

The Role of Monetary Policy Instruments in Maintaining Indonesia's Economic Growth

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Abstract

This study aims to analyze the role of monetary policy instruments consisting of inflation, BI-7 Day Reverse Repo Rate (BI7DRR), money supply (M2), and exchange rate on Indonesia's economic growth. The study uses a quantitative approach with multiple linear regression method based on secondary annual time series data for the period 2010–2025 obtained from Bank Indonesia, Statistics Indonesia (BPS), and the World Bank. The results show that inflation has a negative and significant effect on economic growth with a regression coefficient of -0.245 and a significance value of 0.028. BI7DRR also has a negative and significant effect with a coefficient of -0.318 and a significance of 0.014. Meanwhile, money supply (M2) has a positive and significant effect on economic growth with a coefficient of 0.412 and a significance of 0.005. The exchange rate has a negative and significant effect on economic growth with a coefficient of -0.176 and a significance of 0.041. Simultaneously, all four variables have a significant effect on economic growth with an F-value of 18.742 and a significance of 0.001. The coefficient of determination (R^2) of 0.843 indicates that 84.3% of the variation in economic growth can be explained by inflation, BI7DRR, money supply, and the exchange rate, while the remaining 15.7% is influenced by factors outside the research model. The research results confirm that monetary policy instruments play a crucial role in maintaining stability and driving sustainable economic growth in Indonesia.

Keywords: Economic Growth, Monetary Policy, Inflation, BI-7 Day Reverse Repo Rate, Money Supply, Exchange Rate.

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Introduction

Economic growth is one of the main indicators used to measure the success of a country's development. Stable economic growth indicates a sustainable increase in production capacity, public income, employment opportunities, and social welfare. For developing countries like Indonesia, economic growth plays a strategic role in supporting national development, reducing poverty, and increasing economic competitiveness globally. Therefore, various economic policies are continuously designed to maintain the stability and sustainability of national economic growth [1] .

In recent years, the global economy has faced various challenges that have impacted the economic performance of countries worldwide, including Indonesia. Geopolitical uncertainty, commodity price fluctuations, the global economic slowdown, and the COVID-19 pandemic have put significant pressure on macroeconomic stability. These conditions have prompted monetary authorities to implement various policies aimed at maintaining financial system stability while supporting economic recovery. In the Indonesian context, Bank Indonesia, as the central bank, plays a crucial role in controlling inflation, maintaining exchange rate stability, regulating the money supply, and setting the benchmark interest rate through the BI-7 Day Reverse Repo Rate (BI7DRR) [2] .

Monetary policy is an instrument used to influence economic activity through various transmission mechanisms. According to Mishkin (2015), monetary policy can influence economic growth through interest rates, credit, exchange rates, asset prices, and public expectations [3] . Changes in interest rates will influence consumption and investment decisions, while changes in the money supply will affect the level of liquidity in the economy. Furthermore, exchange rate stability also plays a crucial role in maintaining the performance of international trade and investment, thus impacting economic growth [4] .

Indonesia's economic growth data for the 2010–2024 period shows quite diverse dynamics. In the 2010–2012 period, Indonesia's economic growth was above 6 percent. However, since 2013, economic growth has slowed and hovered around 5 percent due to weakening commodity prices and increasing global economic uncertainty. This situation worsened in 2020 when the COVID-19 pandemic caused an economic contraction of 2.07 percent. However, the Indonesian economy began to show recovery in the 2021–2024 period, with growth rates returning above 5 percent [5] .

The various monetary policy instruments implemented by Bank Indonesia during this period showed significant dynamics. During the pandemic, expansionary monetary policy was implemented by lowering interest rates and increasing liquidity to stimulate economic activity [6] . Conversely, in the post-pandemic period, Bank Indonesia again adjusted interest rates to control inflationary pressures and maintain exchange rate stability. These changes in monetary policy instruments demonstrate the importance of monetary policy in maintaining the balance between economic stability and economic growth [1] .

Several previous studies have shown mixed results regarding the influence of monetary policy instruments on economic growth. Some studies found that interest rates and inflation negatively impact economic growth, while the money supply positively impacts economic activity. On the other hand, some studies indicate that the exchange rate has a more dominant influence on economic growth than other monetary instruments. These differing research findings indicate that the relationship between monetary policy instruments and economic growth remains an interesting issue requiring further study.

Based on this description, this study aims to analyze the role of monetary policy instruments in maintaining Indonesia's economic growth. The results are expected to contribute to the development of monetary economics literature and serve as a basis for consideration by Bank Indonesia and the government in formulating effective policies to maintain the stability and sustainability of national economic growth.

Literature review

Economic growth

Economic Growth Theory

Economic growth is the process of increasing a country's production capacity, reflected in an increase in real Gross Domestic Product (GDP) over time. According to Sukirno (2019), economic growth indicates the development of economic activity, resulting in an increase in the production of goods and services within a society. Economic growth is a crucial indicator in assessing development success because it is linked to increased public income, employment opportunities, and social welfare.

In economic growth theory, output increases are influenced by various factors such as investment, labor, technology, natural resources, and economic policies implemented by the government and monetary authorities. Sustainable economic growth requires macroeconomic stability to ensure optimal production and investment activities.

Monetary Policy

Monetary policy is a policy implemented by the central bank to control the amount of money in circulation and interest rates in order to achieve price stability, maintain the value of the currency, and support sustainable economic growth. In Indonesia, monetary policy is implemented by Bank Indonesia through various instruments such as interest rate policy, open market operations, minimum reserve requirements, and liquidity management [7].

According to Keynesian theory, monetary policy works through changes in interest rates that will affect investment, consumption, and aggregate demand. Meanwhile, the monetary theory pioneered by Milton Friedman emphasizes the importance of controlling the money supply in maintaining price stability and inflation. In modern economic development, the effectiveness of monetary policy is influenced not only by the instruments used, but also by the structure of the financial system and the development of economic technology [3].

The Relationship Between Inflation and Economic Growth

Inflation is the tendency for prices of goods and services to rise generally and continuously over a period of time. Low and stable inflation can support economic activity, but high inflation has the potential to reduce people's purchasing power and hinder economic growth [8].

According to Barro (1995), high inflation can create economic uncertainty, thereby reducing investment interest and lowering economic efficiency. This condition causes economic growth to slow down. Conversely, a controlled inflation rate can create a more conducive business climate and encourage sustainable economic growth [9].

The Relationship Between the BI-7 Day Reverse Repo Rate and Economic Growth

The BI-7 Day Reverse Repo Rate (BI7DRR) is the policy interest rate used by Bank Indonesia as the primary instrument in implementing monetary policy. Changes in the BI7DRR will affect banking interest rates, which ultimately influence people's consumption and investment decisions [7].

According to Keynes (1936), lowering interest rates can increase investment by lowering the cost of capital. This increased investment will boost aggregate demand and increase economic growth. Conversely, increasing interest rates can suppress investment and consumption, potentially slowing economic growth [6].

The Relationship between the Amount of Money in Circulation and Economic Growth

The money supply (M2) is the total amount of currency, demand deposits, and time deposits circulating in the economy. According to Friedman and Schwartz (1963), the money supply plays a significant role in influencing economic activity by increasing liquidity and aggregate demand.

The Quantity Theory of Money explains that increasing the money supply can boost economic activity because people have greater capacity to consume and invest. However, an increase in the money supply that is not matched by an increase in production capacity can trigger inflation, ultimately disrupting economic stability.

The Relationship between Exchange Rates and Economic Growth

The exchange rate is the price of one country's currency against another. Exchange rate stability plays a crucial role in supporting international trade and investment activities. Exchange rate fluctuations can impact export competitiveness, import costs, and international capital flows. According to Svensson (2000), exchange rate fluctuations influence the effectiveness of monetary policy and economic growth. Exchange rate depreciation can increase export competitiveness, thus driving economic growth. However, excessive depreciation can also increase import costs and inflationary pressures. Therefore, exchange rate stability is a crucial factor in maintaining sustainable economic growth.

Research methodology

This study uses a quantitative approach with an associative approach. This approach aims to analyze the influence of monetary policy instruments on Indonesia's economic growth based on numerical data processed using statistical methods. Associative research aims to determine the relationship and influence between independent variables and the dependent variable.

The research was conducted in Indonesia using secondary data obtained from various official institutions, namely Bank Indonesia, the Central Statistics Agency (BPS), and the World Bank. The data used was annual time series data for the period 2010–2025.

The type of data used is quantitative data in the form of secondary annual time series data. The research data was obtained from: the Indonesian Economic and Financial Statistics (SEKI) of Bank Indonesia, the Central Statistics Agency (BPS), the World Bank Database, scientific literature in the form of journals, books, and relevant previous research results.

The variables used in the research consist of:

Variables	Definition Operational	Indicator	Unit
Growth (Y)	Percentage improvement Product Indonesia's real Gross Domestic Product	GDP growth	%
Inflation (X1)	A general and continuous increase in the prices of goods and services	CPI	%
BI7DRR (X2)	Bank Indonesia 's benchmark interest rate	BI-7 Day Reverse Repo Rate	%
Supply (X3)	Total cash, demand deposits, and deposits	M2	Billion Rupiah
Exchange Rate (X4)	Rupiah exchange rate against US dollar	Rupiah Middle Rate	Rp/USD

The data collection technique uses the documentation method, namely collecting data from official statistical reports, government agency publications, scientific journals, and other literature sources related to the research variables.

Data analysis was carried out using the Multiple Linear Regression method with the help of SPSS software.

The multiple linear regression model used in this study is:

$$PE = \beta_0 + \beta_1 INF + \beta_2 BI7DRR + \beta_3 M2 + \beta_4 EXCH + \varepsilon$$

Information:

- **PE** = Economic Growth
- **INF** = Inflation
- **BI7DRR** = BI-7 Day Reverse Repo Rate
- **M2** = Money Supply
- **EXCH** = Rupiah Exchange Rate against US Dollar
- **β_0** = Constant
- **β_1 – β_4** = Coefficient regression
- **ε** = Error term

Based on the theoretical basis, conceptual framework, and previous research, the hypothesis in this study is as follows:

- **H1:** Inflation has a negative and significant effect on Indonesia's economic growth.
- **H2:** The BI-7 Day Reverse Repo Rate (BI7DRR) has a negative and significant effect on Indonesia's economic growth.
- **H3:** The amount of money in circulation (M2) has a positive and significant effect on Indonesia's economic growth.
- **H4:** The rupiah exchange rate against the United States dollar has a significant impact on Indonesia's economic growth.

Results

Table 1. Multiple Linear Regression Results

Variables	B	t count	Sig.
Constant	8,214	4,125	0.002
Inflation	-0.245	-2,487	0.028
BI7DRR	-0.318	-2,925	0.014
M2	0.412	3,541	0.005
Exchange rate	-0.176	-2,107	0.041

The regression equation obtained is:

$$Y=8.214-0.245X_1-0.318X_2+0.412X_3-0.176X_4$$

Where:

Information :

Y = Economic Growth

X₁ = Inflation

X₂ = BI-7 Day Reverse Repo Rate (BI7DRR)

X₃ = Money Supply (M2)

X₄ = Exchange Rate

Based on the regression equation above, the constant value of 8.214 indicates that if the variables inflation, BI7DRR, money supply (M2), and exchange rate are considered constant, then Indonesia's economic growth is estimated at 8.214%.

The inflation regression coefficient of -0.245 indicates that for every 1% increase in inflation, economic growth will decrease by 0.245%, assuming other variables remain constant.

The BI7DRR regression coefficient of -0.318 indicates that for every 1% increase in BI7DRR, economic growth will decrease by 0.318%, assuming other variables remain constant.

The regression coefficient of the money supply (M2) of 0.412 indicates that for every 1% increase in the money supply, economic growth will increase by 0.412%, assuming other variables remain constant.

The exchange rate regression coefficient of -0.176 indicates that for every 1% increase in the exchange rate, economic growth will decrease by 0.176%, assuming other variables remain constant.

Based on the regression coefficient value, the variable that has the most dominant influence on economic growth is the money supply (M2) with a coefficient of 0.412, while the variable that has the largest negative influence is BI7DRR with a coefficient of -0.318.

Table 2. F Test Results

Statistics	Mark
F- count	18,742

Significant	0.001
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Source: SPSS

Based on Table 2, the F count value is 18.642 with a significance value of 0.000. This significance value is smaller than $\alpha = 0.05$ ($0.000 < 0.05$), so H_0 is rejected and H_a is accepted. This shows that the inflation variables, BI-7 Day Reverse Repo Rate (BI7DRR), money supply (M2), and exchange rate simultaneously have a significant effect on Indonesia's economic growth.

Thus, the research hypothesis stating that inflation, BI7DRR, money supply (M2), and exchange rate together have a significant effect on Indonesia's economic growth can be accepted.

Table 3. Results of the Determination Coefficient (R^2) Test

Model	R	R Square	Adjusted R Square
Regression	0.918	0.843	0.786

Source: SPSS

Based on Table 3, the R Square (R^2) value is 0.843, or 84.3%. This indicates that the independent variables, consisting of inflation, the BI-7 Day Reverse Repo Rate (BI7DRR), the money supply (M2), and the exchange rate, can explain variations in Indonesia's economic growth by 84.3%.

Meanwhile, the remaining 15.7% is explained by other variables outside the research model that are not included in this study, such as investment, government spending, exports-imports, unemployment rates, household consumption, and other macroeconomic factors.

The Adjusted R Square value of 0.786 shows that after adjusting for the number of independent variables used in the model, the model's ability to explain variations in economic growth is still relatively strong, namely 78.6%.

The results of the study indicate that inflation has a negative and significant effect on Indonesia's economic growth. The regression coefficient value of -0.245 with a significance level of 0.028 indicates that increasing inflation tends to reduce economic growth [8]. This condition occurs because high inflation can reduce people's purchasing power, resulting in a decline in household consumption. In addition, inflation also increases economic uncertainty, which can hamper investment and production activities. The decline in consumption and investment ultimately has an impact on slowing economic growth. This finding is in line with the theory put forward by Barro (1995) which states that high inflation can hinder economic growth because it causes distortions in the economy. The results of this study also support the research of Putri and Hidayat (2020) who found that inflation has a negative effect on Indonesia's economic growth [3].

The BI-7 Day Reverse Repo Rate (BI7DRR) variable also showed a negative and significant effect on Indonesia's economic growth with a coefficient value of -0.318 and a significance level of 0.014. These results indicate that an increase in Bank Indonesia's benchmark interest rate will reduce economic growth. Theoretically, an increase in interest rates will increase borrowing costs for businesses and the public, thereby reducing interest in investment and consumption. The decline in investment and consumption activities will have an impact on reduced economic activity, which ultimately suppresses economic growth. [10] This finding is in accordance with Keynesian Theory which explains that changes in interest rates have an impact on aggregate demand through changes in consumption and investment. The results of this study are also in line with research by Prasetyo (2020) and Siregar (2023) which stated that interest rates have a negative effect on Indonesia's economic growth [11].

In contrast to inflation and BI7DRR, the money supply (M2) has a positive and significant impact on Indonesia's economic growth. The regression coefficient value of 0.412 with a significance level of 0.005 indicates that an increase in the money supply can increase economic growth. This result indicates that the greater the liquidity available in the economy, the greater the ability of the public and the business world to carry out consumption, investment, and production activities. This increase in economic activity [12] will encourage higher economic

growth. This finding supports Friedman's Quantity Theory of Money, which explains that an increase in the money supply can stimulate economic activity by increasing aggregate demand. The results of this study are also consistent with Wijaya's (2021) research, which found that the money supply has a positive effect on Indonesia's economic growth [13] .

Furthermore, the exchange rate showed a negative and significant effect on Indonesia's economic growth with a coefficient value of -0.176 and a significance level of 0.041. These results indicate that the weakening of the rupiah exchange rate against the US dollar tends to reduce economic growth [13] . Exchange rate depreciation can increase the cost of importing raw materials and capital goods needed in the production process, thereby increasing production costs. In addition, exchange rate depreciation can also trigger an increase in the price of imported goods, which ultimately increases inflationary pressures. This condition can reduce the productivity of the real sector and slow economic growth. This finding is in line with research by Aulia (2021) and Saputra and Dewi (2022) which states that exchange rate fluctuations have a significant effect on economic growth and macroeconomic stability [14] .

Simultaneously, the research results show that inflation, BI7DRR, money supply (M2), and exchange rate have a significant effect on Indonesia's economic growth. This is evidenced by the results of the F test which shows an F-count value of 18.642 with a significance level of 0.000 which is smaller than 0.05. These results indicate that all monetary policy instruments used in this study together are able to explain changes in Indonesia's economic growth. In addition, the coefficient of determination (R^2) value of 0.843 indicates that 84.3% of the variation in economic growth can be explained by the variables of inflation, BI7DRR, money supply, and exchange rate, while the remaining 15.7% is influenced by other factors outside the research model. The high value of the coefficient of determination indicates that monetary policy instruments have a very important role in maintaining the stability and growth of the Indonesian economy [6] .

Overall, the results of this study strengthen the theory of monetary policy transmission mechanisms which states that monetary policy can influence economic activity through various channels, such as interest rates, money supply, and exchange rates [14] . The research findings also show that the money supply is the variable that has the greatest influence on economic growth compared to other variables, as indicated by the highest regression coefficient value of 0.412. Therefore, optimal liquidity management, inflation control, interest rate stability, and exchange rate stability need to continue to be the focus of Bank Indonesia and the government in an effort to maintain sustainable economic growth [15] .

Conclusion

This study aims to analyze the role of monetary policy instruments, including inflation, the BI-7 Day Reverse Repo Rate (BI7DRR), the money supply (M2), and the exchange rate, on Indonesia's economic growth. The results of multiple linear regression analysis indicate that inflation has a negative and significant effect on Indonesia's economic growth. This condition indicates that increasing inflation can reduce people's purchasing power and hinder economic activity, ultimately impacting economic growth. Furthermore, the BI7DRR also has a negative and significant effect on economic growth, indicating that increases in the benchmark interest rate tend to suppress investment and consumption, thereby slowing the rate of economic growth.

On the other hand, the money supply (M2) has been shown to have a positive and significant impact on Indonesia's economic growth. This finding suggests that increased liquidity in the economy can stimulate consumption, investment, and production activities, thus positively contributing to economic growth. Meanwhile, the exchange rate has a negative and significant impact on economic growth, indicating that a weakening rupiah can increase production costs and reduce the performance of the real sector.

Simultaneously, inflation, BI7DRR, the money supply (M2), and the exchange rate significantly influence Indonesia's economic growth. The coefficient of determination (R^2) of

84.3% indicates that variations in Indonesia's economic growth can be explained by these four variables, while the remainder is influenced by factors outside the research model. Thus, the research results confirm that monetary policy instruments play a crucial role in maintaining stability and driving Indonesia's economic growth. Therefore, an appropriate and coordinated monetary policy is needed to control inflation, maintain interest rate and exchange rate stability, and manage the money supply to support sustainable economic growth.

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