

$$D(PE) = 0.17*D(PE(-1)) + 0.04*D(FDI) - 2.51*D(FD) - 0.07$$

Based on the results of estimating parameter coefficients from the ARDL model (1,0,0) which have been written in the form of ARDL model equations, the relationship between the dependent variable and the independent variable can be interpreted. The interpretation of this model explains the relationship between the variables Y(PE), X1(FDI), and X2(FD) which influence the PE variable and also the influence of the PE variable in the previous period on the current PE.Based on equation, it can be concluded that Y(PE) for the first period influences the current PE value. In the first period, PE has a positive influence. If the PE value in the first period increases by 1% then this will increase the current PE by 0.17%. Then the current FDI has a positive influence, where when it experiences an increase of 1% it will encourage an increase in the current PE of 0.04%. Finally, for FD which has a negative influence. If the current FD increases by 1%, it will reduce the current increase in PE by 2.51%.

Based on the results of the regression analysis, the Adjusted R-squared value is 0.435152. This shows that the percentage contribution of the influence of the independent variable on the dependent variable is 43.51%. This means that the independent variables used in the model are able to explain 43.51% of the dependent variable. The remaining 56.48% is influenced by other variables that are not in the model or that are not included in the variables of this study.

Based on the results of the regression test using the Fixed Effect model, the results of the simultaneous test (F-test) were obtained with a probability value of 0.000197 < (0.05), thus it can be concluded that H0 is rejected and H1 is accepted, meaning that Foreign Direct Investment and Financial Sector Development together have a significant effect on Economic Growth in Indonesia.

Based on the results which is by the T-test, can see long-term and short-term relationships. The results of short-term estimation tests, it is known that the FD and FDI variables have a significant effect on Indonesia's economic growth because FD has a probability of 0.0000 < 0.05 and FDI has a probability of 0.0528 < 0.05. Then from the test results above it is known that in the short term, variables X1(FDI) and X2(FD) have different influences on economic growth (Y). Where FDI has a positive influence and FD has a negative influence. The FDI coefficient value of 1.17 (X1) shows that if FDI increases by 1 trillion rupiah in the short term, Indonesia's economic growth will increase by 1.17 percent. And the FD coefficient value of -3.40 shows that if FD (X2) increases by 1 billion rupiah in the short term, Indonesia's economic growth will decrease by 3.40 percent.

Based on the results of the long-term estimation test above, it is known that in the long term there is only one variable that has a significant influence, namely the FD (financial development) variable which has a probability of 0.0029 < 0.05. However, FDI does not have a significant effect because it has a probability of 0.3089 > 0.05. The FDI coefficient value of 0.04 indicates that FDI has a positive effect on Indonesia's economic growth. If FDI increases by 1 trillion rupiah in the long term, it will increase economic growth by 0.04 percent. And the FD coefficient value is -3.03, indicating that FD has a negative effect on Indonesia's economic growth. If FD increases by 1 billion rupiah in the long term, Indonesia's economic growth will decrease by 3.03 percent. From the test results above, it is concluded that the FDI variable in the long term has a positive but not significant effect on Indonesia's economic growth. Then the FD variable in the long term has a negative and significant effect on economic growth.

5. Conclusion

Based on the results of panel data regression testing which includes model testing, individual effects, and hypothesis testing,

the conclusions obtained from this study for Effect in the short term, Foreign direct investment (FDI) has a positive and significant effect on Indonesia's economic growth. Meanwhile Financial development (FD) has a negative and significant effect on Indonesia's economic growth. The long-term effect shows that foreign investment (FDI) has no significant effect on Indonesia's economic growth. Meanwhile, financial development has a negative and significant effect on Indonesia's economic growth.

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