



AN ANALYSIS OF THE DETERMINANTS OF PUBLIC AND PRIVATE INVESTMENTS IN INDONESIA

Muhammad Saleh Mire
Mulawarman University

ABSTRACT

This study aims to determine and examine the influence of the BI rate, government debt, private debt, population, inflation, and MSMEs on economic growth and domestic investment, and foreign direct investment (FDI) using panel data in 34 provinces in Indonesia in the 2017-2022 period. This research uses a Path Analysis model with dummy variables, grouping the system into 2 groups, namely domestic investment called Group 1 and foreign direct investment called Group 2. The results of the study show that private foreign debt (PFD) has a positive influence on economic growth, while government foreign debt (GFD) has a negative influence on economic growth. Furthermore, it was found that the BI rate and inflation showed an increase if economic growth increased, while MSMEs and the population had no influence on economic growth. PFD has no influence on domestic investment but has a positive influence on foreign investment. While economic growth has a positive effect on domestic investment, it has no effect on foreign investment. MSMEs have a significant positive influence on domestic investment and foreign investment. Meanwhile, population growth and inflation have no influence on investment, whether domestic investment or foreign direct investment.

KEYWORDS: BI-rate, PFD, GFD, MSMEs, inflation, population, economic growth, and investment

INTRODUCTION

Economic growth is a very important indicator in analyzing economic development that occurs in a country. Economic growth shows the extent to which economic activity will generate additional community income in a certain period. Basically, economic activity is a process of using production factors to produce output, which is measured using product indicators. Economic growth can increase a country's national income and production from year to year, thereby causing a country's population to experience an increase in its standard of living. To measure economic growth in a country, it can be seen from the level of that country's gross domestic product (GDP). Economic growth is an indicator of the success of a country's development. Recently, many countries have tried to increase their country's economic growth rate by increasing output continuously through the availability of capital goods, technology, and human resources. In economic terms and an economic perspective, inflation is a monetary phenomenon of ups and downs in economic volatility and interest rates. Economic growth is still used as an indicator of aggregate economic progress. Economic growth is expected to provide encouragement in all sectors so that people's lives improve through investment resulting from economic growth. Economic growth can attract foreign investment, both direct and indirect so that capital is available for domestic investment. Apart from that, economic growth can attract workers, so that the demand for labor increases, which results in the creation of job opportunities, so that development goals can be achieved, namely high growth along with adequate labor absorption.

Indonesia as a developing country requires large funds for development, but these funds are not enough if they only come from within the country, so funds are needed from abroad due

to globalization where a country cannot stand alone, including in financing development. In conditions like this, Indonesia finally has to follow the current, namely trying to open itself up by collaborating with other countries for the sake of implementing national development. Like other developing countries, Indonesia also relies on domestic financing. also relies on Foreign Debt (FD) to finance development. Limited domestic savings to finance development is the reason for using FD. Thus, Indonesia has experienced, since the beginning of independence, that it has inherited a debt from the Dutch colonial government amounting to USD 4 billion, in accordance with the results of the Round Table Conference (KMB) and this condition continues until now. This debt is needed to overcome domestic capital shortages like other developing countries. It is understood that government debt is at a safe level if it can be managed well. The solution and/or policy taken by the government and its supporting economists is to regulate the flow of debt burden so that it is optimal (optimal borrowing).

Whether we realize it or not, debt is closely related to economic growth because debt can be used as a real sector investment which is expected to trigger and encourage economic growth. In the implementation of development, high economic growth is the main target for developing countries. This is because economic growth is closely related to the increase in goods and services produced in society, so that as more goods and services are produced, the welfare of society will increase (Mankiw, 2012). Furthermore, foreign debt can be a substitute for low savings rates, thereby being able to encourage economic growth both directly and through domestic savings channels and population growth. The fact is that almost all countries in the world, both developing and developed countries, are not free

from debt. The emergence of pros and cons regarding the implementation of foreign debt policy makes the issue of foreign debt an interesting issue to discuss. Foreign debt in a reasonable amount and used to carry out productive investment or development either now or in the future will have a positive impact and contribute to development and economic growth. However, on the other hand, excessive foreign debt will hamper economic growth through reducing total factor productivity (Pattillo, Poirson, & Ricci, 2004)

Foreign debt plays an important role in financing Indonesia's economic growth. This can be seen in 1999. The Indonesian government's foreign debt reached 148,097 million US\$ with economic growth of 0.79 percent after experiencing a very sharp decline in 1998, namely -13.13 percent. However, demand for foreign debt decreased in 2000, namely 141,693 million US\$ due to the budget deficit which decreased to 105.5 trillion rupiah with economic growth increasing to 4.92 percent. Jumping in 2022, foreign debt will reach 515,533 million US\$ with economic growth reaching 5.15% percent (BPS, 2023). This data shows that the increase in Indonesia's foreign debt was also followed by an increase in domestic economic growth. Meanwhile, the high level of domestic savings is an obstacle to economic growth, as well as population growth which turns out to be an obstacle to economic growth (Satria Prasetyo and Kurnia, 2021). However, on the other hand, a low savings rate actually makes it difficult to invest, because investment is the same as savings, which results in low economic growth that can be achieved (Branson, 1992).

Population plays a very large role in economic growth because labor is part of the workforce that is ready to enter the labor market. Adam Smith stated that population growth is seen as a factor that can encourage economic growth because labor originating from the population is an important production factor to produce economic growth. So it depends on efforts to utilize the population so that it can become a productive production factor to achieve the expected growth. The United States, which is known to have a high population, achieved economic growth that was not low at 5.2% in the third quarter of 2023, although it experienced a decline in the following quarter, as did China, which achieved growth of 5.2% in 2023, as well as Indonesia, which can achieve economic growth above an average of 5% per year (BPS, 2023) even though it experienced minus growth in 2020 due to COVID-19, Figure 1.

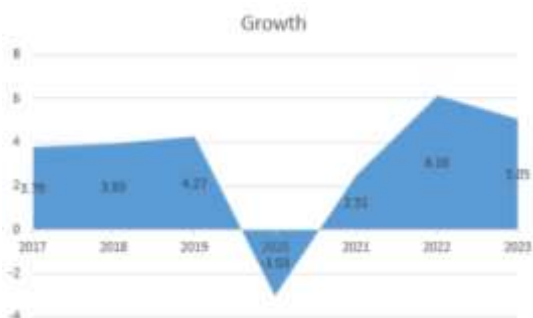


Figure 1. Development of Economic Growth
Source: Processed Data

From a macro perspective, the source of economic growth is national income which is equal to consumption expenditure plus investment and government expenditure and net exports. So investment and consumption are the main sources of economic growth. However, investment is in the opposite direction to consumption, because if investment is high automatically household consumption is low, and the opposite will happen. In this way, the government arranges the APBN budget in such a way so that both are running, but because investment is seen as capital investment, more is needed to achieve the growth that will be achieved. The development of investment from 2017-2022 consisting of domestic investment or investment from abroad which is called direct foreign investment, Figure 2.

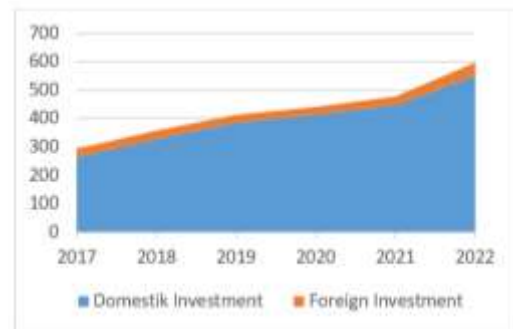


Figure 2. Development of Domestic Investment and FDI
Source: Processed Data, 2024.

The interest rate is one of the government's instruments to achieve the expected economic growth. Low interest rates can provide opportunities for entrepreneurs both domestically and abroad to make and increase investment, thereby encouraging higher economic growth. High interest rates should not occur in a developing country because it makes it difficult for entrepreneurs to invest which results in reduced production levels both locally and nationally. Thus, low interest rates should be maintained so as to attract all elements of entrepreneurs, including MSME entrepreneurs, to develop their businesses.

One of the economic sectors that can encourage investment is MSMEs because they have a large quantity. This sector has a strategic role in improving the country's economy. This can be seen from the large number of workers working in this sector, the high contribution to the formation of the national economy's gross domestic product (GDP), and helping to reduce public unemployment. This sector has proven its resilience in facing the economic crisis that hit the Indonesian economy when many large companies went bankrupt. Furthermore, MSME problems slowed the SME growth in Asia including i) lack of finance, ii) lack of comprehensive databases, iii) low-level of R&D expenditures, and iv) insufficient use of information technology and providing remedies for mitigating them (Naoyuki Yoshino and Farhad Taghizadeh-Hesary, 2016).

The role of MSMEs in economic development is very strategic because they provide the largest contribution, as stated by the research team said that the majority or 99% of businesses in Indonesia are at the MSME level. MSMEs themselves contribute 61.9% to the total gross domestic product (GDP) and absorb approximately 97% of the local workforce so that they

can be used as a means of alleviating poverty. High economic growth can be achieved by paying attention to the factors that cause it. In this study there are six factors that can cause the expected economic growth, these factors are BI-rate, private debt, government debt, MSMEs, population and inflation. Furthermore, these six factors plus economic growth are expected to have a positive impact in increasing the level of domestic investment and FDI. Figure 3. Thus this research aims to analyze and examine the relationship between influencing

factors that influence economic growth and investment. In detail the objectives of this study:

1. Know and assess the influence of PFD, GFD, BI-rate, MSMEs, population and inflation on economic growth
2. Know and assess the influence of PFD, GFD, BI-rate, MSMEs, population, inflation and economic growth on investment
3. Compare the influence of determinate factors on domestic investment and foreign investment

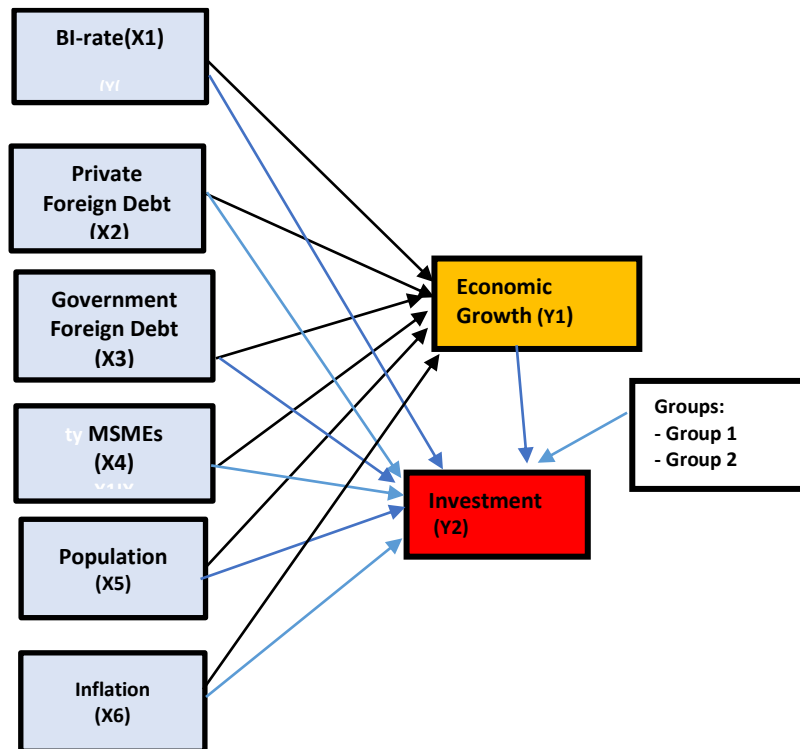


Figure 3. Framework

Group 1 = Domestic Investment
Group 2 = Foreign Direct Investment

REVERENCE REVIEW

Economic Growth

Economic growth is a very important indicator in analyzing economic development that occurs in a country. Economic growth shows the extent to which economic activity will generate additional community income in a certain period. Because basically economic activity is a process of using production factors to produce output, which is measured using the Gross Domestic Product (GDP) indicator. According to Todaro (2000) there are three factors in the economic growth of every country, namely: 1) Capital accumulation, which includes all types of new investments invested in land, physical equipment, and capital or human resources; 2) Population growth, which will affect the number of workers in the future; and 3) Technological progress, this is considered the most important source of economic growth so it can be classified into three types, namely: (a) neutral technological progress; (b) labor-saving technological advances; (c) capital-saving technological advances.

Adam Smith explained that economic growth is a process of combining population growth with technological progress. In

line with David Ricardo, he stated that economic growth is a process of attraction between two forces, namely "the law of diminishing returns" and technological progress. Apart from that, proponents of classical economic growth theory really prioritize liberal or laissez faire principles, where all economic activities are expected to be free without any government interference, in this case supporting economic openness, both trade openness and financial openness. The linear growth theory stages of growth theory developed by Rostow, also formulates development patterns through 5 stages including 1) Modern economic stage; 2) Take-off precondition stage; 3) Takeoff stage; 4) stage towards maturity and 5) stage towards high consumption. Furthermore, the economic growth theory according to Harrod – Domar also explains the same thing, to achieve a steady level of economic growth in a country's economy lies in the active role of investment. Harrod-Domar stated that the level of investment in a country can make a major contribution in encouraging economic growth, especially. On the basis that investment has two major objectives in the economy, namely as a source of income and capital to increase production capacity. Furthermore, investment in macroeconomics is determined by Keynes to determine interest



rates negatively (Case at all., 2020), so that low interest rates will encourage economic growth. Not only that, investment besides encouraging economic growth directly can also create job opportunities both directly and indirectly through growth.

Debt is closely related to economic growth because debt can be used or function as an investment in various development needs. Debt is usually withdrawn from abroad or from within the country which is used to cover the government's budget deficit. Apart from the government, the private sector can also take debt both domestically, especially from banks, and from abroad to make investments which ultimately also encourage economic growth. Furthermore, inflation results in entrepreneurs getting bigger profits, because the value of assets and getting fresh funds from increased profits, so they can make new investments which clearly encourage growth. However, high inflation can become the main enemy for the government and the private sector. Inflation caused by cost push inflation can worsen a country's economy, the economy can even become chaotic, because it reduces people's purchasing power and entrepreneurs cannot sell their goods according to plan, so that the rate of economic growth is hampered.

Investment

Harrod-Domar views that capital formation is considered as expenditure that will increase the ability of an economy to produce goods and services, as well as expenditure that will increase the effective demand of the whole society. In connection with economic growth, Harrod-Domar put forward the incremental capital output ratio (ICOR) which is expressed as where growth is expressed: $Gr = s/k$ where Gr is growth, s is the saving tendency or MPS and $k = I/S$. Thus the relationship between investment and economic growth is determined by the saving tendency and ICOR, while $s = S/Y$ and $I = S$ which are the basic assumptions of the theory, where I represents investment, S is saving, K is capital and Y is output .

Investment is the expenditure of society as a whole to obtain new capital equipment. Expenditures on new capital equipment are aimed at replacing capital equipment that is no longer economical and some are in the form of purchasing new capital equipment to expand the capital stock. Investment includes spending money which causes changes in the supply of capital goods. Investments made in the business sector are based on the profit motive. Investment itself can be divided into two groups,

namely foreign investment which can be divided into direct investment (Foreign Direct Investment) and indirect investment (Foreign Indirect Investment) and Domestic Investment which can be carried out by the government or private sector. Marginal efficiency of capital (MEC) is a concept that underlies Keynes' theory, representing investment demand. The relationship between investment demand and the interest rate (r) with a certain MEC is negative, expressed by $I=f(r)$, where I is investment and r is the interest rate (Branson, William H. 1992). Interest rates can have a negative or positive effect (Alvarez and Koskef, 2004) conducting an analysis of irreversible investment under the changing rates showed that the change in rate had a positive or negative effect on the demand for investment. There are also some scholars believe that the rates may have no impact on the investment. The VAR model was used to test the causal relationship between interest rates and investment, and found that investment depended on the level of demand in the macroeconomic, rather than interest rates (Mohammed Dore, 2013). Apart from that, analysis of three rate hikes from 1960 to 1978 in West Germany, it turned out that the effect of interest rate on investment was different in two periods due to the different policy (R. T. Baillie and P. C. McMahon, 1981).

THE METHOD

This type of research is quantitative, taking the type of study of comparative causality that processes numerical data that can be calculated using statistical formulas. The data analysis technique used in this study is path analysis which estimates the direct and indirect influence of exogenous variables on endogenous variables although in this study we only look at and discuss the direct effect, both effects are available in the statistical program used for estimation in this study. This study uses secondary data, namely data that is already available and collected by other parties and it was panel data. The data was taken from the Indonesia Central Statistics Agency (BPS) and Coordinating Ministry for Maritime Affairs and Investment of the Republic of Indonesia. which covers 34 provinces in Indonesia, where since the end of 2022 there have been 38 provinces, but the necessary data is not yet available. The data used which is divided into two groups, Group 1 and Group 2. The statistical analysis technique used is path analysis using the Amos 18 statistical application program.

Based on the conceptual relationship in the framework of thinking, mathematically functional relationships can be written as $Y_1 = f(X_1, X_2, X_3, X_4, X_5, X_6) \dots \dots \dots (3.1)$

$Y_2 = f(X_1, X_2, X_3, Y_1, X_4, X_5, X_6, D, DX_1, DX_2, DX_3, DX_4, DX_5, DX_6) \dots \dots \dots (3.2)$

Whereas:

- X1= BI-Rate (interest rate determined by Bank Indonesia)
- X2 = PFD (private foreign debt, amount of private debt, rupiah)
- X3 = GFD (government foreign debt, amount of government debt, rupiah)
- X4 = MSMEs (number of small and medium businesses)
- X5 = Population (population of provinces in Indonesia)
- X6 = Inflation (inflation of provincial capitals in Indonesia)
- Y1= Economic growth (provincial economic growth)
- Y2 = Investment (domestic investment, rupiah, and foreign investment, US dollars)



D = Dummy variable, D = 0, domestic investment (Group 1); D=1, foreign direct investment (Group 2)

Equations (3.1) and (3.2) can be written in mathematical equation form as

$$Y_1 = \alpha_0 + \alpha_1 X_1 + \alpha_2 \ln X_2 + \alpha_3 \ln X_3 + \alpha_4 \ln X_4 + \alpha_5 \ln X_5 + \alpha_6 X_6 + \mu_1 \dots(3.3)$$

and

$$\ln Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4 + \beta_5 \ln X_5 + \beta_6 X_6 + \beta_7 D + \beta_8 D \ln X_1 + \beta_9 D \ln X_2 + \beta_{10} D \ln X_3 + \dots + \beta_{11} D \ln X_6 + \beta_{12} Y_1 + \mu_2 \dots(3.4)$$

Substituting the value of the dummy variable, D=0 in the equation (3.4), a new equation is obtained

$$Y_{11} = \alpha_0 + \alpha_1 X_1 + \alpha_2 \ln X_2 + \alpha_3 \ln X_3 + \alpha_4 \ln X_4 + \alpha_5 \ln X_5 + \alpha_6 X_6 + \mu_3 \dots(3.5)$$

Regression Equation for Group 2, D=1, a new equation is also obtained

$$\ln Y_{12} = (\beta_0 + \beta_7) + (\beta_1 + \beta_8)X + (\beta_2 + \beta_9) \ln X_2 + \dots + (\beta_4 + \beta_{11})X_6 + \beta_{11}Y_2 + \mu_4 \dots(3.6)$$

RESULTS AND DISCUSSIONS

Model fit test

Chi-square statistic, as stated earlier, is the most fundamental test to measure overall fit, it is very sensitive to the size of the sample used and the relation of exogenous variables, almost the same as the model Regresi Linear Berganda. The model is

considered good if the Chi-square value is small. The smaller the value, the more feasible the research, meaning that the more it describes the match between the variance of the sample taken and the research population. The results of data processing that have been carried out using the AMOS 18 program are shown in Table 1.

Tabel 1. Goodness of Fit Index

No.	Goodness of fit Measure	Cut-off Criteria	Estimation (cut off Value)	Fit Situation
1	Chi-Square (χ^2) Significance Probability (p)	smaller the better ≥ 0.05	2.555 1.000	Fit
2	RMSEA (the Root Mean Square Error of Approximation)	≤ 0.05	0.000	Fit
3	NFI (Normed of Fit Index)	≥ 0.95	0.998	Fit
4	IFI (Incremental Fit Indices)	≥ 0.95	1.010	Fit
5	CMIN/DF (the minimum Sample Discrepancy Function)	≤ 2	0.142	Fit
6	TLI (Tuckler Lewis Index)	$\geq 0,95$	1.032	Fit
7	CFI (Comparative Fit Index)	$\geq 0,95$	1.000	Fit
8	Hoelter's Index	≥ 200	4588	Fit

Sumber: Malkanthie, 2015; Wan, 2022 and Amos Result

Research findings

As is known, this research divides Indonesia's provinces into 2 Groups, the first group is Domestic investment and the second group is foreign direct investment (FDI) so the estimation results consist of two components. The estimation results for

Group 1, which is called Domestic Investment, D=0, can be seen in Figure 4.

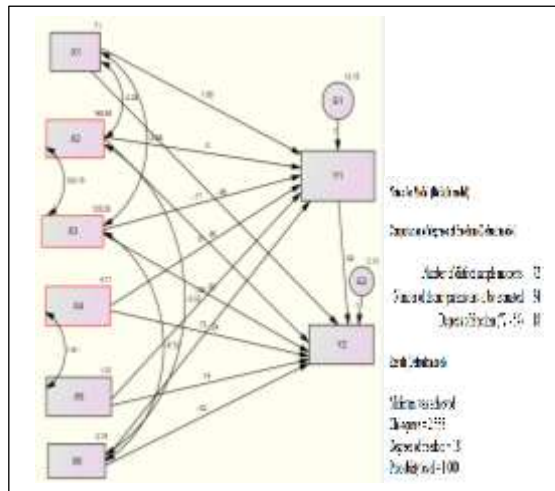


Figure 4: Variable Coefficients for Group 1 and Result of Default Model

Resource: Amos 18 data processing results.

As can be seen in Figure 2, where there is no level of confidence or probability for each coefficient or path, the estimation results

are also displayed as a scalar estimate for Group 1 (Group 1), which describes the level of significance of each path, Figure 5.

Estimates (Group member 1 - Default model)						
Model Estimates (Group member 1 - Default model)						
Minimum Likelihood Estimates						
Regression Weights (Group member 1 - Default model)						
		Estimate	S.E.	C.R.	P	
Economic Growth	←	FFD	21.397	11.818	1.811	.070
Economic Growth	←	GFD	-14.285	14.682	-2.338	.020
Economic Growth	←	MISSE	.010	.157	.066	.947
Economic Growth	←	Share	1.077	.307	3.498	***
Economic Growth	←	Population	-.395	.338	-1.169	.244
Economic Growth	←	Salaries	.727	.188	3.861	***
Investment	←	FFD	-.540	4.887	-.110	.914
Investment	←	Economic Growth	.087	.628	2.976	.003
Investment	←	Share	-.090	.132	-.776	.707
Investment	←	GFD	.593	6.229	.095	.924
Investment	←	MISSE	.241	.088	2.672	***
Investment	←	Population	.135	1.42	.095	.540
Investment	←	Salaries	-.026	.081	-.319	.750

Figure 5. Scalar Estimates Group1

Resource: Amos 18 data processing results.

Further illustrating the estimation results for Group 2, foreign direct investment, D=1 or Group 2, as carried out in Group 1, can be seen in Figure 6.

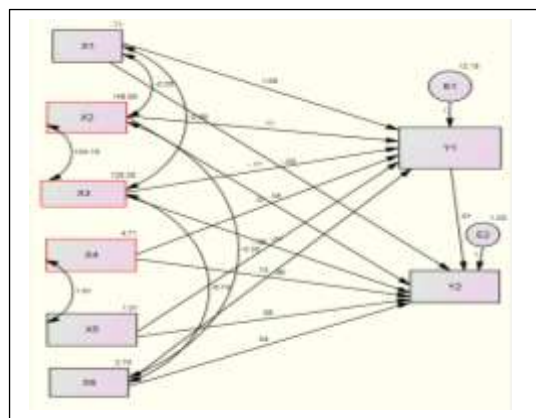


Figure 6. Variabel Coefficients in Group 2

Resource: Amos 18 data processing results

Next, in Group 2, the estimation results are presented, variable coefficients with confidence level or probability (P), Regression Weights for Group 2, can be seen in Figure 7.



Maximum Likelihood Estimates					
Regression Weights (Group number 2 - Default model)					
		Estimate	S.E.	C.R.	P
Economic Growth	<-- PFD	21.397	11.816	1.811	070
Economic Growth	<-- GFD	-34.295	14.682	-2.336	020
Economic Growth	<-- MSMEs	0.010	187	066	947
Economic Growth	<-- BRate	1.057	307	3.438	***
Economic Growth	<-- Population	-0.393	318	-1.164	244
Economic Growth	<-- Inflation	0.727	186	3.901	***
Investment	<-- PFD	6.955	3.746	1.856	063
Investment	<-- Economic Growth	0.006	022	250	803
Investment	<-- BRate	-0.030	099	-0.299	765
Investment	<-- GFD	-1.888	4.680	-0.401	687
Investment	<-- MSMEs	0.361	049	7.342	***
Investment	<-- Population	0.078	107	728	466
Investment	<-- Inflation	0.044	061	721	471

Figure 7. Scalar Estimates Group 2

Resource: Amos 18 data processing results

The results of the analysis show the influence of one variable on another variable according to the research objectives so based on Figure 3 and Figure 4, a summary of the influence of independent variables on dependent variables can be represented in Table 2. The table also shows that Group 1 and Group 2 each have a coefficient and probability according to the relationship between variables.

RESULTS AND DISCUSSIONS

Factors influencing economic growth

Based on Table 2, it shows that private foreign debt has a positive influence at $\alpha=0.10$ on economic growth, both foreign investment and government investment in Indonesia. If private foreign debt increases by 1% it will cause an increase in economic growth of 0.10%. This fact is in accordance with research conducted by (Toktas at al., 2019) which states that the empirical results of this study indicate that there is a causality relationship, including both positive and negative aspects, between net foreign debt stock and economic growth. Likewise

(Amaoateng & Amoako 1996)) states that foreign debt encourages economic growth through additional capital production factors. The two researchers used Granger causality to determine the two-way relationship between external debt and economic growth. The research results show that there is a positive causal relationship between GDP growth and external debt payments. On the other hand, the results of empirical research show results in the opposite direction, namely that external debt has a negative influence on economic growth (Geiger 1990, Cunningham 1993). Large external debt payments become a burden on the government budget which will ultimately reduce investment levels. In fact, excessive external debt will cause a debt overhang (Sawada 1993), namely an excessive amount of external debt so it will become a heavy burden when paying back the external debt. The heavy burden of paying external debt will reduce investment levels, reduce capital inflows, and in turn will affect a country's economic growth. Basically, debt overhang will result in a reduction in output growth through reduced productivity.

Table 2. Coefficients of the variables in Group 1 and Group 2,

No	The Relation of the variables		Group 1		Group 2	
	Dependent variables	Independent variables	Coefficient	Probability	Coefficient	Probability.
1	Economic Growth	1. PFD	21.397	0.070	21.397	0.070
		2. GFD	-34.295	0.020	-34.295	0.020
		3. MSMEs	0.010	0.947	0.010	0.947
		4. BRate	1.057	0.000	1.057	0.000
		5. Population	-0.393	0.244	-0.393	0.244
		6. Inflation	0.727	0.000	0.727	0.000
2	Investment	1. PFD	-0.540	0.914	6.955	0.063
		2. Economic Growth	0.083	0.003	0.006	0.803
		3. BRate	-0.051	0.707	-0.030	0.765
		4. GFD	0.001	0.924	-1.888	0.687
		5. MSMEs	0.241	0.000	0.361	0.000
		6. Population	0.135	0.340	0.078	0.466
		7. Inflation	-0.028	0.750	0.044	0.471

Source: Data processed from Figures 5 and 7.

Furthermore, government foreign debt has a negative influence on economic growth which is significant at $\alpha=0.05$ with a regression coefficient of -0.169. This means that if government foreign debt increases by 1%, economic growth will decrease by 0.17%. this finding

According to research (Senadza at al., 2018) in 39 African countries, it shows the negative impact of government foreign debt on economic growth because it causes a crowding out effect. Meanwhile, research (Akram, 2017) in Sri Lanka shows



a positive impact. Research conducted (Guei, 2019) in emerging market countries shows that government foreign debt has no effect on economic growth because the budget deficit policy is nothing more than delayed taxes and has no effect on aggregate consumption. Likewise, research results (Rafikhalif & Nirmalawati, 2021) show that economic growth is positively and significantly influenced by government foreign debt variables in Indonesia.

As it is known that MSMEs play a very large role in the economy, because their contribution to GDP will reach 61% in 2023, unfortunately this research shows that MSMEs do not have an influence on economic growth. This is because small industry is included in work, so it does not have a big influence in increasing economic growth, which is usually based on being capital intensive. This fact contradicts research conducted (Dewi & Suprpto, 2022) which states that MSMEs have a positive influence on economic growth in East Java.

The interest rate as measured by the BI-rate shows a significant positive influence on economic growth at a confidence level of $\alpha=0.01$ with a regression coefficient of 1,055, meaning that if the BI rate rises by 1% then economic growth will increase by 1.1%. This fact is in accordance with research (Sri Wigati, 2022) which states that interest rates have a positive effect on economic growth in Indonesia, although not significantly. Likewise, research (Ambarwati at al., 2018) states that BI-rate has a positive influence on economic growth. This means that the higher the BI-rate, the higher economic growth. This fact actually contradicts logic which is known from Keynes' theory which states that there is a negative relationship between interest rates and investment which has a negative influence on growth. This is confirmed by research (Luthfiana at al., 2022) which states that low interest rates will encourage investment levels which will have an impact on increasing economic growth.

The estimation results show that population shows a positive relationship with economic growth, but this effect is not significant at the confidence level $\alpha=0.10$. In fact, this fact has been discussed since Classical times, Adam Smith stated the importance of population as a workforce to produce output or economic growth. The results of empirical research are further clarified, (Rahmattullah, 2015) states that the productive age population has a positive and significant influence on Indonesia's economic growth. Population includes labor as one of the production factors that causes output or economic growth. Then the Neoclassical economic growth theory pioneered by Solow-Swam in 1956, which is referred to as exogenous growth and also endogenous growth pioneered by Romer (1986), Lucas (1988), and Grossman-Helpman. (1991), states that economic growth is caused by internal factors in the form of research and development of human resources. The consequences caused by inflation can be positive or negative. The positive consequence (controlled inflation) is that economic growth can be created with controlled inflation. This study shows that inflation has a positive and significant influence on the confidence level $\alpha=0.01$ with a coefficient of 0.73, meaning that if inflation rises by 1%, there will be an increase in economic growth of 0.73% or the higher the

inflation, the higher the economic growth. This finding was clarified by (Baharumshah at al., 2011) who found in his research 2 points, First, we confirmed that the inflation uncertainty has a significant and negative effect on economic growth. Second, inflation is also an important variable and it is detrimental to economic prospects in the fast-growing Association of Southeast Asian Nations (ASEAN) economies.

As has been mentioned, inflation does not always have a positive influence on economic growth. This is in line with research conducted (Sequeira at al., 2021) which states that as a result of this new mechanism in an endogenous growth model, inflation is no longer superneutral. In the model, inflation can decrease economic growth in a non-linear way, a sudden upward shock on inflation can severely hurt economic growth and an inflation cut can be responsible for a take-off. These effects are illustrated quantitatively. Inflation is a continuous increase in goods over a certain period of time. In this research, it was found that inflation had a significant positive influence on economic growth at the confidence level $\alpha=0.01$ with a path coefficient of 0.730. So if inflation rises by one percent, economic growth will increase by 0.73%. Next (Bahrumshah at al., 2011) discusses in depth the results of combining the panel data and least absolute deviation autoregressive conditional heteroscedastic (ARCH) (L 1-ARCH) model to infer on the relationship between inflation uncertainty and economic growth in five emerging markets economies. Two interesting findings emerged from the analysis; first, we confirmed that the inflation uncertainty has a significant and negative effect on economic growth. Second, inflation is also an important variable and it is detrimental to economic prospects in the fast-growing Association of Southeast Asian Nations (ASEAN) economies. All in all, the empirical findings suggest that greater stability in the economy may be desirable in order to stimulate economic growth in the region. Meanwhile (Tiwari at al., 2019) who conducted research in India found three important things: (a) high and increasing dependence between inflation and economic growth, particularly after mid-2002; (b) high-frequency components of economic growth Granger-cause low-frequency components of CPI-based inflation and vice-versa, and at all scales economic growth Granger-cause inflation at scales of 4–6 and no evidence of causality was detected from WPI-based inflation to economic growth; (c) results indicate that there is no long-run causal link between inflation and economic growth. This study presents new insights for policymakers to sustain economic development by using inflation as an economic tool in India

Factors affecting investment

Based on Table 2, it is known that the PFD does not have a significant influence on domestic investment at the confidence level, but it does have a significant influence at the confidence level $\alpha=0.10$ on foreign investment with a path coefficient of 6.96. So if inflation rises by 1% then foreign investment will increase by 6.96%. However, it can still be said that the higher the PFD, the higher the investment that can arise. Furthermore, the influence of investment on economic growth has been widely studied, so this research tries to examine the opposite condition. The research results show that economic growth influences foreign investment positively at the confidence level



$\alpha=0.10$ with a path coefficient of 0.083, which means that if economic growth increases by 1% then foreign direct investment will increase by 0.08%. This fact is in accordance with research conducted (Putu Kartika Dewi & Nyoman Triaryati, 2015) which states that economic growth has a significant positive effect on foreign direct investment. Likewise, research (Juliansyah et al., 2021) states in more detail that economic growth in the short term has no effect on investment but in the long term it does not have a positive influence. Furthermore, domestic investment is not significantly influenced by economic growth. This fact is supported by research (Yevi Dwitayanti et al., 2024) which states that economic growth and the percentage of formal labor do not have a significant impact on investment value. Likewise, the BI-rate and government debt do not have an influence on foreign investment or government investment. The BI-rate may be prevented from having an impact on investment because the applicable interest rates still vary which are applied in determining interest rates by government banks and private banks, even though they are based on the interest rates set by BI. However, research (Wuhan & Khurshid, 2015) using vector error correction model (VECM) analysis found that the relationship between interest rates and investment is negative in the long term, but negative in the short term. It has a negative relationship in the long run but positive in the short run. So the research also produces suggestions that will help in terms of interest rate policy as well as improving investment that promotes economic growth in Jiangsu Province.

Furthermore, MSMEs have a significant positive influence at the confidence level $\alpha=0.01$ on foreign investment and government investment with path coefficients of 0.25 for foreign investment and 0.36 for domestic investment, respectively. This means that if the number of UNKM increases by 1%, it will have an impact on increasing investment by 0.25% for foreign investment and 0.36% for domestic investment. By increasing the number of MSMEs, investment will attract due to the use of raw materials and the results or output of the MSMEs themselves, because in the industrial sector linkages, an MSME can provide forward linkages and backward linkages. Backward linkages mean that the industrial sector or MSMEs use the output of other sectors as input, while backward linkages mean that the output of an MSME is used by other sectors (Muryani & Swastika, 2018).

Meanwhile, government debt cannot affect investment, whether foreign investment or domestic investment. Government debt is largely determined by policies to coordinate and regulate the real sector and the monetary sector on the one hand and on the other hand the debt itself must be paid on time with interest, so it does not follow a certain pattern. The government can make and sell bonds to both foreigners and domestic people who are not directly related to investment. One of the benefits of debt is to cover the development budget deficit, which can be saved and taken from BI to pay development costs and repay debt, so it may not have a positive impact on investment.

Population size has no effect on investment, whether foreign investment or domestic investment. A large population requires

a large amount of output or goods, thus attracting investors to invest their capital, especially foreign investment. Population growth means an increase in the workforce ready to enter the labor market. Furthermore, additional labor can cause wages to decrease. This situation attracts investors to invest because they will get higher profits. So population can have a positive influence on investment. However, due to wage rigidity caused by wage policies such as the UMP, demand and supply do not reach balance, ultimately causing unemployment and inhibiting investors' interest in investing. Furthermore, high inflation will prevent investors from consuming their capital because of the high input costs of the company, so that investment can be hampered by inflation or inflation can cause a negative influence on investment.

CONCLUSION AND RECOMMENDATION

Conclusions

Based on the analysis and the results of the previous discussion, the following conclusions are drawn:

1. PFD has a positive influence on economic growth, while GFD has a negative influence on economic growth.
2. Apart from that, the research results also show that the BI rate and inflation show a positive influence on economic growth, while MSMEs and the population have no influence on economic growth.
3. PFD has no influence on domestic investment, but has a positive influence on foreign investment.
4. Economic growth has a positive effect on domestic investment but has no effect on foreign investment
5. MSMEs have a significant positive influence on domestic investment and foreign investment
6. Population growth and inflation have no influence on investment, whether domestic investment or foreign investment.

Recommendations

The suggestions to be put forward based on the discussion and conclusions that have been stated, among others:

1. Regarding the negative and insignificant relationship between interest rates and investment, it is recommended that future researchers use other analyzes or manipulate data such as adding observations, so that the relationship between interest rates and investment is clear as stated by Keynes. In this way, the government is still expected to increase investment in all economic sectors, especially the industrial sector, both large, medium and small scale.
2. Government debt should be handled with great care because it is very open to unsuccessful use and can worsen the economy. Foreign debt, which always increases from year to year, needs to be studied in depth regarding its need and utilization, although in this study it was found that foreign debt has a very significant influence on economic growth.
3. The research results show that MSMEs have a significant influence on investment. MSMEs must still receive priority development through training and research, by providing capital at low interest rates and



mentoring staff, because it is known that the majority of GDP contributions come from MSMEs

REFERENCE

- Alvarez, Luis H.R. Koskela, E. (2004). Irreversible Investment under Interest Rate Variability: new results, Others 0404007, EconWPA.
- Ambarwati, A. D., Sara, I Made & Azita Aziz, I.S. (2021). The Influence of Money Supply, BI Rate and Inflation on Economic Growth in Indonesia for the 2009-2018 Period. *Warmadewa Economic Development Journal (WEDJ)*, 4(1), 21-27.
- Amoateng K, Amoako AB. 1996. Economic Growth, Export And External Debt Causality: The Case of African Countries, *Applied Economics*, 28(1), 21-27.
- Akram, N. (2017). Role of Public Debt in Economic Growth of Sri Lanka: An ARDL Approach. *Pakistan Journal of Applied Economics*, 27 (2), 189-212.
- Baillie, R. T., McMahon, P. C. (1981). Interest rates and investment in West Germany. *Empirical Economics*, 6 (1), 1-9
- Baharumshah, A. Z., Nor Aishah Hamzah & Muhammad Sabri, S.R. (2011). Inflation Uncertainty and Economic Growth: Evidence from the Lad Arch Model, *Journal of Applied Statistics*, 8 (1), 195-206.
- BPS. (2023). Gross Regional Domestic Product of Provinces in Indonesia According to Expenditure, 2018-2022, Jakarta.
- BPS. (2023). Statistical Year Book of Indonesia. Catalog Number: 1101001, Publication Number: 03200.2303, ISSN/ISBN: 0126-2912, Jakarta.
- Branson, William H. 1992. *Macroeconomics Theory and Policy*. Hopper & Row Publishers, Singapore.
- Case, Karl E., Fair, Ray C. & Oster, Sharon M. (2020). *Principles of Macroeconomics*. Global Edition, Pearson, London.
- Dewi, P. Kartika & Triaryati, N. (2015). The Effect of Economic Growth, Interest Rates and Taxes on Foreign Direct Investment. *Unud Management E-Journal*, 4 (4), 866-878.
- Dore, M., Makken, R., Eastman, E. (2013). The Monetary Transmission Mechanism, Non-residential Fixed Investment and Housing, *Atlantic Economic Journal*, *International Atlantic Economic*, 41(3), 215-224
- Cunningham R. T. (1993). The Effects of Debt Burden on Economic Growth in Heavily Indebted Nation, *Journal of Economic Development*, 18, 115-126.
- (Dewi & Suprpto, 2022). The Influence of the Development of Micro, Small and Medium Enterprises on Economic Growth in East Java. *Journal of Development Economic and Social Studies*. 1(2), 2010-2015.
- Geiger L.T. (1990). Debt And Economic Development in Latin America, *The Journal of Developing Areas*, 24, 181-194.
- Guei, K. M. (2019). External Debt and Growth in Emerging Economies. *International Economic Journal*, 1-16. doi:10.1080/10168737.2019.1590727.
- Juliansyah, H., Suprianti S., & Nailufar, F. (2019). Influence of Saving and Economic Growth on Investment in Indonesia, the Priod of 1990-2019. *Jornal of Malikusaleh, Public Economics*, 4(2), DOI: <https://doi.org/10.29103/jmpe.v4i2.6039>.
- Mankiw, N.G., (2010). *Macroeconomics*. Seventh Editions. Worth Publishers, 41 Madison Avenue, New York.
- Muryani & Swastika, R.B. (2018). Input-output Analysis: a Case Study of Transportation Sector in Indonesia. *Journal of Developing Economics*, 3 (2), 80-90.
- Pattillo, C., Poirson, H., & Ricci, L. (2004). What Are the Channels Through Which External Debt Affects Growth?. *IMF Working Paper*, 1-32.
- Rahmattullah. (2015). The Influence of the Productive Age Population on Economic Growth, *Visipena*, 6(2), 68-87.
- Rafikhalif D. & Nirmalawati, D. (2021). Analysis of the Effect of Government Foreign Debt on Indonesia's Economic Growth (Period 1980-2019). *Scientific Journal of Economics and Development*, 10 (1), 1-9.
- Safie Luthfiana, H.A., Ayuninggar, I. L. & Mumtan J. (2022). The Effect of Inflation and Interest Rates on Economic Growth in Indonesia, *Journal of Economics*, 13(2), 180-186.
- Satria Prasetyo, F. A. & Kurnia, A. S., (2021). Foreign Debt and Economic Growth : A Case Study of Selected Countries 2000-2007. *Journal of Economics Development and Social Research*, 1(1), 1-10.
- Senadza, B., Fiagbe, A.K., & Quartey, P. (2018). The Effect Of External Debt On Economic Growth In Sub-Saharan Africa. *International Journal of Business and Economics Sciences Applied Research*, (Vol.11), No.1, 61-69.
- Sequeira, T.N., Gil, P.M. & Afonso, O. (2021). Inflation, Complexity and Endogenous Growth, *Applied Economics*, Volume 53(23), 2631-2646.
- Sri Wigati & Abdul Wahid, (2022). The Influence of Interest Rates and the Rupiah Exchange Rate on Economic Growth and Export Value in Indonesia. *Al-Buhuts*, 18(2), 430-439.
- Tiwari, A. K., Olayeni, R.O., Olofin, S.A. & Chang, T. (2019). The Indian Inflation-growth Relationship Revisited: Robust Evidence from Time-frequency Analysis, *Applied Economics*, 51, (51).
- Todaro, Michael P. 2000. *Economic Development*. 7th Edition, Addison-Wesley, ISBN 10: 0201441306; ISBN 13: 9780201441307, Boston, MA
- Toktaş Y., Altiner, A., & Bozkurt, E., (2019). The Relationship between Turkey's Foreign Debt and Economic Growth: An Asymmetric Causality Analysis. *Applied Economics*, 51(26), 2807-28017.
- Wan, T. T. H. (2002). *Evidence-based Health Care Management: Multivariate Modeling Approaches* (1st ed.). Norwell, MA: Kluwer Academic Publishers.
- Wuhan, Li Suyuan & Khurshid, A., (2015). The Effect of Interest Rate on Investment; Empirical Evidence of Jiangsu Province, China", *Journal of International Studies*, 8(1), 81-90.
- Yoshino, N & Taghizadeh-Hesary, T, (2016). Major Challenges Facing Small and Medium-sized Enterprises in Asia and Solutions for Mitigating Them. *Asian Development Bank Institute, Kasumigaseki, Chiyoda-ku Tokyo*, No. 564.