

Analysis of Economic Growth, Inflation and Investment in Indonesia

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Abstract

Inflation and investment are factors that can influence a country's economic growth. The aim of this research is to determine the effect of inflation and investment levels on Indonesia's economic growth in 1997-2022. The type of data needed is relevant secondary data, compiled or published data taken from BPS (Central Statistics Agency) data and this research was processed using multiple regression analysis methods. The research results explain that inflation has a negative and significant effect on economic growth in Indonesia, while investment has no significant effect on economic growth. Therefore, high inflation can have a negative impact on Indonesia's economic growth, and if investment increases it can have a positive impact on economic growth.

Keywords: *Economic Growth, Inflation, And Investment*

1. Introduction

Economic growth is the process of increasing the value and quantity of production of goods and services within a certain period of time (Nanga 2005). Economic growth refers to the level of social welfare and is the most important factor influencing the development and economic growth of a country, namely human resources (HR), natural resources (SDA), capital, social culture and technological development [1]. Economic growth is an increase in a country's long-term ability to provide various economic goods for its population [2].

Investment is the act or process of committing a certain amount of resources, such as money, time, or energy, to an asset or project in the hope of obtaining rewards in the future. The main goal of investment is to obtain more income or more returns than the resources invested [3]. You can invest in various assets such as stocks, bonds, real estate, currencies, commodities, startups and more.

Domestic investment can be interpreted as the realization obtained from investment by domestic capital owners which occurs directly and is based on related regulations, general regulations and procedures determined by the state [4]. Investment has a very strong influence on economic growth, domestic investment is also positively related to infrastructure development in the country. In the long term, domestic investment is closely related to economic growth [5]. Investment can be in the form of machinery and equipment or reserves, which have a stronger influence on economic growth, but physical investment is not the only determinant of economic growth.

During the period 1997 to 2022, investment in Indonesia experienced fluctuations and various changes. Some important periods that can be highlighted include:

- a. Financial Crisis 1997-1998: The financial crisis that hit Asia in the late 1990s, including Indonesia, resulted in a massive decline in investment. Many investment projects were

stalled or cancelled, and the Indonesian economy experienced a significant contraction. The investment figure is 16.63 percent.

- b. Reform Era: After the fall of the New Order regime, the Indonesian government carried out various reforms to improve the investment climate. Even though there are still fluctuations, there are efforts to increase investment through deregulation and economic policy updates. The investment figure is 16.61 percent.
- c. Era of Stable Economic Growth: In the early 2000s, Indonesia began to recover from the crisis, and investment began to increase again. Stable economic growth and structural reforms help create a more conducive environment for investment. The investment figure is 16.91 percent.
- d. Infrastructure Improvement: The Indonesian government began focusing on infrastructure development in the mid-2010s, which is expected to support long-term economic growth. Investment in the infrastructure sector has become one of the main focuses in recent years. Investment of 17.92 percent.

During this period, investment in Indonesia was influenced by various factors, including global economic conditions, government policies, political stability and other internal factors.

Inflation is an important factor that influences a country's economic growth, therefore the central bank must increase interest rates, the main aim of which is to control inflation so that it does not burden society too much, so that economic growth can increase [6]. can become stable again. On the positive side, high inflation can affect economic conditions, namely reducing unemployment, as claimed by Philips and well-known economists. The disadvantage is that when inflation is low, this indicates that a country's economic growth is generally slow and causes a significant decrease in people's purchasing power [7].

Inflation, measured by the consumer price index, reflects the average annual percentage cost of consumer purchases of a basket of goods and services, which can be adjusted or changed, for example annually. Indonesia experienced high inflation for the second time in 1997/1998, when inflation was 6.23 percent in 1997 and then became 58.45 percent in 1998. Then in 1999, inflation immediately fell to only 20.48 percent . In 2000, inflation was 3.69 percent. In 2001-2008, although economic growth was rapid, inflation was also high. This means that the prices of consumer goods will also rise. The same pattern also occurred in 2010, 2013 and 2014. In 2015-2017, economic growth is expected to continue and inflation can be controlled. In the second half of 2018, economic growth was 5.17 and annual inflation in September 2018 was 3.20. Inflation in Indonesia was 2.82 percent in 2019. Indonesian inflation in 2020 was 1.92 percent . In 2021 inflation will be 1.56 percent and in 2022 inflation will be 4.21 percent.

Economic growth refers to the process of increasing the production of goods and services in society's economic activities. To measure economic growth, the GDP value is GDP based on constant prices (real GDP), the result of which is real growth due to additional production. Having a balanced economy is one of the goals of improving the country's economy. This can be achieved through economic variables that influence this balance.

2. Methodology

Inflation and investment variables are used as determinants of economic growth in this research. This research uses a quantitative approach which is applied in the form of multiple regression analysis with panel data combining Indonesian time series data from 1997 to 2022.

Generally the data used in this research is secondary data. Data sources were obtained from several institutions involved in this research, such as the Central Statistics Agency (BPS). The data analysis technique used is linear regression analysis with panel data using the simultaneous equation modeling method. The equation model for this research can be seen as:

$$Y=f(X_1, X_2)$$

Where:

Y = Economic Growth

X₁ = Investment

X₂ = Inflation

as a non-linear function as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Information:

Y = economic growth

α = constant

X₁ = Investment

X₂ = Inflation

β_1, β_2 = Parameters or regression coefficients of the independent variables

e = Bullying error section.

3. Result and Discussion

3.1. Research Result

3.1.1 Classic Assumption Test

- Normality Test

It is considered normal if the significance level value is greater than 0.05 . There are three ways to test normality, namely histogram, P-plot and triangular plot [8]. This research introduces the Kolmogorov test to test normality. From table 1 below it can be concluded that all variables in this study are normal, it can be seen that the significance level value is 0.200 > 0.05, so the data is normally distributed.

Table 1
 Normality test
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		24
Normal Parameters ^{a, b}	Mean	.0000000
	Std. Deviation	.94451346
Most Extreme Differences	Absolute	.085

	Positive	.063
	Negative	-.085
	Test Statistic	.085
	Asymp. Sig. (2-tailed) ^c	.200 ^d
Monte Carlo Sig. (2-tailed) ^e	Sig.	.920
	99% Confidence Interval	
	Lower Bound	.913
	Upper Bound	.927

- Uji Multikolinearitas

Multicollinearity test is a method that detects the presence or absence of multicollinearity by looking at the VIF (Variance Inflation Factor) size and tolerance value. If $VIF < 10$ and tolerance > 0.1 then multicollinearity does not occur [9]. From Table 2 below, it is known that the VIF value is $1.667 < 10$ and the tolerance is $0.600 > 0.1$ so that there is no multicollinearity in the data.

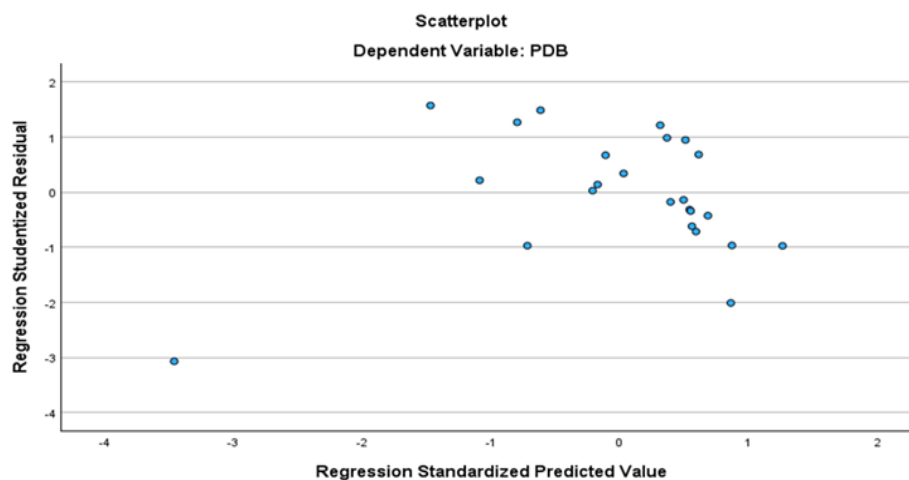
Table 2
 Multicollinearity test

Model	Collinearity statistics		
	B	Tolerance	VIF
1. (Constant)	10,064		
Investment	-.213	,600	1,667
Inflation	-.182	,600	1,667

- Heteroscedasticity Test

The heteroscedasticity test can be seen in Figure 1 which has a scatterplot where the points are spread out, meaning that heteroscedasticity does not occur.

Figure 1
 Heteroscedasticity



3.1.2 Description of Data Analysis Results

Table 3
 Influence Between Variables

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	10,064	4,062		2,478	,022	
INVESTMENT	-.213	,210	-.238	-1,016	,321	
INFLATION	-.182	,063	-.676	-2,888	,009	

a. Dependent Variable: GDP

The table above shows the results of statistical analysis of the influence of investment levels (X1), inflation (X2) on economic growth (Y1) in Indonesia.

The research equation estimated from data analysis is:

$$Y = 10.064 - 0.213X_1 - 0.182X_2$$

This equation can be interpreted as follows:

- The investment level variable coefficient is -0.213. The investment level regression coefficient value is negative, which means that if the investment level increases by one percent, economic growth will decrease by 0.213 percent.
- The inflation factor variable is -0.182. The regression coefficient value for the inflation variable is negative, meaning that if inflation increases by one percent, it can reduce economic growth by 0.182 percent.

3.1.3 Hypothesis Testing

The condition that supports the research hypothesis is if the influence and/or direction of the variable is as expected. Two hypotheses were tested in this research, namely:

H1: The level of investment has no effect on economic growth

The analysis results presented in Table 3 show that the influence of investment has no effect on economic growth. the influence coefficient value is -0.213 and the probability value is $0.321 > 0.05$. Coefficient values that are negative indicate a unidirectional relationship. This means that the higher the investment value, the greater the economic growth.

Based on the results of the analysis, it can be concluded that investment has no effect on economic growth. Thus, the hypothesis H1 stating that investment has no effect on economic growth is accepted.

H2: Inflation has a negative and significant effect on economic growth

The results of the analysis in Table 3 show that the effect of inflation on economic growth is negative and significant with an influence coefficient value of -0.182 and a probability of $0.009 < 0.05$. This means that the higher inflation is, the slower economic growth will be. Based on the results of the analysis, it can be concluded that inflation has a negative and significant effect on economic growth.

Thus, hypothesis H2 which states that inflation has a negative and significant effect on

economic growth is accepted.

Overall, the results of research hypothesis testing are presented in table 4

Table 4
 Results of research hypothesis testing

Connection	Hypothesis	Test result			Conclusi
		Coefficient	Probability	Informatio	
X1→Y	(+) Significant	-0.213	0.321	Not significant	Rejected
X2→Y	(-) Significant	-0.182	0.009	Significant	Accepted

Source: Processed data, 2024

3.2. Discussion

3.2.1 The influence of investment on economic growth in Indonesia in 1997-2022

Based on the results of data analysis, it shows that the level of investment does not have a significant effect on economic growth. This is due to the low efficiency of investment use, so that even though investment is made, it does not have an optimal impact on economic growth. In addition, factors such as lack of adequate infrastructure, complicated bureaucracy, corruption, and regulatory uncertainty can also hinder the positive impact of investment on economic growth. By improving the efficiency of investment use and creating a conducive environment for investment, Indonesia can increase the positive impact of investment on economic growth.

Investment does not have a significant effect on economic growth because investment is not on target. The results of this research are not in line with Juardi's research findings [10]. In theory, the correlation between investment and economic growth is explained in the Harrod-Domar economic growth model, which is a development of Keynes' theory which focuses on the role of savings and investment in determining economic growth. The more savings and investment, the faster the economy will grow. 91 Basically, the influx of foreign investment originating from other countries provides opportunities for developing countries to support development. This is clearly very necessary, considering the limited financial resources available in developing countries, while their financial needs are very large. So that foreign investment can be used to accelerate the process of economic growth.

This research is in line with research conducted by [11] entitled the influence of government investment, private investment, inflation, exports, labor and labor productivity on economic growth in Indonesia.

3.2.2 The influence of inflation on economic growth in Indonesia in 1997-2022

Based on the results of data analysis, it shows that the inflation rate has a negative and significant effect on economic growth in Indonesia in 1997-2022. There is an inverse or opposite influence between inflation and economic growth, namely if inflation increases then economic

growth will decrease and if inflation decreases then economic growth will increase.

The results of this research are in line with previous research conducted by [12], [13]. From this research, the results showed that inflation had a negative effect on economic growth in Riau Province. If inflation rises then economic growth will decline. Inflation can have bad consequences because continuous price increases may not be affordable for all people. When inflation occurs, people have to spend more money to get the goods they want.

In this research, the results obtained show that inflation has a negative and significant influence on economic growth. One of the things that can increase inflation in Indonesia is the increase in fuel prices. The increase in fuel prices will be followed by an increase in the prices of goods and services in society.

4. Conclusion

The Based on the results of data processing and discussion both statistically and comprehensively based on empirical facts and related theoretical studies, this research can draw the following conclusions:

1. The level of investment does not have a significant effect on economic growth in Indonesia, with an influence coefficient value of -0.213 and a probability value of $0.321 > 0.05$. Coefficient values that are negative indicate a unidirectional relationship. This means that the higher the investment value, the lower economic growth will be . Based on the results of the analysis, it can be concluded that investment has no significant effect on economic growth.
2. The inflation rate has a negative and significant effect on economic growth in Indonesia with an influence coefficient value of -0.182 and a probability of $0.009 < 0.05$. This means that the higher inflation is, the lower economic growth will be. Based on the results of the analysis, it can be concluded that inflation has a negative and significant effect on economic growth.

5. Acknowledgement

The author would like to express his thanks to the lecturers of the development economics study program, especially to Cici Mahmut S.E., M.Si and NurHuda S.E., M.Si, Faculty of Economics and Business, Andi Djemma Palopo University for facilitating the author to conduct research and facilitate him in attending this international seminar. Hopefully what is obtained from the results of this research and from this activity can be useful for Andi Djemma University, especially the development economics study program.

6. Reference

- [1] N. N. Pamungkas dan S. Sukirno, "Analysis of Factors Affecting Return On Investment (ROI)," *J. Profita Kaji. Accounting Science.* , vol. 4, no. 8, 2016.
- [2] S. Arka dan I. K. O. A. Yasa, "The influence of economic growth and income disparities between regions on the welfare of the people of Bali Province," *J. Ekon. Applied Quantitative.* , vol. 8, no. 1, p. 44328, 2015.

- [3] C. Mahmut, F. Fatmawati, dan A. I. Anwar, "Analysis of Community Welfare in South Sulawesi Province," *SEIKO J. Manag. Bus.* , vol. 5, no. 2, p. 452–461, 2022.
- [4] K. Fatimah, V. H. Amalia, dan E. K. Panggiarti, "Analysis of the Effect of Foreign Direct Investment (PMA) on Economic Growth," *J. Ekon. Manaj. and Accountant.* , vol. 1, no. 2, p. 68–76, 2022.
- [5] D. Li, "Is the AK model still alive? The long-run relation between growth and investment re-examined," *Can. J. Econ. Can. d'économique*, vol. 35, no. 1, hal. 92–114, 2002.
- [6] R. D. Pandiangan, "Analysis of the Effect of Inflation, Economic Growth, Provincial Minimum Wage (UMP), Number of Labor Force on Open Unemployment in North Sumatra Province 2007-2017," 2019.
- [7] A. M. Adlu, N. Nursini, dan I. T. Abdireviane, "Determination of Exports and Economic Growth in Indonesia," *SEIKO J. Manag. Bus.* , vol. 6, no. 2, p. 245–261, 2023.
- [8] Y. L. Sukestiyarno dan A. Agoestanto, "Limitations of prerequisites for normality tests and homogeneity tests in linear regression models," *Unnes J. Math.* , vol. 6, no. 2, p. 168–177, 2017.
- [9] B. Nugraha, *Development of statistical tests: Implementation of multiple linear regression methods with consideration of classical assumption tests* . Pradina Pustaka, 2022..
- [10] B. Bado, "Analysis of Capital Expenditures, Investment and Labor on Economic Growth in South Sulawesi," *J. Ilm. Ecoscience* , vol. 14, no. 2, p. 34–42, 2016.
- [11] C. Ramayani, "The influence of government investment, private investment, inflation, exports, labor and labor productivity on economic growth in Indonesia," *Econ. J. Econ. Econ. Educ.* , vol. 1, no. 2, p. 203–207, 2015.
- [12] A. Salim, F. Fadilla, dan A. Purnamasari, "The Effect of Inflation on Indonesia's Economic Growth," *Ekon. Sharia J. The Thinker. and Developer. Econ. Sharia* , vol. 7, no. 1, p. 17–28, 2021.
- [13] N. Izzah, "Analysis of the influence of the human development index (HDI) and inflation on economic growth in Riau province in 1994-2013," *At-Tijaroh J. Ilmu Manaj. and Islamic Business* , vol. 1, no. 2, p. 156–172, 2015.