

## Analysis Of The Influence Of Inflation, Money Supply, And Exchange Rate On Economic Growth In Indonesia

Hotsawadi<sup>1\*</sup>, Nuzulia<sup>2</sup>

<sup>1</sup>Development Economics Study Program, Faculty of Economics and Business  
Mulawarman University

<sup>2</sup>Sharia Economics Study Program, Faculty of Economics and Business  
Mulawarman University

\*Email: hotsawadi@feb.unmul.ac.id

### Abstract

*This study aims to analyze the influence of inflation, money supply, and the exchange rate on economic growth in Indonesia in the short and long term, covering the period 1982–2024. The analysis methods used are Vector Autoregression (VAR) and Vector Error Correction Model (VECM) to capture the dynamic relationship and long-term balance between macroeconomic variables. The results show that in the short term, inflation, money supply, and exchange rates do not have a significant effect on economic growth, which indicates a delay (time lag) in the transmission mechanism of economic policy. However, in the long term, the variables are cointegrated, indicating that macroeconomic variables tend to move towards equilibrium. Partially, exchange rates and inflation have proven to have a significant effect on long-term economic growth, with exchange rate depreciation driving export competitiveness, while controlled inflation increases aggregate demand. On the other hand, the money supply had a relatively limited influence, indicating that the transmission of monetary policy to the real sector was suboptimal. These findings affirm the importance of inflation and exchange rate stability as the main determinants of economic growth in Indonesia. Therefore, a coordinated monetary and fiscal policy framework is needed to maintain macroeconomic stability and promote sustainable economic growth.*

**Keywords:** economic growth, inflation, money supply, exchange rate, VECM

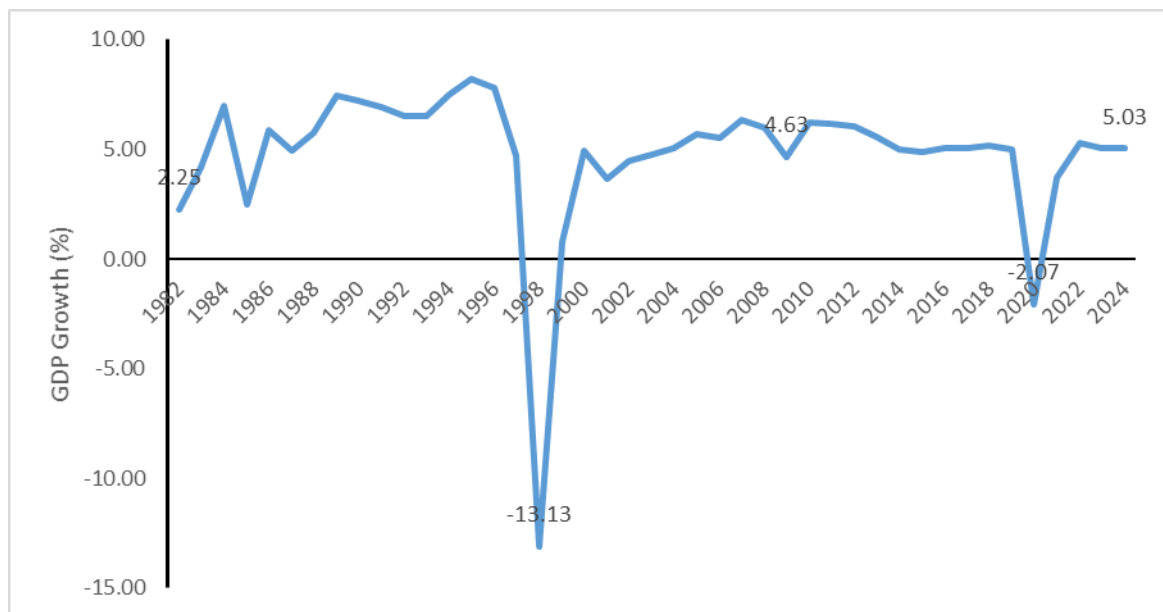
### INTRODUCTION

Economic growth is one of the main indicators used to assess the success of a country's economic development. High, stable, and sustainable economic growth indicates an increase in national production capacity, an equitable distribution of income, and an improvement in people's welfare. (Todaro & Smith, 2020). Within the framework of macroeconomic theory, economic growth is influenced by various fundamental factors, both domestic and external, such as price stability, inflation rates, exchange rates, and government monetary and fiscal policies. (Mankiw, 2019); Harahap & Widyastutik, 2020). A comprehensive understanding of the factors that affect economic growth is essential for formulating effective and sustainable development policies, particularly in developing countries such as Indonesia.

In the macroeconomic context, economic growth is influenced by various factors on both the demand and aggregate supply sides, including monetary, fiscal, and external conditions. (Mankiw, 2019). This is in line with the theory of economic growth put forward by Solow, which emphasizes that economic growth in the long term is determined by capital accumulation, labor growth, and technological progress as the main exogenous factors (Solow, 2010). Moreover, in the Keynesian approach, economic growth in the short term is strongly influenced by aggregate demand components such as consumption, investment, government spending, and net exports, all of which are highly sensitive to the macroeconomic policies implemented. (Blanchard & Leigh, 2013). Thus, the interaction between long-term structural factors and short-term policies is key in explaining the dynamics of a country's economic growth.

In Indonesia, the dynamics of economic growth are inseparable from various macroeconomic factors that interact, especially inflation, money supply, and exchange rates (Sujatmiko et al., 2025; Salim & Fadilla, 2021; Salvatore, 2013). Figure 1 presents Indonesia's

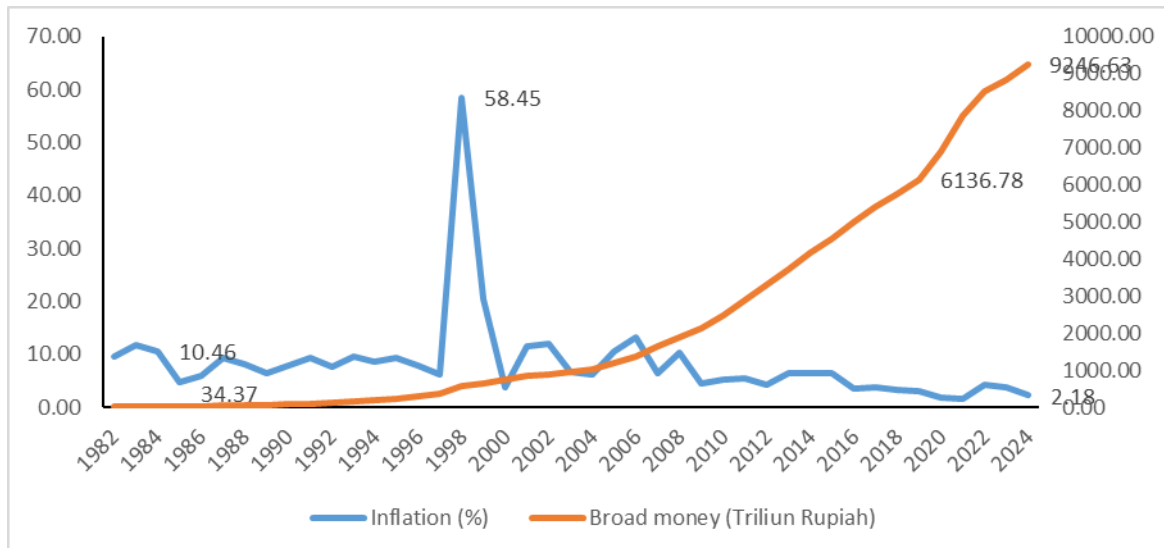
economic growth rate from 1982 to 2024. Empirically, Indonesia's economic growth exhibits fluctuations across several clearly identifiable phases. In the period before the Asian Crisis that lasted from 1997 to 1998, Indonesia's economic growth was identified as relatively high and stable. However, during the 1998-1999 crisis, it was found that the crisis caused a deep economic contraction and marked a structural turning point in the Indonesian economy. Post-crisis, economic growth resumed and trended moderately. However, it remained volatile due to external factors, including fluctuations in global commodity prices and international capital flows. Furthermore, during the 2008 Global Financial Crisis, an economic slowdown occurred again, although the impact was relatively limited compared to the previous crisis. Meanwhile, during the COVID-19 Pandemic period, economic growth contracted again due to a widespread decline in economic activity.



**Figure 1. Indonesia's Economic Growth Rate in 1982-2024 (%)**

Source: World Bank

One of the important factors that affects the rate of economic growth is the relatively stable and controlled national inflation rate (Prabasari & Purnomo, 2022). A stable and controlled inflation rate can encourage growth by increasing consumption and investment, whereas inflation that is too high creates economic uncertainty, erodes people's purchasing power, and hampers long-term investment (Nopirin, 2018). In addition, the money supply also plays an important role in determining economic stability. A controlled money supply can increase liquidity and encourage real-sector activity, but excessive money supply can create inflationary pressures that hinder growth (Boediono, 2019).



**Figure 2. Inflation Rate and Amount of Radar Money in Indonesia in 1982-2024**

Source: World Bank

Based on the description above, when examining the relationship among the national economic growth rate, the inflation rate, and the money supply in Indonesia from 1982 to 2024, it is evident that macroeconomic stability is a key factor in sustaining Indonesia's economic growth. This is reinforced by a study conducted by (2025), which consistently finds that these variables have a significant effect on Indonesia's economic performance, as evidenced by economic growth variables. Based on data published by the World Bank in 2025, the very high inflation spike in 1998 (58.45%) coincided with a sharp contraction in economic growth (-13.13%). These findings indicate that uncontrolled inflation negatively affects economic activity. In contrast, after 2000, when inflation was relatively stable at 3-6%, economic growth was more consistent at 5%. On the other hand, the continuous increase in the money supply, which reached more than 9,000 trillion rupiah in 2024, helps boost liquidity and economic activity but does not necessarily trigger high inflation, provided it is managed carefully by the monetary authorities. Thus, the relationship between the three variables suggests that the expansion of the money supply can support economic growth, but its effectiveness is highly dependent on the ability to keep inflation low and stable ; Pal et al., 2025).

Various previous studies have analyzed the relationship between these variables and economic growth in Indonesia and other countries. Jannah et al., (2025) and Ningsih & Tanjung (2025) In his study, it was found that inflation and the money supply had a positive and significant effect on economic growth in Indonesia during 1991-2023. Meanwhile, a study conducted by Ningsih & Tanjung (2025) Analyze the influence of money supply, interest rates, and inflation on economic growth in North Sulawesi Province during the period from 1991 to 2023 using the Error Correction Model (ECM) method. The results of the study show that the money supply has a significant negative effect on economic growth, but only in the short term. Meanwhile, the inflation variable has been shown to have a significant negative influence on economic growth in both the short and long term.

From another perspective, Sari & Wardianto (2025) and Sinukaban & Karmini (2026) The study also stated that the exchange rate has a negative relationship with economic growth, as rupiah depreciation reduces trade competitiveness. Instead, research conducted by Setyorani (2018) shows that, in the long run, the money supply and exchange rates have a significant effect on economic growth, whereas inflation has no real effect. Based on the results described above, previous research showed an inconsistency in findings (research gap) regarding the significance and direction of the influence of inflation, the money supply, and the exchange rate on economic growth in Indonesia. The differences in results can be due to the research's periodization, the econometric model's approach, and the global economic conditions at the time the research was conducted. In addition, some previous studies have not comprehensively combined these three

macroeconomic variables in a single analytical model, using more up-to-date data and more robust methods.

Based on this background, further research is needed to analyze and update empirical findings regarding the influence of inflation, money supply, and exchange rates on economic growth in Indonesia, taking into account the economic dynamics after the global financial crisis and the current national economic conditions, especially their simultaneous effects both in the short and long term. For this reason, this study aims to identify and analyze the influence of inflation, money supply, and exchange rates on economic growth in Indonesia simultaneously from 1982 to 2024. It is hoped that this research will contribute to the development of macroeconomics and serve as a consideration for policymakers in formulating effective strategies to maintain economic stability and encourage sustainable growth from both short- and long-term perspectives.

## RESEARCH METHODS

### Data Types and Sources

The data used in this study are in the form of annual data (time series) for the period 1982–2024, obtained from Bank Indonesia (BI), the Central Statistics Agency (BPS), and World Bank Data. Economic growth variables are measured as the percentage change in real Gross Domestic Product (GDP), inflation measured by changes in the Consumer Price Index (CPI), money supply (JUB), and the exchange rate, measured as the Rupiah against the United States Dollar (USD). Based on the description above, the types and data sources used in this study are listed in the table below. Based on Table 1 above, the units used in this research model are multidimensional, which may lead to scale differences among variables. To address these dimensional unit differences, this study uses a natural-logarithmic approach. The econometric analysis used in this study is approached using Stata SE 17 software.

Based on the description above, natural logarithmic transformation not only serves to align the scale of variables, but also reduces heteroscedasticity, improves data distribution to be closer to normal, and simplifies the interpretation of regression coefficients in the form of elasticity (Gujarati & Porter, 2013; Wooldridge, 2015; Kontopoulou et al., 2023). In addition, logarithmic transformations are also often used in empirical economic analysis because they can reduce the influence of outliers and change nonlinear relationships to be more linear, so that the estimation results become more efficient and reliable (Kowalskie, 2025; Hu & Xu, 2025; Gujarati & Porter, 2013). Thus, the use of natural logarithms in this study is expected to improve the quality of model estimation and produce more economically meaningful interpretations.

**Table 1. Types and Sources of Research Data**

No.	Variabel	Symbols	Units	Time Period	Data Source
1	Economic Growth	GDPG	Percentage (% per year)	1982–2024	Central Statistics Agency (BPS), <i>World Bank Data</i>
2	Inflation	INF	Percentage (% annual change in CPI)	1982–2024	Central Statistics Agency (BPS), <i>Bank Indonesia</i>
3	Broad Money	JUB	Natural logarithm (Ln JUB) in billion Rupiah)	1982–2024	<i>Bank Indonesia, World Bank Data</i>
4	Rupiah Exchange Rate against the US Dollar	EXC	Natural logarithm of the Rupiah exchange rate against the dollar (Rp/USD)	1982–2024	<i>Bank Indonesia, International Monetary Fund (IMF)</i>

**Analysis Method**

This study uses the Vector Autoregression (VAR) approach to analyze the dynamic relationship between macroeconomic variables consisting of economic growth (GDP growth), inflation (INF), money supply (JUB), and exchange rate (EXC) in Indonesia during the period 1982–2024. The VAR approach was chosen because it can capture the simultaneous interconnectedness between endogenous variables without the need to explicitly define dependent variables, so that each variable in the system can act as an explanation or explain (Nkoro & Uko, 2016; Wooldridge, 2015). Thus, this model enables the identification of causal relationships, both short-term and long-term, between the main macroeconomic variables that affect national economic growth.

In general, the VAR model can be formulated as a system of simultaneous equations that includes lag relationships between variables, namely:

$$Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \alpha_2 Y_{t-2} + \dots + \alpha_n Y_{t-n} + \epsilon_t \quad (1)$$

Based on equation (1) above, it is a vector containing macroeconomic variables;  $\alpha_i$  is the coefficient matrix for each lag  $i$ ; and  $\epsilon_t$  is an error term vector that is assumed to be white noise  $Y_t [GDPG_t, INF_t, JUB_t, EXC_t]'$  (Gujarati & Porter, 2013; Widyastutik et al., 2023). The selection of the optimal lag length ( $p$ ) will be determined using several information criteria such as the Akaike Information Criterion (AIC), Schwarz Bayesian Criterion (SBC), and Hannan-Quinn Criterion (HQC). Specifically, the research model used to identify and analyze the simultaneous relationships among Inflation, Money Supply, Exchange Rate, and Economic Growth in Indonesia is as follows.

$$GDPG_t = \alpha_{10} + \sum_{i=1}^p \beta_{11i} GDPG_{t-1} + \sum_{i=1}^p \beta_{12i} INF_{t-1} + \sum_{i=1}^p \beta_{13i} LnJUB_{t-1} + \sum_{i=1}^p \beta_{14i} LnEXC_{t-1} + \epsilon_{1t} \dots \dots (2)$$

$$INF_t = \alpha_{10} + \sum_{i=1}^p \beta_{11i} GDPG_{t-1} + \sum_{i=1}^p \beta_{12i} INF_{t-1} + \sum_{i=1}^p \beta_{13i} LnJUB_{t-1} + \sum_{i=1}^p \beta_{14i} LnEXC_{t-1} + \epsilon_{1t} \dots \dots (3)$$

$$LnJUB_t = \alpha_{10} + \sum_{i=1}^p \beta_{11i} GDPG_{t-1} + \sum_{i=1}^p \beta_{12i} INF_{t-1} + \sum_{i=1}^p \beta_{13i} LnJUB_{t-1} + \sum_{i=1}^p \beta_{14i} LnEXC_{t-1} + \epsilon_{1t} \dots \dots (4)$$

$$LnEXC_t = \alpha_{10} + \sum_{i=1}^p \beta_{11i} GDPG_{t-1} + \sum_{i=1}^p \beta_{12i} INF_{t-1} + \sum_{i=1}^p \beta_{13i} LnJUB_{t-1} + \sum_{i=1}^p \beta_{14i} LnEXC_{t-1} + \epsilon_{1t} \dots \dots (5)$$

The model estimation steps begin with stationary testing (unit root test) using the Augmented Dickey-Fuller (ADF) or Phillips-Perron (PP) test. Variables that are not stationary at the level will be transformed into the first or second form of differentiation until they reach stationarity. Next, the Johansen cointegration test was conducted to assess the existence of long-term relationships among the variables. If the test results indicate cointegration, the model will be developed as a Vector Error Correction Model (VECM) that captures long-term relationships and short-term dynamics. After the VAR or VECM estimation model is formed, the analysis is followed by the Granger

causality test to determine the direction of the relationship between variables, as well as the Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) to identify the impact and relative contribution of changes in one variable to another. At this stage, it can be observed to what extent shocks to inflation, money supply, and exchange rates affect Indonesia's economic growth over a certain time horizon.

## RESULTS AND DISCUSSION

### Results of Vector Autoregression (VAR) Model Test Results

Vector Autoregression (VAR) analysis was used to examine the dynamic relationships among economic growth (GDP growth), inflation (INF), money supply (JUB), and the exchange rate (EXC) in Indonesia during 1982–2024 within a simultaneous-equation system. The initial stage in VAR estimation with a time-series data approach is testing the data's characteristics to ensure that the variables used are stationary. This test is important because most time series-based econometric methods require that the data have constant averages and variances over time, so that the relationships between variables are not pseudo-spurious regression (Gujarati & Porter, 2013; Wooldridge, 2015). For this reason, the unit root test using the Augmented Dickey-Fuller (ADF) approach is carried out to ensure that the data and variables used are free from the root or stationary unit roots both at the level and first difference (Nkoro & Uko, 2016; Gujarati & Porter, 2013). Table 2 below presents the results of unit root analysis and testing for the dynamic relationship among economic growth, inflation, money supply, and the exchange rate in Indonesia during the period 1982–2024, within a simultaneous equation system.

Based on the results of the Augmented Dickey-Fuller (ADF) test in Table 2, some variables are not stationary at the level because the probability value exceeds the 5% significance level. However, after the first differentiation is carried out, all variables have a probability value of less than 0.05, so they can reject the null hypothesis of the existence of root units. Thus, it can be concluded that all variables are stationary in the first order or integrated in  $I(1)$ , so that the assumption of stationarity in the time series model has been fulfilled, and subsequent analyses, such as VAR/VECM, can be carried out (Gujarati & Porter, 2013; Wooldridge, 2015); Nkoro & Uko, 2016).

**Table 2 Roots Unit Test Results (Stationaryness)**

Variabel	Augmented Dickey-Fuller test for unit root			
	Level		First Difference	
	Test Statistic	Probability	Test Statistic	Probability
$GDPG_t$	0.350	0.980	-4.326	0.000**
$INF_t$	-1.271	0.642	-3.668	0.005**
$LnJUB_t$	-5.188	0.000**	-8.289	0.000**
$LnEXC_t$	-1.206	0.671	-5.341	0.000**

Source: Stata SE 17, processed

Notes: \*) significant at the real level 5%;\*\*) significant at the real level 10%

The next step in the analysis using VAR is to determine the optimal lag length using several information criteria such as Akaike Information Criterion (AIC), Schwarz Bayesian Information Criterion (SBIC), Hannan-Quinn Information Criterion (HQIC), Final Prediction Error (FPE), and *Likelihood Ratio* (LR). Based on the results of the optimal lag test, most information criteria indicate that the first lag is the optimal choice for the VAR model. Selecting the right lag is very important, as a lag that is too short can cause the model to fail to capture the dynamics of relationships between variables. At the same time, a lag that is too long can reduce degrees of freedom and lead to multicollinearity in estimation (Gujarati & Porter, 2013).

**Table 3**  
**Optimal Lag Test Results**

Lag	LL	LR	df	p-value	FPE	AIC	HQIC	SBIC
0	-66.386	–	–	–	0.003	5.414	5.470	5.608
1	58.282	249.340	16.000	0.000**	0.000	-2.945	2.66612*	-1.977
2	70.853	25.142	16.000	0.067	0.000	-2.681	-2.179	-0.939
3	88.369	35.030	16.000	0.004	0.000	-2.798	-2.073	-0.281
4	109.436	42.134*	16.000	0.000	0.000	-3.18736*	-2.240	0.103

Source: Stata SE 17, processed

Notes: \*) significant at the real level 5%;\*\*) significant at the real level 10%

More in-depth, when partially analyzed on each of the variables analyzed, both economic growth, inflation rate, money supply, and wage exchange rate against the dollar also have a consistent probability at the same time, greater than the real level of 5%. According to Gujarati & Porter (2013) and Wooldridge (2015) consistently states that if the Jarque–Bera test statistic exceeds the nominal 5% level, then the model's residuals are normally distributed. Therefore, the estimated VAR model can still be used for advanced analyses, such as impulse response functions (IRFs) and variance decompositions, to examine the dynamics of influence between variables in the short and long term.

**Table 4**  
**Results of Residual Normality Test (Jarque–Bera Test)**

Equations	Chi-Square ( $\chi^2$ )	df	Prob > $\chi^2$
$GDPG_t$	0.120	1.000	0.729
$INF_t$	0.071	1.000	0.790
$LnJUB_t$	0.035	1.000	0.852
$LnEXC_t$	5.781	1.000	0.106
<b>ALL</b>	<b>6.007</b>	<b>4.000</b>	<b>0.199</b>

Source: Stata SE 17, processed

Notes: \*) significant at the real level 5%;\*\*) significant at the real level 10%

Once the optimal lag is determined, the next step is to perform diagnostic testing of the residual model to ensure that the estimated VAR model meets the required classical assumptions. One of the tests carried out was a residual normality test using the Jarque–Bera approach. The test results showed that, overall, the residual model had a probability value of 5%, indicating that each variable used in the model had a residual distribution that closely followed a normal distribution. (Gujarati & Porter, 2013; Wooldridge, 2015).

**Table 5**  
**Multicollinearity Test Results**

	$LnEXC_t$	$INF_t$	$LnJUB_t$
$LnEXC_t$	1.000		
$INF_t$	0.011	1.000	
$LnJUB_t$	-0.419	0.096	1.000

Source: Stata SE 17, processed

Notes: \*) significant at the real level 5%;\*\*) significant at the real level 10%

**Table 6**  
**Heteroscedasticity and Autocorrelation Test Results**

Test	Chi2	df	Prob>Chi2
Autocorrelation Test	13.933	16.000	0.604
Heteroskedasticity Test	0.003	1.000	0.953

Source: Stata SE 17, processed

Notes: \*) significant at the real level 5%;\*\*) significant at the real level 10%

The last test carried out in the VECM analysis was the model feasibility test, using a multicollinearity test approach and the Heteroscedasticity and Autocorrelation Test. Based on the results of the classical assumption tests in Tables 4 and 5, the research model met the estimation feasibility criteria. The multicollinearity test showed that the correlation among the independent variables was relatively low (overall coefficient < 0.8), with correlations of 0.011 between the exchange rate and inflation variables and -0.419 between the money supply and the other independent variables, indicating no serious multicollinearity in the model. Furthermore, the autocorrelation test showed a p-value of 0.604 (> 0.05), indicating the absence of autocorrelation. In contrast, the heteroscedasticity test produced a p-value of 0.953 (> 0.05), indicating that the residual variance is homogeneous (homoskedastic). Thus, the regression model has met the classical assumptions and produced a BLUE (Best Linear Unbiased Estimator), making it suitable for further analysis (Gujarati & Porter, 2013; Nkoro & Uko, 2016).

### The Effect of Inflation, Money Supply, and Exchange Rate on Indonesia's Economic Growth

In analyzing Indonesia's macroeconomic dynamics, especially the influence of inflation, money supply, and the exchange rate on economic growth, this study uses a Vector Error Correction Model (VECM) to capture short- and long-term relationships simultaneously. This approach is relevant because it can identify long-term equilibrium as well as the dynamics of short-term adjustments between variables that are co-integrated with each other (Blackburne & Frank, 2007; Im et al., 2003; Pesaran et al., 1999). For this reason, the results of the VECM analysis aim to measure and identify Indonesia's macroeconomic dynamics, especially the influence of inflation, money supply, and the exchange rate on Indonesia's economic growth, as shown in the table below.

**Table 7**  
**The Effect of Inflation, Money Supply, and Exchange Rate on Indonesia's Economic Growth**  
**Short Run**

	Ln_Y	Ln_Kurs	Ln_Inf	Ln_r
<i>GDPG<sub>t</sub></i>	-0.131 (0.643)	0.166 (0.799)	-1.968 (0.296)	-0.901 (0.175)
<i>LnEXC<sub>t</sub></i>	0.260 (0.004)*	0.538 (0.010)*	2.156 (0.000)*	0.282 (0.186)
<i>INF<sub>t</sub></i>	-0.032 0.414	-0.022 (0.804)	-0.146 0.576	-0.020 (0.830)
<i>LnJUB<sub>t</sub></i>	-0.062 (0.042)*	0.009 (0.995)	-0.877 (0.088)**	-0.084 (0.644)
_Cons	0.146 (0.002)*	-0.001 (0.995)	0.156 (0.001)*	0.085 (0.446)
<b>Long Run</b>				
_Cel	0.002 (0.738)	-0.018 (0.238)	-0.120 (0.008)*	0.027 (0.086)**
<i>GDPG<sub>t</sub></i>	- -	-0.503 (0.037)*	0.093 (0.323)	-0.406 (0.439)

$LnEXC_t$	1.987 (0.002)*	- -	-0.184 (0.323)	0.806 (0.316)
$INF_t$	10.785 (0.000)*	-5.428 (0.000)*	- -	-4.375 (0.000)*
$LnJUB_t$	-2.465 (0.178)	1.241 (0.242)	-0.229 (0.318)	- -
_Cons	-14.733 (0.000)*	7.415 (0.000)*	-0.137 (0.000)*	5.976 (0.000)*

Source: Stata SE 17, processed

Notes: \*) significant at the real level 5%;\*\*) significant at the real level 10%

Based on Table 7 below, the short-term estimates indicate that not all macroeconomic variables significantly influence economic growth. In particular, in the short term, the estimates indicate that exchange rates, inflation, or the money supply do not significantly influence Indonesia's economic growth. The exchange rate coefficient of 0.166 (p-value 0.799), inflation coefficient of -1.968 (p-value 0.296), and interest rate coefficient of -0.901 (p-value 0.175) indicate that, in the short-term, changes in macroeconomic variables do not directly drive changes in national output. This phenomenon reflects the time lag in the transmission of economic policy in Indonesia, where the impact of monetary policy and external fluctuations is felt in the real sector only after a lag. In addition, structural conditions such as price rigidity, import dependence, and a considerable distribution of the informal sector have also slowed down the response of economic growth to macroeconomic shocks  $GDPG_t$  (You et al., 2024).

In the long term, the estimation results indicate a balanced relationship among the variables in the Indonesian economy. This is demonstrated by *the coefficient of the error correction term (ECT) in the inflation equation, which is significant at -0.120 (p-value 0.008), indicating that about 12 percent of the imbalance will be adjusted towards equilibrium in a single period.* These findings indicate that, in the long term, macroeconomic variables in Indonesia tend to move together towards equilibrium. This condition is consistent with the concept of cointegration in macroeconomics, which states that although economic variables such as inflation, the exchange rate, money supply, and economic growth are not stationary in the short term, linear combinations of these variables can form a stable long-term equilibrium relationship. Various empirical studies in Indonesia have found cointegration among macroeconomic variables, indicating an adjustment mechanism towards equilibrium in response to short-term deviations. For example, research with the VECM and ARDL approaches found that variables such as GDP, exchange rate, inflation, and investment have long-term relationships and influence each other in the economic adjustment process (Renaldi et al., 2025). In addition, the results of cointegration tests in other studies confirm that macroeconomic variables in Indonesia do not move independently but exhibit strong long-term structural linkages, so monetary and fiscal policies need to be designed in an integrated manner to maintain economic stability. (Suripto et al., 2025). Thus, these findings reinforce that Indonesia's macroeconomic dynamics follow a long-term equilibrium pattern consistent with economic theory and supported by the latest empirical evidence.

Furthermore, in the long-term economic growth equation, the exchange rate had a positive and significant effect of 1.987 (p-value 0.002). This shows that long-term exchange rate depreciation can increase the competitiveness of Indonesia's exports, thereby encouraging economic growth. These findings are consistent with Indonesia's characteristics as a commodity-export-based country, where exchange rates play an important role in determining the performance of the external sector (Habib et al., 2020; Al Adwan & Alzubi, 2022). In addition, inflation also has a significant effect on economic growth with a coefficient of 10.785. These findings indicate that an increase in aggregate demand reflected in inflation can boost output in the long run, as long as it remains at a controlled level (Nguyen & Luong, 2021). In the long-term inflation equation, the exchange rate has a significant negative effect of -5.428 (p-value 0.000), indicating the presence of an imported inflation mechanism in the Indonesian economy. The depreciation of the exchange rate

raises the prices of imported goods, ultimately increasing domestic inflation. In addition, economic growth also has a positive effect on inflation, reflecting long-term demand pressures (Ha et al., 2021). However, the variable money supply or interest rate does not show a significant effect in the long term, indicating that monetary policy transmission in Indonesia still faces various structural constraints, such as the depth of financial markets and the effectiveness of banking intermediation (World Bank, 2022).

More in-depth, in the context of the Indonesian economy, the findings of this study show that macroeconomic stability, as reflected in inflation and exchange rates, plays a dominant role as the main determinant of economic growth, both in the short and long term. Controlled inflation helps maintain people's purchasing power and production cost efficiency, thereby creating a conducive business climate. On the other hand, exchange rate stability serves as an anchor for economic actors, especially in maintaining stability in the external sector, trade flows, and foreign investment. Instability in these two variables has the potential to cause significant distortions to national economic activities. On the other hand, monetary variables such as money supply and interest rates show a relatively limited influence, especially in the long term. This indicates a monetary policy transmission that is not fully effective or has a long lag in its effect on the real sector. In addition, this condition can also reflect that the financial intermediation mechanism in Indonesia is not fully optimal, so that liquidity expansion or interest rate changes are not directly converted into an increase in investment and economic output.

The policy implications of these findings confirm that economic authorities, especially Bank Indonesia and the government, need to prioritize inflation control and exchange-rate stability within the macroeconomic policy framework. A forward-looking, credible, and coordinated policy approach among authorities is crucial to maintaining stable market expectations. In addition, strengthening domestic economic fundamentals, such as increasing real-sector productivity, diversifying exports, and deepening financial markets, is needed to enhance the effectiveness of monetary policy transmission. Thus, maintaining macroeconomic stability cannot only encourage short-term economic growth but also ensure sustainable growth in the long term.

## **CONCLUSION**

Based on the results and readings above, in the context of the Indonesian economy, inflation and exchange rate variables are proven to be the main determinants of economic growth in both the short and long term. Inflation stability plays an important role in maintaining people's purchasing power and production cost efficiency. In contrast, exchange rate stability is a key factor in maintaining external sector performance and investor confidence. In contrast, monetary variables such as the money supply and interest rates exert a relatively limited influence, especially in the long term, suggesting a weak transmission mechanism of monetary policy to the real sector. Therefore, Indonesia's economic growth dynamics are more sensitive to macroeconomic fundamentals than to conventional monetary instruments alone.

Based on these findings, policy recommendations include strengthening the macroeconomic stabilization framework to control inflation and maintain exchange rate stability through a coordinated policy mix between the monetary and fiscal authorities. The central bank needs to implement forward-looking and credible policies to control inflation. In contrast, the government needs to support this by strengthening the supply side, such as maintaining smooth distribution, food price stability, and logistics efficiency. In addition, exchange rate stability needs to be maintained through strengthening foreign exchange reserves, diversifying exports, and prudent management of capital flows. To increase the effectiveness of monetary policy, it is also necessary to deepen the financial sector and optimize the banking intermediation function so that policy transmission is faster and more on target. Thus, comprehensive policy synergy is expected to encourage inclusive and sustainable economic growth in Indonesia.

On the other hand, this study still has several limitations that should be considered in the context of future research development. The use of a relatively limited set of macroeconomic variables may introduce bias, as it does not fully represent other important determinants of economic growth, such as fiscal policy, investment, and institutional quality. In addition, the use of aggregate national-level data tends to overlook regional heterogeneity across Indonesia, which is characterized by diverse economic structures and varying levels of development. Therefore, future

studies are encouraged to expand the range of variables and utilize more disaggregated data at the regional or sectoral levels. Such an approach is expected to produce more comprehensive analysis and forecasting, not only from the perspective of variable variation but also in capturing spatial economic dynamics more accurately.

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