

The Effect of Inflation, SBI Interest Rate on Foreign Investment (PMA) and Economic Growth in Indonesia (Year 2010-2019)

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ABSTRACT

The economic crisis experienced by developed countries must be utilized by improving the economic structure in Indonesia to increase economic growth and increase the flow of foreign capital into Indonesia. This study aims to determine the effect of inflation and SBI interest rates on foreign investment and economic growth in Indonesia as an emerging market. The type of research used is explanatory research with a quantitative approach. This study uses 2010-2019 time series data, namely secondary data in the form of data on inflation, interest rates, FDI, and economic growth, which are tested using path analysis techniques. Statistical test results show that the inflation variable has no significant negative effect on FDI; the interest rate has no significant positive effect on FDI; inflation has no significant negative effect on economic growth; the interest rate has no significant positive effect on economic growth; and FDI has a positive and significant effect on economic growth.

INTRODUCTION

The impact of the crisis in industrialized countries caused the world economy to experience a contraction. These problems slowed down the recovery of developed countries from the crisis. And to slow down economic growth in developing countries has different characteristics from markets in developing countries, making investment in developing countries more profitable (Tandelilin, 2010). Foreign capital not only helps to raise capital, but also provides technical skills, experts, market knowledge, organizational experience, advanced production techniques and so on. The presence of foreign investment helps accelerate economic development in lagging countries (Jhingan, 2012).

Inflation is a monetary phenomenon in countries where inflation fluctuations cause economic turmoil. Maintaining price stability remains an important macroeconomic policy goal for most countries in the world. This is one to achieve sustainable economic growth. In monetary policy, special emphasis is placed on price stability to promote sustainable economic growth and strengthen the purchasing power of currencies (Umary dan Zubairu, 2012). Economic growth and development have different definitions, namely economic development is an effort to improve the standard of living of a nation, which is often measured by per capita income (Suparmoko, 2002).

LITERATURE REVIEW

Foreign direct investment is a form of investment through development, enterprise or acquisition. Foreign investment (PMA) is the arrangement of flows received by outsiders engaged in foreign investment (Nabilla Mardiana Pratiwi, 2004). Economic growth is an increase in the production of goods and services in the economy, which is reflected in quantitative changes (Nanga, 2005). Increased economic growth affects wealth, employment opportunities, productivity and income distribution of goods and services increases, it can also be said that the country's economy is also growing (Rahardja and Manurung, 2008).

Inflation is a general and continuous increase in the price of goods. Venieris and Seblod define inflation as the tendency of the general price level to continue to increase over time (Fahmi, 2010). Inflation is an economic event that often occurs, even though it was never expected before. Inflation when there is a general increase in prices continuously at the same time. Price increases are not expected in the future. Under certain conditions, price increases should not be a problem because prices will return to normal, so that temporary price increases cannot be called inflation (Iba, 2012).

Interest rates are fees that are set at a certain percentage when you want to borrow money for a certain period of time. Represents bank charges for borrowing from customers. Interest rates are determined by the supply and demand of currency and determined by money markets. Changes in interest rate affect the willingness to invest (Fabozzi and Francais, 2003).

Mind Map

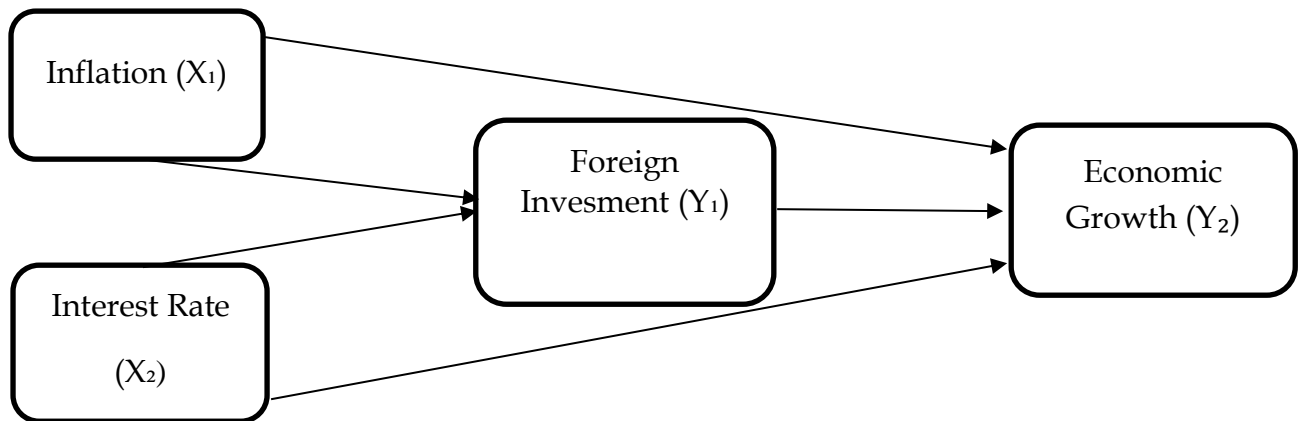


Figure 1. Path Analysis Model of the Influence of Inflation, Interest Rates on Foreign Investment and Economic Growth

METHODOLOGY

The data used in this study is a quantitative method using secondary data. This research was conducted by looking for data originating from Central Bureau of Statistics and Bank Indonesia regarding inflation, interest rates, foreign investment and economic growth for the 2010-2019 period. The method used in this study is the path analysis method to determine the causal relationship between one dependent variable and or more dependent variables.

RESEARCH RESULT

The results of multiple linear regression to see the effect of inflation variables, interest rates on foreign investment (PMA) can be seen in the table below.

Table 1. The Result of Multiple Linear Regression

Dependent Variable: Y1
 Method: Least Squares
 Date: 11/03/22 Time: 03:01
 Sample: 2010 2019
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.842387	4.032523	2.192768	0.0644
X1	-0.058039	0.460644	-0.125994	0.9033
X2	-0.679673	0.846150	-0.803254	0.4482
R-squared	0.180464	Mean dependent var		4.420000
Adjusted R-squared	-0.053689	S.D. dependent var		2.175668
S.E. of regression	2.233310	Akaike info criterion		4.688171
Sum squared resid	34.91370	Schwarz criterion		4.778947
Log likelihood	-20.44086	Hannan-Quinn criter.		4.588591
F-statistic	0.770710	Durbin-Watson stat		1.253355
Prob(F-statistic)	0.498297			

Based on these results, the regression equation used in this study is:

$$Y = 8.8423 - 0.0580 X_1 - 0.6796 X_2 + e$$

The results of multiple linear regression to see the effect of inflation variables, interest rates, on economic growth through foreign investment (PMA) can be seen in the following table:

Table 2. The Result of Multiple Linear Regression

Dependent Variable: Y2
 Method: Least Squares
 Date: 11/03/22 Time: 03:30
 Sample: 2010 2019
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.393104	1.157942	6.384695	0.0007
X1	-0.021701	0.101959	-0.212842	0.8385
X2	-0.146711	0.195506	-0.750415	0.4814
Y1	-0.238875	0.083564	-2.858603	0.0289
R-squared	0.576848	Mean dependent var		5.339000
Adjusted R-squared	0.365272	S.D. dependent var		0.619757
S.E. of regression	0.493759	Akaike info criterion		1.715637
Sum squared resid	1.462790	Schwarz criterion		1.836672
Log likelihood	-4.578187	Hannan-Quinn criter.		1.582863
F-statistic	2.726434	Durbin-Watson stat		1.335652
Prob(F-statistic)	0.136704			

Based on these results, the equation used in this study is:

$$Y = 7.3931 - 0.0217 X_1 - 0.1467 X_2 - 0.2388 Y_1 + e$$

1. The effect of inflation on foreign investment (PMA)

The results of the study of structure 1 directly explain that the inflation variable (X_1) has a direct and significant effect on FDI (Y_1) at a significant level of 0.05 when other variables are assumed to be constant. This can be shown by the coefficient -0.0580 with a probability value of t 0.903 ($0.903 > 0.05$). Based on the hypothesis, inflation has no significant effect on FDI.

2. The effect of the SBI interest rate on foreign investment (PMA)

The results of the study of structure 1 state that the interest rate (X_2) has a direct and significant effect on FDI (Y_1) at a significant limit of 0.05 if other variables are assumed to be constant. This can be proven by the magnitude of the coefficient of 0.6796 with a value of 0.448 ($0.488 > 0.05$). Based on the hypothesis, there is no significant influence between SBI interest rates and FDI.

3. The effect of inflation on economic growth
 The results of structure 2 research directly prove that the inflation variable (X_1) at a significant limit of 0.05 has a direct negative and significant effect on economic growth (Y_2) when other variables are assumed to be constant. This can be proven by the magnitude of the coefficient -0.0217 with a value of 0.838 ($0.838 > 0.05$). According to the hypothesis, inflation is not significant to economic growth.
4. The effect of the SBI interest rate on economic growth
 The results of the 2nd structure study show that the interest rate variable (X_2) at a significant limit of 0.05 has a direct negative and significant effect on economic growth (Y_2) when other variables are assumed to be constant. This can be proven by the magnitude of 0.1467 with a value of 0.481 ($0.481 > 0.05$). based on the hypothesis, the SBI interest rate has no significant effect on economic growth.
5. The effect of foreign investment (PMA) on economic growth.
 The results of the 2nd structure study directly explain that the variable level of Foreign Investment (PMA) (Y_1) at a significant limit of 0.05 has a direct and significant negative effect on economic growth (Y_2) when other variables are assumed to be constant. This can be proven by the magnitude of the coefficient -0.2388 with a value of 0.028 ($0.028 < 0.05$). The hypothesis states that Foreign Investment (PMA) has a significant effect on economic growth.

Table 3. Results Direct Effect, Indirect Effect and Total Effect between Variables

Variable Relationship	Influence		Total
	Direct	Indirect Influence Y_1	
$X_1 \rightarrow Y_1$	-0,0580		-0,0580
$X_2 \rightarrow Y_1$	-0,6796		-0,6796
$X_1 \rightarrow Y_2$	-0,0217	0,0138504	-0,0078
$X_2 \rightarrow Y_2$	-0,1467	0,16228848	-0,0155
$Y_1 \rightarrow Y_2$	-0,2388		-0,2388

Based on the table it can be explained as follows:

Direct Effect (Direct Effect)

- a. The effect of the inflation variable on foreign investment is -0.0580
- b. The influence of the SBI interest rate variable on foreign investment is -0.6769
- c. The effect of the inflation variable on economic growth is -0.0217
- d. The influence of the SBI interest rate variable on economic growth is -0.1467
- e. The variable influence of foreign investment (PMA) on economic growth is -0.2388

Indirect influence

- a. The effect of inflation on foreign investment through economic growth is 0.0138504.
(-0.0580 x (-0.2388) = 0.0135804)
- b. The effect of SBI interest rates on foreign investment through economic growth 0.16228848
(-0.6796 x (-0.2388) = 0.16228848)

Total Effect (Total Effect)

- a. The total effect of the inflation variable on foreign investment through economic growth is -0.0078
(-0.0217 + 0.0138504) = 0.0078)
- b. The total influence of the SBI interest rate variable on foreign investment through economic growth is 0.0155
(-0.1467 + 0.16228848 = 0.0155)

Based on the research results, the coefficient model of the path analysis between variables was formed. The substructure equation can be a path analysis coefficient model, as follows:

Substructural Equation I :

$$Y = 8.8423 - 0.0580 X_1 - 0.6796 X_2 + 0.8196 e_1$$

Substructural Equation II:

$$Y = 7.3931 - 0.0217 X_1 - 0.1467 X_2 - 0.2388 Y_1 + 0.4232 e_2$$

In Timming's theory, testing the validity of the research model is observed through calculating the total determination coefficient as follows:

$$\begin{aligned} Rm^2 &= 1 - (0.8196)^2 (0.4232)^2 \\ &= 1 - (0.6717446) (0.17909824) \\ &= 1 - (0.12030819679) \\ &= 0.8796 \\ &= 87.96\% \end{aligned}$$

The coefficient of determination of 0.8796 indicates that 87.96% of the information in the data is explained by the model, and the remaining 0.12% is explained by errors and other variables outside the model. the coefficients in this model are relatively large, so further interpretation makes sense.

CONCLUSIONS AND RECOMMENDATIONS

1. The results of the structural equation I show that the inflation variable (X_1) has a direct and significant negative effect on foreign investment (Y_1) assuming other variables are constant with a significant limit of 0.05, explained in detail.
2. The results of the interest rate variable (X_2) have a negative and significant direct effect on foreign investment (Y_1)
3. The results of the structural equation II directly explain that the inflation variable (X_1) has a direct and significant negative effect on economic growth (Y_2)
4. The results of the study directly explain the negative and significant direct effect of the interest rate variable (X_2) on economic growth (Y_2).
5. The results of the study explain that changes in the level of foreign direct investment (Y_1) have a direct negative and significant effect on economic growth (Y_2)

Based on the conclusions above, the researcher wants to provide the following suggestions: The Government and Bank Indonesia as banks central expected to be more careful when going carry out policies so that the investment climate in Indonesia is maintained and economic growth in Indonesia is getting higher.

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Huriah, Alfina, Ariska, Nurhasanah, Ananda, Asnidar

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