Type of Paper Article

The Effect of FDI and PMA on Economic Growth in Indonesia With Labor As a Moderating Variable

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Abstract: The purpose of this study is to evaluate the effect of foreign debt and foreign direct investment (FDI) on Indonesia's economic growth for the period 2012-2021, with labor as a moderating variable. The research methodology used is quantitative method and the analysis technique used is multiple regression analysis technique. The results showed that partially variable X1 (foreign debt) had an effect on Indonesia's economic growth, while variable X2 (FDI) had no significanteffect. But if tested simultaneously, the two X variables have a significant influence on economic growth in Indonesia.

Keywords: FDI; external debt; and economic growth.

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1. Introduction

Today countries have an obligation to cooperate in helping other countries achieve prosperity in the economic sector. Collaboration between countries can increase eco- nomic growth and trade, allowing for business investments to be made through interna- tional economic activity. If there is an increase in economic growth and trade, this can have a positive impact on investment flows between countries with higher volumes. Therefore, such cooperation is expected to accelerate economic development and create greater economic growth. Economic factors commonly associated with economic growth are Foreign Direct Investment (FDI) and Foreign Debt (ULN). (Setiawan, 2019). When domestic sources of funds are limited, the government may choose to use external debt as a way to resolve the deficit. (Atmadja, 2000).

The government has issued Bank Indonesia Regulation number 18/4/PBI/2014 to regulate the concept of prudence in managing external debt by non-bank business actors.The government's strategy in managing external debt is to seek funding from other countries. Bank Indonesia is responsible for controlling government and private external debt through these regulations. (PBI, 2016). The use of foreign debt should aim to im- prove the country's infrastructure. For example, the Indonesian government has had external debt from 2016 to 2021:

Table 1 External Debt

No.	Year	External Debt/USD
1	2016	144,525
2	2017	153,670
3	2018	172,604
4	2019	184,191
5	2020	191,416
6	2021	192,471

Source: BPS 2022

Table 1 above is a description of the growth in the value of Indonesia's external debt (ULN) from 2016 to 2021. The data contained in the table shows a comparison between the value of government external debt which tends to increase every year. However, the results of research conducted by Pellu (2019) shows that the demand for external debt can place a high burden on government spending in making debt payments if external debt in the government sector continues to increase every year. However, in contrast to the results of other studies, including research by Rudi *et al*. (2016)Rudi et al. (2016) found that external debt can make a major contribution to the economic progress of the borrowing country. Like other developing countries, Indonesia needs to use external debt to stabilize its economy in the midst of limited domestic financial resources. (Atmadja, 2000). However, it must be balanced with an increase in production factors to achieve the purpose of external debt as an alternative source. This is mentioned in research (Setiawan et al., 2022).

The government continues to try to increase capital inflows into Indonesia with the aim of funding development in the economic sector which requires greater costs. Therefore, the government provides convenience for foreign investors through various policies to attract them, such as the opening up of foreign investment (UU, 1997). (LAW, 1997).

FDI and portfolio investment are two forms of development finance that will drive the expansion of the country's economy. Indonesia is a developing country that has a rapid flow of capital that provides a good opportunity to receive economic development financing. In addition to foreign debt, foreign investment such as direct investment and portfolio investment are also considered as sources of financing national economic development. According to (Setiawan, 2019). The increase in foreign debt every year further emphasizes the importance of foreign investment. This can be clearly seen in Table 2 below:

Table 2 Foreign Invstment

No.	Year	FDI Billion/USD
1	2016	29,0
2	2017	32,2
3	2018	29,3
4	2019	28,2
5	2020	28,7
6	2021	31,1

Source: BPS 2022

The changes that occur from year to year are questionable, especially since 2016 where there was an increase of 29 billion and increased again in 2017 by 32 billion but decreased in 2018 to 2020 and only increased again in 2021 but not as much as in 2017. From the table above, it can be seen that foreign investors are still not fully interested in the offers made by the Indonesian government to invest their capital.

Previously, there have been many studies similar to this research. For example, Malik (2017) stated that foreign debt has a positive influence on economic growth. This issupported by Rudi *et al*. (2016) other studies such as those stating that foreign aid can stimulate economic growth. Abate (2022), Ayenew (2022) also found results in line with these findings. However, there are studies that have different views such as Fitri Murniawati & Achmad (2021) which states that external debt has a small negative im- pact on economic growth. These findings are also in line with research by Pellu (2019).

In a recent study, the relationship between foreign investment and economic de- velopment was examined. Research conducted by Adi & Syahlina (2020) found that foreign investment had a positive impact on the Gross Regional Domestic Product of Jambi province from 2000 to 2018. This finding is in line with other studies which state that foreign investment can be a source of economic growth through technological change, increasing production, improving infrastructure, and creating jobs (Rudi et al., 2016). (Rudi et al., 2016). Therefore, external debt and foreign investment are important for the government in covering the budget deficit caused by government spending that exceeds revenue. Other research by Rumalutur *et al*. (2022) found that economic growth in 33 provinces in Indonesia is influenced by foreign investment, so that the greater the value of a country's foreign investment, the higher its economic growth.

In another study conducted by Adedokun (2017) using the Generalized Method of Moments (GMM) approach in Sub-Saharan African countries from 1996 to 2012, different results were found. The results showed that foreign aid has an insignificant and negative relationship with economic growth. Therefore, the governance and size of foreign aid are critical to the effectiveness of foreign aid in sub-Saharan African countries. In addition, the same study also found that foreign aid only had a beneficial impact on economic growth in the short run in Cambodia between 1980 and 2014 using the ARDL dependent testing approach. However, in the long run, foreign aid is detrimental to Cambodia's economic growth (Sothan, 2017). Other researchers who conducted research in 48 African countries from 1996 to 2014 by applying DOLS and FMOLS techniques also found that foreign aid has a negative influence on economic growth (Yahyaoui & Bouchoui, 2017). (Yahyaoui & Bouchoucha, 2021)..

There are other factors that can affect a country's economic growth besides the fac- tors mentioned earlier. One such factor is labor. Population growth and labor growth are considered positive factors that can trigger economic growth. For example, with more workers, production will increase, and population growth will create a larger market for the distribution of previously produced goods. However, the positive or negative effect of population growth on economic growth is debatable and depends on the ability of the regional economic system to absorb and utilize the labor growth productively. (Astuti et al., 2017). Research by Hellen *et al*. (2017) shows that there is a substantial correlation between labor-related factors and economic growth, a result supported by another studyconducted by Prasetyawan *et al*. (2017), and Koyongian *et al*. (2019).

Economic Growth

Economic growth is the long-term ability of a country to produce various goods and services to meet the needs of its population. To maintain sustainable development, high economic growth is necessary. The country must continue to increase its income every year to accommodate the increasing economic needs due to population growth. This is emphasized by Todaro (2015) as the main requirement for sustainable development.

Foreign Debt on Indonesia's Economic Growth

The utilization of debt or loans from other countries or institutions is one way of financing that can be used to increase development and encourage investment to support economic growth. Malik (2017) found that the use of foreign debt can affect economic growth. This result is also supported by research conducted by Rudi *et al*. (2016), Abate (2022), and Ayenew (2022)(2016), Abate (2022), and Ayenew (2022), which state that economic growth is influenced by aid from other countries.

HI: External Debt Affects Economic Growth in Indonesia.

Foreign Direct Investment (FDI) on Indonesia's Economic Growth

FDI or foreign investment flows coming from abroad and aimed at the private sector can be in the form of direct or indirect or portfolio investment. This is conveyed by Didu (2019). Income from foreign investment can also be an impetus for a country's economic growth, such as the results of research by Rumalutur et al. Rumalutur *et al*. (2022) which shows that economic growth in 33 provinces in Indonesia is influenced by FDI. Therefore, the higher the flow of foreign capital into a country, the faster its economic growth will be.

H2 : FDI has a positive effect on economic growth in Indonesia.

Labor to Indonesia's Economic Growth

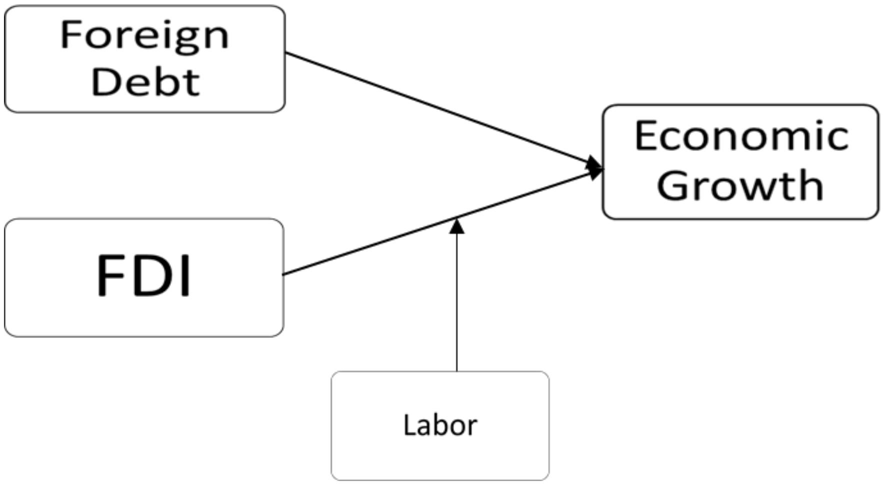
Labor growth goes hand in hand with population growth, and is considered one of the factors that influence economic growth. The more labor, the more production will increase. In addition, a large domestic market is also a reflection of a large population. However, there is no certainty whether rapid population growth will have a positive or negative impact on economic development. This was stated by Astuti *et al*. (2017).

According to Solow (1956) According to Solow (1956), factors such as population growth, increased education, capital accumulation, technological complexity, and improved labor quality are factors that affect economic growth. Therefore, if capital can be accumulated effectively, this will promote economic growth by providing jobs that can absorb labor. So with this, it can be said:

H3 : Labor Can Moderate Foreign DebtH4 : Labor Can Moderate FDI

Based on the description above, researchers want to ascertain how external debt and foreign investment will affect economic growth in Indonesia between 2012 and 2021 with labor as a moderating variable. The research has the novelty of the timing of data collection, and the inconsistent nature of the research findings warrants further research.

The conceptual structure of the research is as follows:



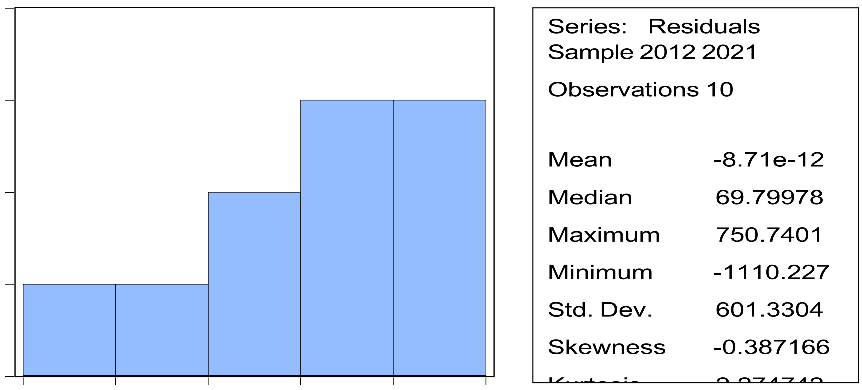
2. Results

Classical Assumption Test

The classical assumption test is needed to determine whether the OLS regression model has problems with these assumptions. OLS regression makes the assumption that the two variables have a unidirectional relationship, but if the relationship between the two variables is not linear, OLS regression is not the best instrument for analyzing the research. (Widarjono, 2005). The tests carried out include:

Normality Test

Figure 1



As a result of the normality test above, we can see the jarque-bera (JB) value of 0.46, so it can be said that the processed data is normally distributed as explained above that if JB is greater than 0.05, the processed data is said to be normally distributed.

Multicollinearity Test

Figure 2 Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
X1	155.0831	56.0933 0	**1.40159 6**
X2	32898.84	384.085 0	**1.40159 6**
C	2001887 7	283.495 6	**NA**

From the results of the above calculations, we can conclude that there is no multi-collinearity because in the calculation results of the three variables none of them reaches a value of 10, but only a value of 1, so it can be continued in the next test.

Heteroscedasticity Test

Figure 3 Heteroscedasticity test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.036004	Prob. F(2,7)	**0.9648**
Obs*R-squared	0.101821	Prob. Chi-Square(2)	**0.9504**
Scaled explained SS	0.019492	Prob. Chi-Square(2)	**0.9903**

The assumption is that if the probability value exceeds 0.05 then there is no hetero-scedasticity and vice versa if the probability value is less than 0.05 then there is hetero kedasticity, while the results of the data testing above show the probability of 0.96 so that it is greater than 0.05 so it can be said that there is no heteroscedasticity.

Hypothesis Test

Figure 4 Hypothesis Test

Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-92774.59	49703.65	-1.866555	0.1112
X1	110.9613	12.57967	8.820688	0.0001
X2	-136.6231	203.5445	-0.671220	0.5271
Z	979.5267	555.1477	1.764443	0.1281

Based on the test result we can interpret the constant value -92774.59 means that if foreign debt (ULN) and foreign investment (PMA) where both are variables X1 and X2 are equal to 0 then the economy develops by -92774.59%, while ULN is known to have a coefficient value of = 110.9613, this means that if external debt increases by 1%, economic development will increase by 110.9613%, while it is known that the coefficient value of FDI is = -13.623%, meaning that if FDI increases by 1%, the increase in economic growth is equal to -13.623%.

Y = 110.9613 X1 - 13.623 X2 + e

T test

Figure 5 T test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-92774.59	49703.65	-1.866555	0.1112
X1	110.9613	12.57967	8.820688	0.0001
X2	-136.6231	203.5445	-0.671220	0.5271
Z	979.5267	555.1477	1.764443	0.1281

As found in the test that X1 has T count 8.820> T table = 1.860, there is an influence that X1 has on Y. Meanwhile, X2 has T count = -0.671 T table which is = 1.860, so it can be said that X2 has no effect on Y.

F test

Figure 6 F test

F-statistic	**42.86687**	Durbin-Watson stat	1.486660
Prob(F-statistic)	**0.000190**		

As we know that f count = 42.866 > greater than f table = 5.318, we can conclude that simultaneously all x variables have an influence on y variables.

Moderated Regression Analysis (MRA) Test

M1

Figure 7 moderation 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-674007.3	499895.8	-1.348296	0.2262
X1	3454.975	2782.251	1.241791	0.2607
Z	7139.580	5325.104	1.340740	0.2285
M1	-35.69682	29.64955	-1.203958	**0.2739**

As from the test results above, it is known that the probability of X1_Z = 0.273 ≥ 0.05 or the probability is greater than 0.05, so it can be said that X1 external debt is notmoderated by the number of workers.

M2

Figure 8 Moderation 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	102762.2	4008140.	0.025638	0.9804
X2	1636.694	138683.7	0.011802	0.9910
Z	-1282.269	42559.96	-0.030129	0.9769
M2	-5.993177	1472.230	-0.004071	**0.9969**

While from the test results above we know the probability X2_Z = 0.996 ≥ from 0.05, it can be said that x2 does not moderate, so that from testing foreign investment (PMA) on economic growth a red thread can be drawn that PMA is not moderated by the number of workers.

3. Discussion

The Effect of Foreign Debt (ULN) on Economic Growth in Indonesia

From the test results, it was found that there is an effect of external debt (ULN) on economic growth in Indonesia, with a T count of 8.820 which is greater than the T table of 1.860. These results indicate that the hypothesis in this study is accepted, which states that external debt has a relationship with economic growth. This finding is consistent with previous research, such as that conducted by Malik (2017), Rudi *et al*. (2016), Abate (2022), and Ayenew (2022)which show that economic growth is influenced by factors such as external debt and aid from other countries. Therefore, it can be concluded that external debt plays an important role in supporting economic growth in Indonesia.

The Effect of Foreign Direct Investment (FDI) on Economic Growth in Indonesia

Based on the results of the study, it was found that foreign direct investment (FDI) has no effect on economic growth in Indonesia, because the T count is -0.671 which is smaller than the T table of 1.860. This shows that the second hypothesis in this study, namely that there is a positive influence between FDI and economic growth, cannot be accepted. The results of this study differ from the findings in the study of Rumalutur *et al.* (2022) which shows that FDI has a positive influence on economic growth in 33 provinces in Indonesia. However, the results of this study are in line with research by Sulistiawati *et al*. (2019) which shows that economic growth has a negative and significant effect on FDI.

External Debt Moderated by Labor on Indonesia's Economic Growth

Based on the results of the study, it was found that the probability value of X1_Z was 0.273 ≥ 0.05, which indicates that the Total Labor variable does not moderate the effect of external debt on Economic Growth in Indonesia. Therefore, hypothesis H3 is rejected. The results of this study are in line with the findings of Astuti *et al.* (2017) which states that labor growth can affect economic growth, because increased production will be supported by an adequate number of workers. However, it is uncertain whether rapid population growth will have a positive or negative impact on economic development, depending on how well labor is utilized and absorbed.

FDI Moderated by Labor on Indonesia's Economic Growth

Based on the test results above, it is known that the probability of X2_Z = 0.996 ≥ 0.05, so it can be concluded that FDI is not moderated by the number of workers on Indonesia's economic growth. In this case, the research results are in line with the research of Astuti *et al*. (2017) which states that labor growth is positively related to population growth, which is one of the driving factors of economic growth. Increased production will be achieved through increased labor, and a large domestic market is a reflection of a large population. However, despite this, it is unclear whether rapid population growth will have a positive or negative impact on economic development, as the impact depends on how effectively labor is utilized and absorbed in the economy.

4. Materials and Methods

Descriptive quantitative methodology is used in this study to evaluate the hypotheses that have been formulated. The quantitative approach in this study focuses on testing a specific population or sample (Sugiyono, 2013). (Sugiyono, 2013). The data was collected from the official BPS website and other annual reports, The analysis technique used in this study is to use multiple regression analysis techniques as for the equations used include:

$Y = \alpha + B1X1it + B2X2it + B3.z + B4.z + \varepsilon$

Ket:

Y = Economic Growth

α = Constant

B1-B4 = Regression

CoefficientX1 = EXTERNAL DEBT

X2 = FDI

Z = Labor (Moderation)

ε = Residual Error (error)

As seen in the equation above, several tests are required to determine the influence between variables. These tests include classical assumption test, normality test, multicolinerity test, heteroscedasticity test, and hypothesis testing, as well as MRA test to evaluate moderation between variables. With the results of these tests, we can make conclusions on this research. Eviews 10 is used as an application to process data in this study.

5. Conclusion

The results of the study partially found that the foreign debt variable (ULN) had an effect on Indonesia's economic growth for the period 2012-2021, on the other hand economic growth was not influenced by foreign investment (PMA), but if tested simultaneously the two variables above had an effect on economic growth. Meanwhile, external debt and FDI on economic growth are not moderated by labor, meaning that as in research Astuti *et al*. (2017) which states that labor growth is in line with population growth which is believed to be one of the factors triggering economic growth, increased production will be supported by a large number of workers, besides that a large domestic market is a representation of a large population, however, there is no certainty whether the rapid population growth rate will have a positive or negative impact on economic development, In addition, it is said that population growth can have a beneficial or detrimental impact on a country's economy, depending on how well labor is utilized and absorbed.

The limitation of the study is that it only uses three variables in the study and the period is not so long so the suggestion for future researchers is that they should be able to add HDI variables or other variables that can affect economic growth and add the time period to be studied as well as what can be added is the coverage of economic growth in Asian countries so that future research is even better.

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