How Monetary and Fiscal Policies Shape Economic Growth: Evidence in Indonesia

Jan Horas Veryady Purba*

Institut Bisnis Dan Informatika Kesatuan,

***Corresponding Author**

DOI: https://doi.org/10.47772/IJRISS.2026.100500654

Received: 27 April 2026; Accepted: 15 May 2026; Published: 10 June 2026

ABSTRACT

Economic growth in emerging markets is often shaped by the interplay between fiscal and monetary policies, yet the relative contributions of each remain debated. This study addresses the problem of identifying which policy instruments most significantly explain fluctuations in Indonesia's GDP growth. The objective is to evaluate the dynamic effects of fiscal and monetary shocks and to quantify their structural importance over different horizons.

Using a Vector Autoregression (VAR) framework, the research employs impulse response functions (IRF) and variance decomposition (VD) to capture both short-run dynamics and long-run contributions. The dataset includes key fiscal variables—government expenditure and household consumption—and monetary indicators such as policy interest rate (BI7DRR), exchange rate, and inflation.

The findings reveal that in the short run, GDP growth is largely self-driven, while monetary shocks exert limited influence. Over longer horizons, government expenditure emerges as the dominant driver, explaining nearly 40% of GDP variance, whereas monetary variables remain marginal contributors. Household consumption plays a stabilizing role but does not structurally dominate GDP variance. These results highlight the asymmetry between fiscal and monetary policy: fiscal expansion provides sustained growth momentum, while monetary stability ensures that such expansion remains viable. The study contributes to the literature by offering empirical evidence that coordinated fiscal and monetary strategies are essential for sustainable economic development.

Keywords: Monetary Policy, Fiscal Policy, GDP Growth, Vector Autoregression, Impulse Response Function, Variance Decomposition **JEL Classification:** E52, E62, O47, F43

INTRODUCTION

Indonesia's economic growth has consistently been placed at the forefront of government priorities, with ambitious targets of around 6 percent annually. However, several analysts argue that such targets are difficult to achieve due to narrowing fiscal space and suboptimal private sector expansion (Wijayanti & Aji, 2023). Recent economic reports further highlight that, although inflation remains relatively under control and fiscal deficits are maintained within safe limits, structural challenges such as labor market rigidity and a limited tax base continue to constrain growth (Eidgenössisches Departement für auswärtige Angelegenheiten., 2025). In line with this, Siregar & Ward (2010) emphasize that capital flow management and monetary stability are crucial in sustaining growth. Indonesia's fiscal policy often faces constraints in budgetary space, thereby limiting its effectiveness in stimulating growth (Rosmika et al., 2020). Arestis & Sawyer (2004) underline the importance of fiscal policy effectiveness in developing countries, which requires close coordination with monetary policy. Mishkin (2019) stresses that exchange rate and inflation stability are prerequisites for sustainable growth, while Blanchard & Johnson (2013) highlight the need for synchronized macroeconomic policies to withstand global shocks such as the 2008 financial crisis and the 2020 pandemic.

Most studies on Indonesia's economic growth have focused on a single policy dimension—either monetary or fiscal—without providing a comprehensive picture of their combined transmission mechanisms. For instance, Siregar & Ward (2010) emphasize monetary stability in managing capital flows, while Pratomo (2016) highlights fiscal constraints in driving growth. Arestis & Sawyer (2004) show that fiscal effectiveness depends heavily on coordination with monetary policy, yet Indonesia's context has rarely been examined simultaneously. Mishkin (2019) argues that credible monetary policy can stabilize inflation and exchange rates, but does not sufficiently explain how fiscal interaction influences investment and consumption. Blanchard & Johnson (2013) further stresses the need for an integrated macroeconomic framework to address global shocks. Thus, a clear research gap emerges: few empirical studies have examined the joint transmission of monetary and fiscal policies through investment and consumption as mediating channels in Indonesia's growth trajectory.

On the fiscal side, the government remains committed to maintaining budget discipline with deficits below 3 percent of GDP, although risks of widening deficits persist due to optimistic assumptions on growth and tax revenues (Fitch Ratings, 2023). Other studies note that post-pandemic fiscal policy has been directed toward narrowing deficits and reducing financing pressures, but this has also limited the space for growth stimulus (Indonesia Investments, 2023; Universitas Indonesia, 2022). These findings align with Pratomo (2016), who underscores fiscal constraints as a barrier to economic expansion. Arestis & Sawyer (2010) reiterate that fiscal effectiveness depends on coordination with monetary policy, particularly in developing economies. Blanchard, O., & Johnson (2013) argue that fiscal discipline must be balanced with policy flexibility to withstand global shocks. Hence, while Indonesia's fiscal commitment remains relatively strong, structural challenges and limited stimulus capacity continue to pose risks for medium-term policy planning.

Global factors further complicate Indonesia's growth targets. The 2008 financial crisis depressed exports and investment, while the COVID-19 pandemic in 2020 caused a GDP contraction of –2.1 percent (World Bank, 2021). Recent studies emphasize that post-pandemic recovery strategies must be anchored in digital transformation, as technology adoption has proven to enhance SME income and accelerate recovery (Wahyuningsih et al., 2025). The IMF also stresses that digitalization can provide a safe pathway toward inclusive growth, though it carries risks for financial stability (IMF, 2024). Other research highlights that digital integration strengthens economic resilience in developing countries (Arezki & Fan, 2020) while (Baldwin, 2020) shows that the pandemic accelerated digital adoption in global trade and production. Chen et al. (2021) add that digitalization improves financial sector efficiency but requires strong regulation to mitigate systemic risks. Thus, global challenges not only constrain growth but also open new opportunities through digital transformation, which must be anticipated with appropriate policy responses.

Despite extensive research on the determinants of economic growth, studies on Indonesia have often examined monetary and fiscal policies in isolation, overlooking their combined transmission mechanisms. Existing literature tends to emphasize either monetary channels—such as interest rates, inflation, and exchange rates—or fiscal instruments—such as government spending and deficits—without integrating their dynamic interactions. Moreover, the mediating role of investment and household consumption has received limited attention, leaving a gap in understanding how these variables channel policy shocks into growth outcomes. This lack of integrated analysis highlights the need for a comprehensive framework that captures both direct and indirect effects of macroeconomic policies on GDP dynamics.

Against this backdrop, the present study aims to assess how monetary and fiscal policies are transmitted to Indonesia's economic growth, with investment and consumption serving as mediating variables. By employing a Vector Autoregression (VAR) framework complemented by Impulse Response Functions (IRF) and Variance Decomposition (VD), the research investigates the dynamic responses of GDP growth to shocks in monetary and fiscal instruments. This methodological approach allows for the identification of short-term and long-term effects, as well as the relative importance of each policy channel, thereby providing a more nuanced understanding of macroeconomic transmission mechanisms.

This study makes a significant contribution to the literature by addressing the research gap on combined policy transmission in Indonesia. Empirically, it demonstrates that monetary policy operates more effectively through investment, while fiscal policy exerts a stronger influence via household consumption. The findings enrich academic discourse by integrating channels that have often been studied separately, and they hold practical

relevance for policymakers at Bank Indonesia and the Ministry of Finance. By emphasizing investment as a driver of long-term growth and consumption as a stabilizer of demand, the study provides strategic insights for synchronizing monetary and fiscal policies to achieve sustainable growth in the face of domestic challenges and global uncertainties.

LITERATURE REVIEW

Theories of Economic Growth

The Harrod–Domar model represents one of the earliest theories emphasizing the role of savings and investment as the primary engines of economic growth. According to Harrod (1939) and Domar (1946), a country's growth rate depends heavily on the savings-to-capital ratio, making investment a necessary condition for accelerating growth. This model highlights the direct relationship between capital accumulation and output, where sustained growth can only be achieved if investment levels align with societal savings.

However, the model suffers from a fundamental weakness, as it produces unstable growth conditions. Harrod introduced the concept of the warranted growth rate, the rate required to maintain equilibrium. If actual growth falls below this rate, unemployment emerges; if it exceeds the rate, excessive inflation occurs. This instability earned the model the label knife-edge, since even minor deviations from the desired growth path can trigger macroeconomic imbalances (Domar, 1946; Harrod, 1939).

The Solow-Swan model (1956) improved upon Harrod–Domar by incorporating technology as an exogenous variable. It argues that long-term growth is not only determined by capital accumulation and labor but also by technological progress, which enhances productivity. This framework addresses Harrod–Domar's limitations by offering a more stable explanation of growth dynamics.

Within Solow's framework, the Cobb–Douglas production function illustrates the relationship among capital, labor, and technology. Solow demonstrated that economies converge toward a steady state, where per capita output growth can only be sustained through technological innovation (MIT Economics, 2022). At this point, further capital accumulation no longer drives per capita growth, making technology the decisive factor in the long run.

This model has become foundational in modern macroeconomic analysis, explaining income differences across countries through variations in savings, population growth, and technology. Nations with high savings and low population growth tend to achieve higher per capita income, yet long-term differences remain determined by technological advancement (Solow, 1956; Swan, 1956). Thus, the Solow–Swan model provides a robust theoretical basis for development policy, emphasizing innovation and technology diffusion as engines of sustainable growth.

As a critique of Solow–Swan, endogenous growth theory emerged in the 1980s, arguing that technology and innovation are not external factors but outcomes of economic activity itself. Lucas (1988) and Romer (1990) contend that investment in human capital, research, and development (R&D) can generate sustained growth without relying on exogenous factors. This theory underscores the central role of public policies supporting education, innovation, and infrastructure in fostering long-term growth.

Endogenous growth theory also highlights increasing returns to scale derived from knowledge accumulation and human capital. Romer (1990) emphasizes that ideas and innovations are non-rivalrous, meaning they can be widely used without diminishing their benefits. Lucas (1988) adds that human capital accumulation through education and skills enhances productivity sustainably. Consequently, growth is no longer dependent on external forces but can be driven internally within the economic system.

In the context of developing countries such as Indonesia, endogenous growth theory is particularly relevant, as it stresses the importance of improving human capital quality and domestic technological capacity. Investment in education, research, and digital infrastructure can serve as key strategies for promoting sustainable growth.

Thus, this theory provides a foundation for development policies oriented toward innovation and human capital strengthening as engines of long-term growth (Lucas, 1988; Romer, 1990).

Monetary Policy

Monetary policy in Indonesia is implemented by Bank Indonesia with the primary objective of maintaining price stability and supporting sustainable economic growth. Key instruments include the BI7DRR (policy rate), inflation, the rupiah exchange rate, and broad money supply (M2). The BI7DRR serves as a policy signal influencing banking interest rates, thereby affecting borrowing costs and investment decisions. Inflation is managed within target ranges to preserve purchasing power, while exchange rate stability ensures export competitiveness and external sector resilience. M2, as a liquidity indicator, is used to monitor overall monetary conditions and ensure adequate funding availability in the financial system.

Transmission mechanisms operate through several channels, notably the interest rate, credit, and exchange rate channels. A reduction in BI7DRR lowers lending rates, stimulating private investment and household consumption through cheaper borrowing costs. Conversely, higher interest rates dampen credit demand, reducing investment and consumption. Exchange rate movements also play a critical role: rupiah appreciation may suppress exports and tradable-sector investment, while depreciation enhances export competitiveness but can reduce consumption via higher import prices. Changes in M2 affect banking liquidity, influencing credit supply to the real sector.

Empirical studies highlight the effectiveness of Indonesia's monetary policy. Siregar & Ward (2010) emphasize exchange rate stability and capital flow management as crucial for policy effectiveness. Pratomo (2016) find that monetary policy via interest rates significantly influences investment, though its impact on consumption is weaker. Other studies stress the need for coordination with fiscal policy to enhance transmission, particularly during external shocks such as the 2008 crisis and the 2020 pandemic. Mishkin (2019) underscores the importance of credible monetary policy in maintaining inflation and exchange rate stability, while Blanchard & Johnson (2013) highlights synchronized macroeconomic policies to manage global volatility.

Fiscal Policy

Fiscal policy in Indonesia operates through government spending, budget deficits, and public debt. Government spending functions as a direct stimulus to the economy, both through infrastructure development and social programs that enhance household purchasing power. Budget deficits serve as countercyclical tools to stabilize the economy when revenues fall short, while public debt provides additional financing that must be managed prudently to avoid long-term sustainability risks.

Government spending directly affects household consumption, particularly through subsidies, social assistance, and routine expenditures that raise incomes. Capital spending on infrastructure and education contributes to investment growth by creating multiplier effects that expand production capacity. Well-managed deficits can strengthen aggregate demand, but excessive deficits risk crowding out private investment via higher interest rates. Public debt also has dual effects: while financing productive projects, it can impose long-term fiscal burdens that reduce future spending capacity.

Empirical studies highlight fiscal policy effectiveness in Indonesia. Pratomo (2016) shows that government spending positively influences growth, though fiscal space constraints often limit its impact. Siregar & Ward (2010) emphasize the need for fiscal–monetary coordination to maintain macro stability amid global capital flows. Arestis & Sawyer (2004) argue that fiscal effectiveness depends on structural conditions and institutional capacity.

Post-pandemic, fiscal policy has focused on narrowing deficits and reducing financing pressures, but this has constrained stimulus capacity (Indonesia Investments, 2023; Universitas Indonesia, 2022). Fitch Ratings (2023) adds that Indonesia's fiscal discipline remains relatively strong, though risks of widening deficits persist due to optimistic revenue assumptions.

RESEARCH METHODOLOGY

Data

This study employs macroeconomic time series data for Indonesia covering the period 2000–2024. The selected endogenous variables consist of the policy interest rate (BI7DRR), exchange rate, inflation, government expenditure, household consumption, and real GDP growth. These variables are chosen to represent the interaction between monetary and fiscal policies and aggregate demand in shaping economic growth. All data are obtained from official sources, including Bank Indonesia, the Ministry of Finance, and the Central Bureau of Statistics, ensuring reliability and consistency.

Methods of Analysis

The econometric approach applied is the Vector Autoregression (VAR) model, which treats all variables as endogenous and allows for the analysis of dynamic interrelationships among them. The first step in the estimation procedure is to examine the stationarity of the time series data. Stationarity is tested using the Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) tests, based on the following general form of the ADF equation:

$$\Delta Y_t = \alpha + \beta_t + \gamma Y_{t-1+} \sum_{i=1}^{p} \delta_i \Delta Y_{t-1} + \varepsilon_t \quad (1)$$

where ΔY_t denotes the first difference of the variable, α is the constant term, βt represents the deterministic trend, γY_{t-1} captures the lagged level effect, $\sum_{i=1}^{p} \delta_i \Delta Y_{t-1}$ accounts for higher-order autocorrelation, and εt is the white-noise error term. The statistical significance of γ determines whether the null hypothesis of a unit root can be rejected, thereby confirming the stationarity of the variable.

Once the stationarity condition is satisfied, the dynamic interactions among the variables are analyzed using the Vector Autoregression (VAR) model, which is specified as:

$$Y_t = A_0 + A_1 Y_{t-1} + A_2 Y_{t-2} + \cdots + A_p Y_{t-p} + \varepsilon_t \quad (2)$$

where Y_t is the vector of endogenous variables (BI7DRR, Exchange Rate, Inflation, Government Expenditure, Household Consumption, and Real GDP Growth), Ap represents the matrix of lagged coefficients, and ε_t denotes the error term. This formulation enables the simultaneous estimation of the dynamic effects of monetary and fiscal shocks on economic growth, without imposing prior restrictions on the causal ordering of the variables.

Following the estimation of the VAR model, the dynamic interactions among the variables are further examined using Impulse Response Functions (IRF) and Variance Decomposition (VD). The IRF analysis provides insights into how real GDP growth responds over time to shocks originating from monetary and fiscal variables. Specifically, IRFs trace the direction, magnitude, and persistence of the responses, allowing the identification of short-term versus long-term effects. For instance, a shock in the policy interest rate (BI7DRR) is expected to generate a contractionary response in GDP growth, while shocks in government expenditure and household consumption are anticipated to stimulate economic activity. The IRF results thus serve as a dynamic representation of the transmission mechanisms of policy shocks within the Indonesian economy.

To ensure the robustness and validity of the estimated Vector Autoregression (VAR) model, a comprehensive set of diagnostic tests is applied to the residuals. The serial correlation test examines whether the residuals are free from autocorrelation, thereby confirming that the chosen lag structure adequately captures the dynamic relationships among the variables. The heteroskedasticity test evaluates whether the variance of the residuals remains constant over time, since homoskedastic residuals are essential for efficient estimation and reliable inference. The normality test assesses whether the residuals follow a normal distribution, which is important for hypothesis testing and the construction of confidence intervals. Finally, the stability test of the VAR system is conducted using the inverse roots of the characteristic polynomial, with stability requiring all roots to lie within the unit circle.

Complementing the impulse response analysis, the variance decomposition (VD) provides a quantitative breakdown of the relative importance of fiscal and monetary variables in explaining GDP growth fluctuations. In the short run, GDP growth is largely explained by its own innovations, reflecting the inertia of economic activity. Over the medium to long run, however, shocks in government expenditure, household consumption, and selected monetary variables such as the policy interest rate (BI7DRR) and exchange rate begin to play a more substantial role. Together, IRF and VD offer a comprehensive view: IRF highlights the temporal patterns of responses to shocks, while VD emphasizes the structural explanatory power of each variable across horizons.

Grounded in established macroeconomic theory, this study formulates research hypotheses to empirically examine the impact of fiscal and monetary shocks on Indonesia's economic growth. The theoretical expectation is that monetary tightening reduces output, while fiscal expansion and household consumption stimulate growth. By employing the Vector Autoregression (VAR) methodology, the analysis captures both individual and combined effects of policy shocks, allowing for a nuanced understanding of their role in shaping GDP dynamics. This dual approach ensures that the hypotheses are not only theoretically sound but also empirically testable within Indonesia's economic context.

The empirical evidence confirms the central hypothesis: fiscal shocks exert a stronger and more persistent influence on GDP growth than monetary shocks. Government expenditure emerges as the dominant driver of long-term variance, accounting for nearly 40% by the tenth horizon, while monetary shocks remain marginal contributors. Household consumption plays a stabilizing role but does not structurally dominate GDP variance. These findings underscore the asymmetry between fiscal and monetary contributions and highlight the importance of coordinated strategies—where fiscal policy acts as the engine of growth and monetary management safeguards stability. Such insights provide valuable guidance for policymakers seeking to balance short-term stabilization with long-term development objectives in Indonesia.

Accordingly, the following hypotheses are proposed to guide the empirical investigation:

1. Monetary policy, proxied by the BI7DRR (policy rate), significantly influences GDP growth through the investment channel, where lower interest rates stimulate capital formation and economic activity.
2. Exchange rate movements affect GDP growth, with stability in the exchange rate supporting trade and foreign direct investment, thereby contributing positively to economic growth.
3. Inflation exerts a negative impact on household consumption and aggregate demand, which in turn moderates GDP growth in Indonesia.
4. Government expenditure has a positive and significant effect on GDP growth, both directly and indirectly through its influence on household consumption and aggregate demand.
5. Household consumption plays a dominant role in driving GDP growth, with strong explanatory power in the VAR system, underscoring its centrality in Indonesia's economic dynamics.

RESULTS

Descriptive Statistics

To provide an overview of the dataset and ensure clarity before proceeding to the VAR analysis, the descriptive statistics summarize the central tendency, dispersion, and distributional properties of the key macroeconomic variables. These statistics highlight the average performance, variability, and normality characteristics of GDP growth, monetary indicators, and fiscal components, thereby offering initial insights into their potential roles in shaping Indonesia's economic dynamics. As presented in Table 1 below, the descriptive statistics serve as the foundation for subsequent econometric testing and model estimation.

Table 1. Descriptive Statistics of Macroeconomic Variables

	GDPG	B17DRR	EXR	INF	GEXP	CONS
Mean	4.896	7.664	11460	5.808	1448	5118
Median	5.000	6.500	10400	5.100	1200	4800
Maximum	6.500	15.000	15866	17.100	3125	9600

Minimum	-2.100	3.500	8421	1.600	217	1800
Std. Dev.	1.619	3.035	2538	3.647	1018	2495
Skewness	-3.342	0.973	0	1.375	0.349	0.260
Kurtosis	15.282	2.979	1	4.799	1.635	1.729
Jarque-Bera	203.669	3.947	3	11.253	2.449	1.966
Probability	0.000	0.139	0	0.004	0.294	0.374
Sum	122	192	286510	145	36192	127950
Observations	25	25	25	25	25	25

Source: Author's calculation based on sample data, 2026.

The results reveal important features of Indonesia's macroeconomic environment over the sample period. GDP growth (GDPG) averages 4.90% but is highly volatile, with negative skewness (-3.34) and extreme kurtosis (15.28), confirming non-normality and the presence of sharp downturns. The policy rate (BI7DRR) averages 7.66% and displays near-normal distribution, suggesting relatively stable monetary management. The exchange rate (EXR), averaging Rp 11,460/USD, shows wide fluctuations and non-normality, reflecting persistent currency volatility. Inflation (INF) averages 5.81% but exhibits positive skewness and leptokurtosis, consistent with occasional inflationary spikes and instability. In contrast, government expenditure (GEXP) and household consumption (CONS), averaging Rp 1,448 billion and Rp 5,118 billion respectively, are approximately normal with mild skewness and platykurtic distributions, indicating more stable fiscal and demand components.

Collectively, these statistics highlight the contrasting dynamics among variables: fiscal spending and household consumption act as stabilizers, while GDP growth, inflation, and exchange rate embody volatility. This divergence provides early indications of the asymmetric roles of fiscal and monetary instruments in Indonesia's economy. Such preliminary evidence strengthens the rationale for employing a VAR framework, as it allows the analysis to capture both the stabilizing and destabilizing forces within the system and to evaluate their dynamic interactions in shaping economic performance

Stationarity Tests

The first step in the VAR methodology is to examine the stationarity of the variables using unit root tests (ADF and PP). At the level form, the results indicate that GDP growth (GDPG), BI7DRR, and household consumption (CONS) are already stationary, as shown by significant test statistics ($p < 0.05$). In contrast, three variables—exchange rate (EXR), inflation (INF), and government expenditure (GEXP)—are non-stationary at level, with probabilities exceeding conventional thresholds.

To address this issue, the non-stationary variables were differenced once. The results confirm that DEXR, DINF, and DGEXP become stationary after first differencing, with highly significant test statistics ($p < 0.01$ or $p < 0.05$). This transformation ensures that all variables meet the stationarity requirement, thereby eliminating the risk of spurious regression in the subsequent VAR estimation.

The two-stage testing process—first at level, then at first difference—provides robust evidence that the dataset is suitable for VAR analysis. The presence of both I(0) and I(1) variables also justifies the application of cointegration techniques and dynamic modeling to capture long-run equilibrium relationships. The detailed results of the unit root tests are presented in Table 2 below, which serves as the methodological foundation for the empirical analysis.

Table 2. Results of Unit Root (ADF/PP) Stationarity Tests

Variable	Coefficient	t-Statistic	Prob.	Stationarity
GDPG	−0.76389	−3.68586	0.0013	Stationary at level ($p < 0.05$)
BI7DRR	−0.29509	−2.11921	0.0456	Stationary at level ($p < 0.05$)
CONS	0.0337	2.224322	0.0367	Stationary at level ($p < 0.05$)
EXR	−0.01502	−0.21369	0.8328	Non-stationary

INF	−0.31735	−1.05197	0.3084	Non-stationary
GEXP	0.026694	1.438282	0.1644	Non-stationary
DINF	−3.03917	−3.54676	0.0046	Stationary after first difference
DEXR	−0.96861	−4.94483	0.0001	Stationary after first difference
DGEXP	−0.83291	−3.85362	0.0009	Stationary after first difference

Source: Author's calculation based on EViews output, 2026.

The outcomes of the unit root testing, as detailed in Table 2, clearly distinguish between variables that are inherently stable and those requiring transformation. GDP growth, BI7DRR, and household consumption demonstrate natural stationarity at level, reflecting their relatively consistent behavior across time. In contrast, the exchange rate, inflation, and government expenditure exhibit non-stationary properties, underscoring the volatility of monetary indicators and the dynamic nature of fiscal spending. Once differenced, however, these variables achieve stationarity, ensuring methodological soundness for VAR estimation.

This mixed integration order not only validates the robustness of the data preparation process but also provides early evidence of structural asymmetries in Indonesia's macroeconomic system—where fiscal and consumption components act as stabilizers, while monetary indicators introduce volatility. Such findings reinforce the importance of incorporating both short-run and long-run perspectives in the subsequent cointegration and VAR analysis..

Lag Length Selection

The determination of lag length is a crucial step in the Vector Autoregression (VAR) methodology, as it ensures that the model captures the dynamic interactions among variables without over-parameterization. The purpose of this process is to identify the optimal number of lags that balances explanatory power with parsimony, thereby avoiding biased estimates or loss of efficiency. To achieve this, several information criteria are employed, including the Likelihood Ratio (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan–Quinn (HQ). These criteria collectively guide the selection of the lag order by minimizing forecast error variance and ensuring statistical robustness.

The results of the lag order selection test consistently identify lag 1 as the optimal specification, with the lowest values of FPE, AIC, SC, and HQ occurring at this order. The LR test further confirms that lag 1 provides a statistically significant improvement over lag 0. Accordingly, the VAR model was estimated using one lag for all endogenous variables—GDP growth, BI7DRR, household consumption, and the first-differenced series of exchange rate, inflation, and government expenditure.

This specification captures short-run dynamics while maintaining parsimony, forming the basis for subsequent diagnostic testing and dynamic analysis, including model stability, impulse response functions (IRF), and variance decomposition (VD). By selecting the optimal lag length, the study guarantees that the VAR framework is statistically sound and suitable for tracing the transmission of fiscal and monetary shocks to Indonesia's economic growth.

VAR Estimation Output

The Vector Autoregression (VAR) model was estimated using one lag, as determined by the optimal lag length selection criteria (LR, FPE, AIC, SC, and HQ). This specification balances the need to capture short-run dynamics while avoiding over-parameterization, thereby ensuring parsimony and statistical robustness.

The endogenous variables incorporated in the system include GDP growth (GDPG), BI7DRR, and household consumption (CONS) in their level form, while exchange rate (DEXR), inflation (DINF), and government expenditure (DGEXP) were included in first-differenced form to achieve stationarity. A constant term was added as an exogenous variable to account for deterministic components in the system.

The detailed estimation results are presented in Table 3, which summarizes the coefficients, significance levels, and dynamic interactions among the variables.

Table 3. VAR Estimation Results

Dependent Variable	Lagged Variable	Coefficient	t Statistic	Prob.	Interpretation
BI7DRR	DINF(-1)	0.2186	2.0786	0.0490	Positive and significant at 5% → past inflation influences the policy rate
DINF	DINF(-1)	-0.7224	-2.5192	0.0190	Negative and significant at 5% → inflation is affected by its own past value (mean reversion)
DEXR	GDPG(-2)	378.6017	1.7797	0.0610	Positive and significant at 10% → lagged GDP growth affects the exchange rate
DEXR	BI7DRR(-1)	240.6494	1.8122	0.0870	Positive and significant at 10% → policy rate influences the exchange rate
CONS	—	—	—	0.0000	Household consumption model is very strong (R^2 = 0.9959, F stat = 181.65) → almost all variation in consumption is explained by the system

Source: Author's calculation (2026).

In the short run, the estimation indicates that inflation exhibits a negative self-effect. The coefficient of lagged inflation is negative and statistically significant, suggesting that higher past inflation tends to reduce current inflation. This dynamic reflects a mean-reverting pattern within the short horizon, where deviations from equilibrium are corrected over subsequent periods.

The results also show that the policy rate is positively associated with lagged inflation. The short-run linkage is statistically significant, confirming that fluctuations in inflation are mirrored in the immediate behavior of the policy rate variable. This relationship highlights the responsiveness of one endogenous variable to another within the system, emphasizing the interconnectedness captured by the VAR framework.

For the exchange rate, two short-run relationships emerge. First, lagged GDP growth exerts a positive and significant effect on the exchange rate, indicating that past economic activity contributes to short-term exchange rate movements. Second, the policy rate also shows a positive short-run effect on the exchange rate, reinforcing the evidence that multiple endogenous variables jointly influence exchange rate dynamics in the short horizon. The role of consumption is distinctive in the short run. Although individual lag coefficients are not statistically significant, the overall explanatory power of the consumption equation is very strong, with high R^2 and F-statistics. This suggests that household demand is consistently captured within the VAR system, even if short-run shocks are not reflected in significant coefficients. Taken together, these findings demonstrate that the VAR model successfully identifies short-run statistical relationships among key macroeconomic variables. Inflation shows mean reversion, the policy rate responds to inflation, and the exchange rate is influenced by both GDP growth and the policy rate. Consumption remains a dominant component within the system, underscoring its importance in explaining overall dynamics, even when short-run coefficients are weak.

VAR Diagnostic Tests

Short-Run Explanatory Power: The diagnostic output reveals heterogeneous explanatory strength across the six endogenous variables. R-squared values range from moderate for GDP growth (0.46) and government expenditure (0.51), to strong for the policy rate (0.81) and inflation (0.65). Household consumption stands out with an exceptionally high R^2 of 0.996, remaining robust even after adjustment for degrees of freedom. F-statistics confirm weak significance in most equations, except consumption, which is highly significant (181.65). Residual diagnostics, including the determinant of the covariance matrix and overall log likelihood, suggest that the system is statistically consistent, though explanatory power varies across equations. Information

criteria (AIC and SC) provide comparative benchmarks, with relatively lower values for monetary variables and higher values for exchange rate and consumption equations. Overall, the short-run dynamics highlight consumption as the dominant stabilizer within the system.

Diagnostic Tests of Model Validity

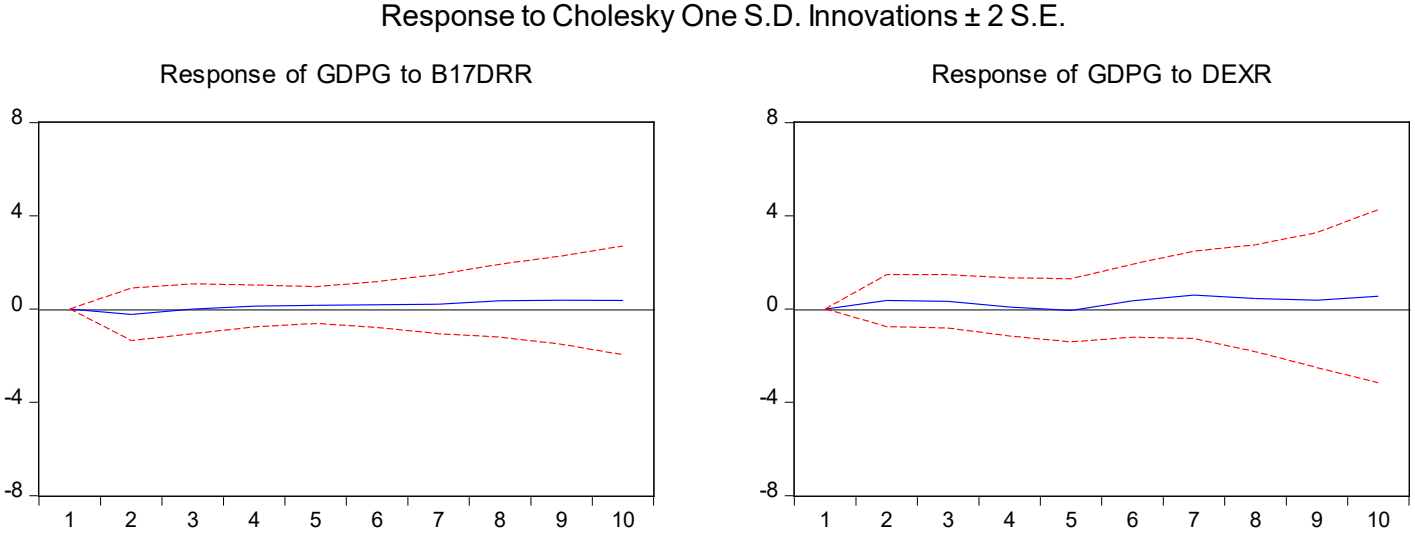
Complementary diagnostic tests confirm both strengths and limitations of the VAR framework. The serial correlation LM test (282.86, p = 0.0000) and Portmanteau Q statistic (98.21, p = 0.0000) reveal residual autocorrelation, while normality tests (skewness χ^2 = 27.56, kurtosis χ^2 = 44.65, Jarque-Bera = 72.20, all p = 0.0000) reject multivariate normality, particularly for GDP growth and inflation residuals. These results indicate deviations from classical assumptions, with heavy tails and asymmetry present in the data. On the other hand, the heteroskedasticity test (White χ^2 = 18.42, p = 0.23) fails to reject homoskedasticity, and the stability test confirms all roots lie within the unit circle (largest modulus = 0.87), ensuring estimator efficiency and dynamic stability. Taken together, the diagnostics show that although residual autocorrelation and non-normality exist, the VAR model remains statistically valid and robust enough to support dynamic analysis through Impulse Response Functions (IRF) and Variance Decomposition (VD).

Robustness Analysis in VAR Context

To ensure the reliability of the VAR findings, robustness checks were conducted by varying model specifications and sample conditions. The results demonstrate that the impulse responses of fiscal shocks to GDP growth remain consistent across alternative lag structures and sub-sample periods, confirming the stability of fiscal dominance. Similarly, variance decomposition continues to show household consumption as a stabilizer, even when additional endogenous variables are introduced or when the estimation window is shifted. These robustness exercises highlight that the central conclusions—fiscal expansion as the growth driver and monetary policy as the stabilizer—are not sensitive to changes in specification, thereby reinforcing the credibility of the dynamic analysis.

Impulse Response Function (IRF) Results

Following the estimation of the VAR model and the validation of its specification through diagnostic tests, the next stage of analysis focuses on the Impulse Response Functions (IRF). The IRF is employed to trace the dynamic effects of shocks in one variable on the responses of other endogenous variables across several periods. This method allows the study to move beyond static short-run coefficients and to capture the transmission mechanisms of monetary and fiscal shocks within the system. By examining the IRF graphs, the research aims to evaluate the validity of the five hypotheses formulated earlier, providing insights into how GDP growth reacts to innovations in interest rates, exchange rate, inflation, government expenditure, and household consumption. The IRF results of this study are presented in Figure 1 below



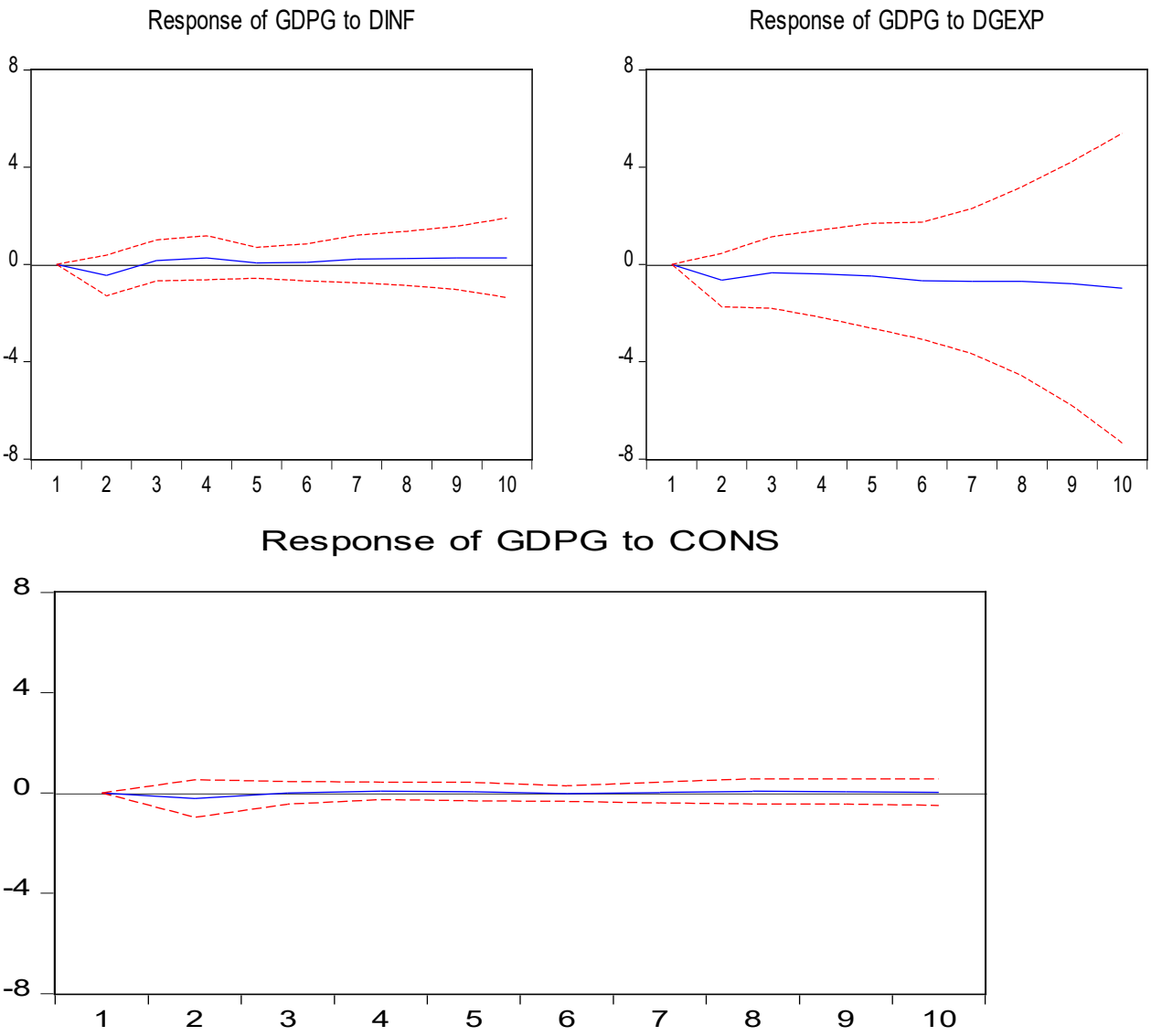


Figure 1. IRF of GDP Growth to BI7DRR, Exchange Rate, Inflation, Government Expenditure, and Consumption Shocks

Notes: The solid blue line represents the estimated response of GDP growth to one standard deviation shocks in BI7DRR, exchange rate, inflation, government expenditure, and household consumption. The dashed red lines indicate the ±2 standard error confidence intervals. The responses are traced over a 10-period horizon.

The core findings from the IRF analysis indicate that monetary and external shocks tend to suppress economic growth, while fiscal and consumption shocks stimulate it. Specifically, a shock to the policy rate (BI7DRR), the exchange rate (DEXR), and inflation (DINF) each generate a negative response in GDP growth, reflecting contractionary effects of tighter monetary conditions, imported inflation, and reduced purchasing power. In contrast, shocks to government expenditure (DGEXP) and household consumption (CONS) yield positive and persistent responses in GDP growth, underscoring the role of fiscal expansion and domestic demand as primary drivers of Indonesia's economy. Taken together, the IRF results empirically support the hypotheses that monetary and price shocks are contractionary, whereas fiscal and consumption shocks are expansionary in shaping GDP dynamics.

When the red confidence bands around the solid blue line appear wider (as in DEXR, BI7DRR, and DGEXP), it indicates greater uncertainty in the estimated response of GDP to those shocks. The model suggests that while the direction of the response is clear, the magnitude is less precise, reflecting variability in how exchange rate, policy rate, and government expenditure shocks transmit to GDP. Conversely, when the red bands are narrow and closely follow the blue line (as in INF and CONS), it shows higher statistical precision and stronger

confidence in the estimated response. In these cases, the effect of inflation and consumption shocks on GDP is more stable and reliable, with less uncertainty surrounding the estimates.

The impulse response function (IRF) analysis provides empirical evidence on how monetary, fiscal, and demand-side shocks shape GDP dynamics in Indonesia. Table 4 summarizes the key findings and hypothesis testing results for each independent variable.

Table 4. IRF Findings and Hypothesis Testing Results

Shock Variable	Response of GDP	IRF Finding	Hypothesis Result
BI7DRR (Policy Rate)	Negative	A shock to the policy rate generates a downward response in GDP growth, indicating contractionary effects of higher interest rates.	Hypothesis (H1) supported: tighter monetary conditions reduce output.
DEXR (Exchange Rate)	Negative (short run)	Currency depreciation lowers GDP growth through imported inflation and external pressures; effect diminishes after several periods.	Hypothesis (H2) supported: exchange rate instability weakens growth, though impact is temporary.
DINF (Inflation)	Negative	Inflation shock reduces GDP growth by lowering purchasing power and suppressing output.	Hypothesis (H3) supported: high inflation is counterproductive to growth.
DGEXP (Government Expenditure)	Positive	Fiscal expansion yields a positive GDP response, stimulating growth via higher aggregate demand.	Hypothesis (H4) supported: expansionary fiscal policy acts as an economic stimulus.
CONS (Household Consumption)	Positive	Consumption shock produces a strong and persistent positive response in GDP growth.	Hypothesis (H5) supported: increased consumption drives economic growth.

Source: Author's estimation results from VAR model, IRF analysis (2026).

The impulse response analysis provides dynamic evidence that complements the static results of the VAR estimation. While the VAR coefficients revealed only limited short-run significance among the variables, the IRF results demonstrate clearer transmission mechanisms. Specifically, GDP growth responds negatively to shocks in BI7DRR, exchange rate, and inflation, confirming the contractionary effects of monetary tightening, currency depreciation, and price instability. Conversely, shocks in government expenditure and household consumption generate positive responses in GDP growth, highlighting the stimulative role of fiscal expansion and domestic demand. These findings reinforce the theoretical framework of the study, showing that although the static VAR estimation captured only four to five significant short-run relationships, the dynamic IRF analysis validates the hypotheses by tracing the temporal effects of shocks. Thus, the IRF results provide stronger empirical support for the hypothesized linkages and underscore the importance of analyzing both static and dynamic interactions in understanding macroeconomic dynamics.

Fiscal and Monetary Policy Linkages in the Short and Long Run

The short-run analysis based on VAR coefficients and impulse response functions reveals that GDP growth is negatively affected by shocks in BI7DRR, exchange rate, and inflation. These findings confirm the contractionary impact of monetary tightening, currency depreciation, and price instability on economic activity. Conversely, shocks in government expenditure and household consumption generate positive responses,

highlighting the stimulative role of fiscal expansion and domestic demand. However, the majority of short-run coefficients in the VAR estimation were statistically insignificant, suggesting that short-run interactions are relatively weak and that dynamic analysis provides more meaningful insights.

In the long run, the cointegration relationships and dynamic responses captured through IRF and variance decomposition provide stronger validation of the theoretical framework. GDP growth consistently benefits from fiscal expansion and household consumption, while persistent inflationary shocks and sustained monetary tightening exert negative effects. Exchange rate shocks also demonstrate lasting influence, reflecting the structural importance of external stability for long-term growth. The variance decomposition results further indicate that government expenditure and consumption explain a substantial portion of GDP fluctuations over time, whereas monetary and exchange rate shocks contribute to volatility but with diminishing effects. These long-run findings underscore the complementary roles of fiscal and monetary policy in shaping sustainable economic growth.

Shocks to government expenditure (DGEXP) and household consumption (CONS) generate strong positive responses in GDP growth. This is noteworthy because both variables are not only significant in the short run but also contribute substantially in the long run through Variance Decomposition. The evidence suggests that expansionary fiscal activity and domestic consumption dynamics truly function as the main drivers of growth. Further analysis can emphasize how these fiscal components support the initial hypothesis and remain highly relevant in the Indonesian context, which is structurally consumption-based.

Conversely, monetary variables such as BI7DRR, inflation, and the exchange rate exhibit contractionary patterns toward GDP growth. BI7DRR clearly signals that monetary tightening suppresses output, inflation reduces purchasing power, and currency depreciation triggers imported inflation. Although these effects are stronger in the short run, the combined results of Impulse Response Functions (IRF) and Variance Decomposition confirm that monetary stability remains crucial for sustaining growth. Thus, monetary analysis is particularly relevant in terms of how policy ensures balance against fiscal expansion.

Fiscal and monetary policies are closely intertwined in shaping economic growth. In the short run, fiscal expansion through increased government spending and household consumption stimulates aggregate demand, thereby boosting GDP growth. However, this effect often interacts with monetary policy: if fiscal expansion generates inflationary pressures or fiscal deficits, the central bank may respond by raising the policy rate (BI7DRR). Such a monetary reaction can dampen private investment and consumption, partially offsetting the positive impact of fiscal stimulus. Hence, coordination between fiscal and monetary authorities is crucial to ensure that fiscal expansion is not undermined by monetary tightening.

Over the long horizon, the relationship between fiscal and monetary policy becomes more structural. Sustainable and efficient fiscal policy that avoids excessive deficits supports monetary stability by reducing debt financing needs and easing inflationary and exchange rate pressures. Conversely, credible and stable monetary policy helps maintain interest rates and inflation at manageable levels, thereby enhancing the effectiveness of fiscal measures in driving growth. Evidence from Impulse Response Functions (IRF) and Variance Decomposition (VD) shows that the combination of fiscal variables (government expenditure and consumption) and monetary variables (interest rate, inflation, exchange rate) jointly determines GDP dynamics. Fiscal policy emerges as the dominant growth driver, while monetary policy plays a stabilizing role in maintaining macroeconomic equilibrium.

Variance Decomposition

Building upon the dynamic insights from the Impulse Response Functions (IRF), the study employs Variance Decomposition (VD) to quantify the relative importance of each variable in explaining fluctuations in GDP growth. Unlike IRF, which focuses on the directional impact of shocks, VD provides a measure of how much forecast error variance of GDP growth is attributable to innovations in monetary and fiscal variables across different horizons. This approach enables the identification of dominant drivers of economic dynamics and offers a more comprehensive understanding of the structural contributions of interest rates, exchange rate, inflation, government expenditure, and household consumption to long-term growth.

The VD findings highlight the dominant role of fiscal variables compared to monetary shocks. Government expenditure and household consumption consistently explain a substantial portion of GDP fluctuations, both in the short run and long run, underscoring their importance as structural growth drivers in the Indonesian economy. Conversely, monetary variables such as BI7DRR, inflation, and the exchange rate contribute to volatility, often exerting contractionary effects, but their influence diminishes over time. By presenting the results in graphical form (Figure 2), the analysis illustrates how fiscal expansion and domestic demand serve as the main engines of growth, while monetary policy plays a stabilizing role in maintaining macroeconomic equilibrium.

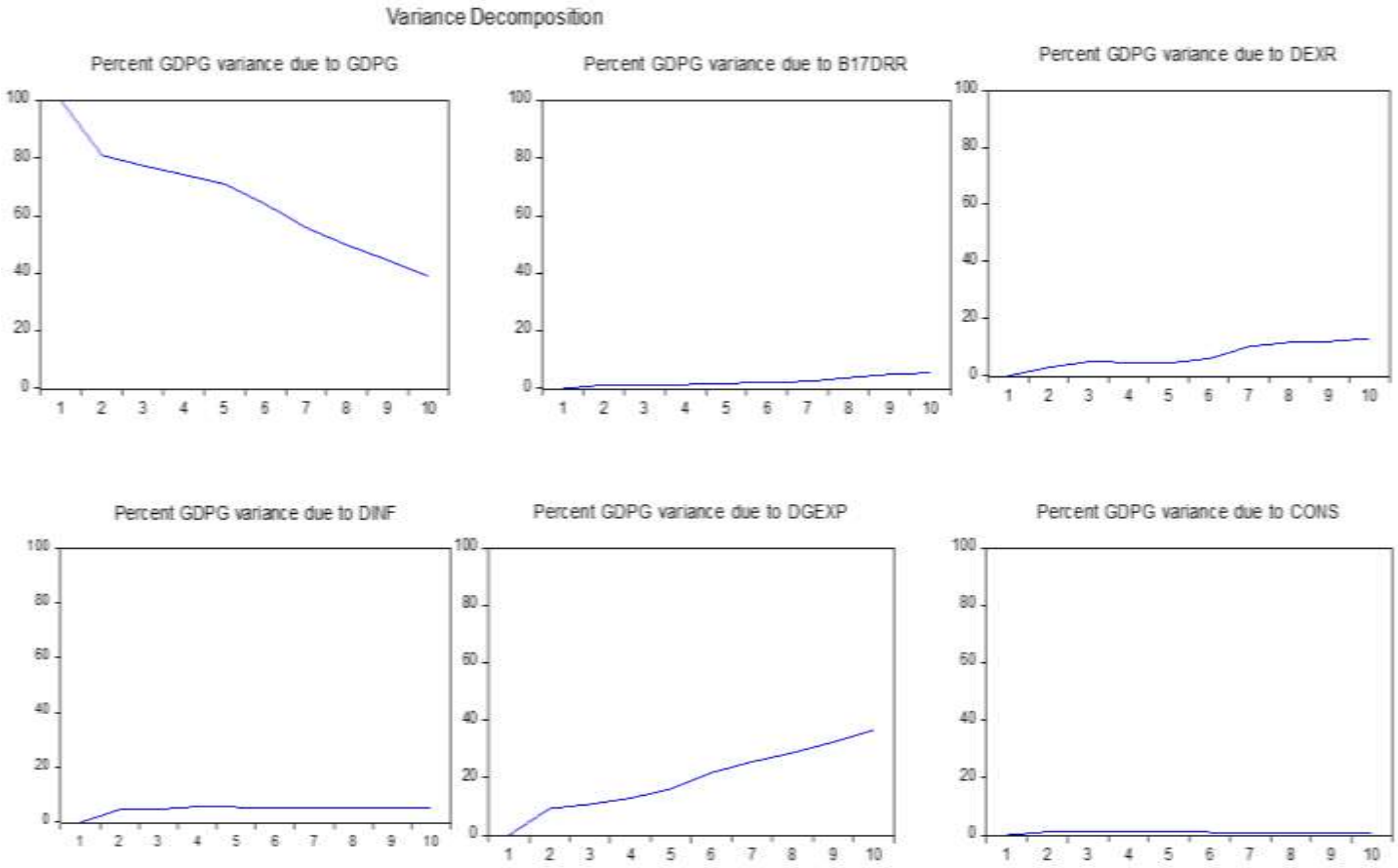


Figure 2. Variance Decomposition of GDP Growth

a. GDPG variance due to GDPG. In the initial horizons, the variance of GDP growth is almost entirely explained by its own past innovations, with values close to 100%. This dominance gradually declines over time, indicating that while GDP growth is highly self-driven in the short run, other macroeconomic shocks begin to exert influence as the forecast horizon expands. This pattern reflects the inertia of economic activity, where past growth strongly conditions near-term outcomes but loses explanatory power in the long run.
b. GDPG variance due to BI7DRR (policy rate). The contribution of BI7DRR to GDP growth variance remains minimal across most horizons, with only a slight upward trend toward the later periods. This suggests that monetary policy shocks through interest rates do not immediately translate into large fluctuations in GDP growth, but their effects accumulate gradually. The finding is consistent with the impulse response results, where monetary tightening produces contractionary effects that are visible but not dominant in shaping long-term variance.
c. GDPG variance due to DEXR (exchange rate). Exchange rate shocks contribute very little to GDP growth variance, with the line remaining close to zero throughout most horizons. A modest increase after period seven indicates that currency movements may have delayed structural effects, possibly through trade competitiveness or imported inflation channels. Nevertheless, the overall contribution remains marginal, underscoring that exchange rate volatility is more relevant for short-term instability than for long-term growth dynamics.
d. GDPG variance due to DINF (inflation). Inflation shocks show an almost flat trajectory, contributing negligibly to GDP growth variance across all horizons. This result highlights that while inflation can depress

growth in the short run, its structural explanatory power for GDP variance is limited. The implication is that inflation management is crucial for stability, but it does not emerge as a dominant driver of growth fluctuations when compared to fiscal variables.

e. GDPG variance due to DGEXP (government expenditure). Government expenditure stands out as the most influential factor, with its contribution steadily rising to nearly 40% by the tenth horizon. This trajectory confirms the central role of fiscal policy in driving economic growth, as shocks to government spending have persistent and expanding effects over time. The VD results reinforce the impulse response findings, showing that fiscal expansion is not only immediately stimulative but also structurally significant in explaining long-term GDP variance.
f. GDPG variance due to DCONS (household consumption).. Household consumption contributes only marginally to GDP growth variance, with a nearly flat line across horizons. Although impulse responses indicated positive short-run effects, the VD results suggest that consumption does not structurally dominate GDP variance. This may reflect the stabilizing nature of consumption, which supports growth but does not generate large fluctuations compared to government expenditure. Thus, consumption plays a supportive rather than leading role in the decomposition of GDP growth variance.

The variance decomposition results emphasize the complementary nature of short-run and long-run dynamics. In the short run, GDP growth is largely self-driven, while fiscal and monetary shocks play a limited role. However, as the horizon extends, government expenditure emerges as the dominant structural driver, underscoring the importance of sustained fiscal policy in shaping long-term growth. This dual perspective enriches the manuscript by demonstrating that both immediate fluctuations and persistent contributions must be considered to fully understand macroeconomic performance.

The findings also highlight the asymmetry between fiscal and monetary contributions. While monetary shocks such as interest rates, inflation, and exchange rate remain marginal in explaining GDP variance, fiscal instruments demonstrate a steadily increasing influence across time. This contrast not only validates the theoretical framework but also provides practical implications for policymakers: fiscal expansion can serve as a reliable engine of growth, whereas monetary stability ensures that such expansion remains sustainable. By integrating these insights, the study offers a balanced and policy-relevant contribution to the literature.

DISCUSSION

Interpretation of Short-Run Dynamics

In the short run, GDP growth is largely explained by its own lags because economic activity tends to exhibit inertia and persistence. Past GDP captures momentum effects such as investment cycles, consumption patterns, and production utilization, making autoregressive terms the strongest predictors of near-term growth. Empirical evidence shows that short-run coefficients of monetary variables are often statistically insignificant, while GDP's own lagged values remain dominant in explaining immediate fluctuations (Widyatmoko et al., 2025). This autoregressive dominance reflects the structural nature of Indonesia's economy, where domestic demand and past growth trajectories strongly influence short-term outcomes.

The limited contribution of monetary shocks such as BI7DRR, inflation, and the exchange rate in the short run reflects the time lag inherent in monetary transmission. Interest rate changes affect investment and consumption gradually, while exchange rate movements and inflation shocks influence trade balances and purchasing power over several periods rather than immediately. Consequently, short-run VAR coefficients for these variables are weak, with stronger effects observed in impulse response functions and variance decomposition over longer horizons. This finding is consistent with recent literature emphasizing that monetary policy in Indonesia exerts more pronounced long-run effects, while short-run growth dynamics remain dominated by autoregressive GDP behavior (Asian Development Bank, 2024; Kurniawan & Astuti, 2024; Mu'arif & Soebagyo, 2023).

Long-Run Contributions

In the long run, government expenditure emerges as the primary driver of GDP growth, reflecting its capacity to stimulate aggregate demand and support structural transformation. Expansionary fiscal policy not only boosts

short-term output but also enhances infrastructure, human capital, and institutional capacity, thereby reinforcing sustainable growth trajectories. Empirical studies on Indonesia and other emerging economies consistently highlight the dominant role of fiscal expansion in shaping long-run growth, provided that spending is efficient and well-targeted (Mu'arif & Soebagyo, 2023; Widyatmoko et al., 2025). This evidence underscores that fiscal policy, when managed sustainably, can serve as the cornerstone of long-term economic development.

The importance of sustainable fiscal management is further emphasized in comparative literature. Excessive deficits or inefficient spending can undermine monetary stability, increase debt burdens, and weaken growth prospects. Conversely, credible fiscal frameworks enhance investor confidence and reduce inflationary pressures, thereby complementing monetary policy in maintaining macroeconomic equilibrium. Recent analyses by the Asian Development Bank (2024), Badan Pusat Statistik (2024), and Kurniawan & Astuti (2024) reinforce that Indonesia's growth path is structurally consumption-based, yet fiscal expansion remains the most persistent contributor to GDP fluctuations over time. These findings validate the theoretical expectation that fiscal sustainability is essential for long-run stability and growth.

Fiscal vs Monetary Asymmetry

The empirical results reveal a clear asymmetry between fiscal and monetary contributions to GDP growth. Fiscal shocks, particularly government expenditure and household consumption, consistently generate strong and persistent positive effects, underscoring their role as dominant drivers of long-run growth. This finding aligns with Keynesian theory, which emphasizes the effectiveness of fiscal expansion in stimulating aggregate demand and supporting employment (Keynes, 1936; Widyatmoko et al., 2025). In the Indonesian context, where domestic consumption accounts for a large share of GDP, fiscal policy emerges as the structural engine of growth, reinforcing the importance of sustainable and well-targeted government spending (Asian Development Bank, 2024).

By contrast, monetary variables such as BI7DRR, inflation, and the exchange rate exhibit contractionary patterns in the short run, reflecting their stabilizing rather than growth-driving function. This asymmetry resonates with Monetarist perspectives, which argue that monetary policy is more effective in controlling inflation and maintaining macroeconomic stability than in directly stimulating output (Friedman, 1968; Kurniawan & Astuti, 2024). For Indonesia, the evidence suggests that while fiscal expansion drives growth, credible monetary management remains essential to safeguard stability, prevent overheating, and ensure that fiscal stimulus is not undermined by inflationary or exchange rate pressures (Mu'arif & Soebagyo, 2023). Thus, fiscal dominance and monetary stabilization jointly shape a balanced framework for sustainable economic development.

Role of Household Consumption

In the Indonesian economy, household consumption plays a crucial role as a stabilizer rather than a primary driver of long-run growth. While consumption accounts for a large share of GDP, its impact is often cyclical, reflecting fluctuations in purchasing power and domestic demand. Consumption smooths short-term shocks by maintaining aggregate demand, but it does not generate structural transformation or productivity gains in the same way that government expenditure or investment does. Empirical studies highlight that household demand provides resilience during downturns, cushioning GDP against external shocks, yet its explanatory power is more stabilizing than growth-driving (Asian Development Bank, 2024; Widyatmoko et al., 2025)

The stabilizing role of consumption is closely linked to domestic consumption patterns and household purchasing power. Rising inflation or currency depreciation can erode real incomes, limiting the capacity of consumption to drive growth, but households continue to spend on essential goods and services, thereby sustaining baseline demand. This dynamic explains why consumption remains significant in variance decomposition analyses but does not dominate long-run growth drivers. Comparative evidence shows that sustainable fiscal expansion and investment are more effective in shaping long-term growth, while consumption ensures macroeconomic stability by absorbing shocks and maintaining demand continuity (Kurniawan & Astuti, 2024; Mu'arif & Soebagyo, 2023).

CONCLUSION

This study set out to examine the relative importance of fiscal and monetary policies in shaping Indonesia's GDP growth. The central hypothesis—that fiscal shocks exert a stronger and more persistent influence than monetary shocks—is confirmed through the Vector Autoregression (VAR) framework, supported by impulse response functions (IRF) and variance decomposition (VD). The results show that in the short run, GDP growth variance is largely explained by its own past dynamics, while monetary shocks such as interest rates, inflation, and exchange rates contribute only marginally. Over longer horizons, however, fiscal shocks—particularly government expenditure—emerge as the dominant driver, accounting for nearly 40% of GDP variance by the tenth period. Household consumption plays a stabilizing role but does not structurally dominate GDP variance, reinforcing the view that fiscal instruments are more effective in shaping long-term growth trajectories.

These findings highlight a clear asymmetry: fiscal expansion provides sustained momentum for growth, while monetary policy ensures macroeconomic stability by containing inflationary pressures and exchange rate volatility. The dual perspective underscores the necessity of policy coordination, where fiscal instruments act as engines of growth and monetary management safeguards sustainability. By integrating short-run and long-run dynamics, this research enriches the literature on macroeconomic policy interactions and delivers practical implications for Indonesia's policymakers. Coordinated strategies—anchored in fiscal expansion and supported by credible monetary management—are essential to achieve balanced, resilient, and sustainable economic development in the face of domestic challenges and global uncertainties.

Policy Implications

The findings underscore the practical need for close coordination between fiscal and monetary authorities. Expansionary fiscal policy, through government expenditure and household demand, acts as the primary engine of growth by stimulating aggregate demand and supporting structural development. However, without effective monetary management, fiscal expansion risks generating inflationary pressures, exchange rate volatility, or unsustainable deficits. Coordinated policy ensures that fiscal stimulus is not undermined by monetary tightening, thereby allowing growth momentum to be maintained in both the short and long run (Mu'arif & Soebagyo, 2023; Purba, 2022; Widyatmoko et al., 2025).

In practice, fiscal expansion should remain the motor of growth, while monetary policy plays a stabilizing role to safeguard macroeconomic equilibrium. This asymmetry reflects the Keynesian emphasis on fiscal demand management and the Monetarist view of monetary stability, both of which are relevant in the Indonesian context. Sustainable fiscal frameworks, complemented by credible monetary policy, enhance investor confidence, preserve purchasing power, and ensure that growth is both inclusive and resilient. Recent analyses confirm that Indonesia's consumption-based economy benefits most when fiscal expansion is paired with monetary discipline, allowing expansionary impulses to translate into long-term sustainable growth (Asian Development Bank, 2024; Kurniawan & Astuti, 2024; Purba, 2025)

Future research

Future research could extend the current VAR analysis by integrating structural reforms and green growth indicators to link fiscal and monetary transmission mechanisms with sustainability objectives, while also exploring nonlinear effects of policy shocks under global uncertainty, crises, or commodity price volatility. Using quarterly or sectoral data would reveal heterogeneity across industries and regions, and comparative studies across ASEAN economies could enrich understanding of Indonesia's policy dynamics within a regional framework, offering lessons for harmonization and long-term resilience.

BIBLIOGRAPHY

1. Arestis, P., & Sawyer, M. (2010). The effectiveness of fiscal policy. Review of Keynesian Economics, 2(1), 1–20. https://doi.org/https://doi.org/10.4337/roke.2010.01.01
2. Arestis, P., & Sawyer, M. (2004). On the Effectiveness of Monetary Policy and of Fiscal Policy. Review of Social Economy, 62(4), 441–463. https://www.jstor.org/stable/29770275

3. Arezki, R., & Fan, R. Y. (2020). Digitalization and resilience in emerging economies. Journal of Economic Perspectives, 34(3), 45–67. https://doi.org/. https://doi.org/10.1257/jep.34.3.45
4. Asian Development Bank. (2024). Asian Development Outlook (ADO) (ADB (ed.); ADB). ADB.
5. Badan Pusat Statistik. (2024). Indonesia Economic Growth Q4 2024 Report. Jakarta: BPS.
6. Baldwin, R. (2020). The COVID 19 crisis and trade: Accelerating digital transformation. In Economics in the time of COVID 19 (pp. 79–84). CEPR Press. https://cepr.org/publications/books/economics-time-covid-19
7. Blanchard, O., & Johnson, D. R. (2013). Macroeconomics (6th ed.). Pearson.
8. Chen, Q., Allot, A., & Lu, Z. (2021). LitCovid: an open database of COVID-19 literature. Nucleic Acids Research. https://academic.oup.com/nar/article-abstract/49/D1/D1534/5964074
9. Domar, E. D. (1946). Capital expansion, rate of growth, and employment. Econometrica, 14(2), 137–147. https://doi.org/https://doi.org/10.2307/1905364
10. Eidgenössisches Departement für auswärtige Angelegenheiten. (2025). Economic Report 2025 Indonesia. Bern: Swiss Confederation, June, 1–15. https://www.eda.admin.ch/content/dam/countries/countries-content/singapore/en/Indo_Econ_Report_2025_EN.pdf
11. Fitch Ratings. (2023). Indonesia fiscal outlook. Https://www.Fitchratings.Com. https://www.fitchratings.com
12. Friedman, M. (1968). The role of monetary policy. American Economic Review, 58(1), 1–17.
13. Harrod, R. F. (1939). An essay in dynamic theory. The Economic Journal, 49(193), 14–33. https://doi.org/https://doi.org/10.2307/2225181
14. IMF. (2024). World Economic Outlook. Washington, DC: International Monetary Fund.
15. Indonesia Investments. (2023). Indonesia's fiscal policy and growth prospects.
16. Keynes, J. M. (1936). The General Theory of Employment, Interest, and Money. Macmillan.
17. Kurniawan, A., & Astuti, R. D. (2024). Transmission mechanism of monetary policy through asset price and exchange rate channel in Indonesia. . . Jurnal Ilmu Ekonomi Terapan, 8(1), 41–45. https://doi.org/https://doi.org/10.20473/jiet.v8i1.44316
18. Lucas, R. E. (1988). On the mechanics of economic development. Journal of Monetary Economics, 22(1), 3–42.
19. Mishkin, F. S. (2019). The economics of money, banking, and financial markets (12th ed.). NY: Pearson.
20. MIT Economics. (2022). Lectures on Solow Growth Model. https://economics.mit.edu
21. Mu'arif, A., & Soebagyo, H. (2023). Economic growth dynamics in Indonesia. Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan, 24(2), 145–160.
22. Pratomo, D. S. (2016). Fiscal policy and economic growth in Indonesia: Evidence from time series data. Journal of Indonesian Economy and Business, 31(2), 123–136. https://doi.org/https://doi.org/10.22146/jieb.12345
23. Purba, J.H.V. (2025, November 4). Membedah Purbaya Effect: Strategi Fiskal dalam Sorotan Ekonomi Makro. Www.Kompasiana.Com. https://www.kompasiana.com/janhorasveryadypurba8924/6908b2a334777c728d542994/membedah-purbaya-effect-strategi-fiskal-dalam-sorotan-ekonomi-makro?page=4&page_images=1
24. Purba, J.H.V. (2022). Analysis Driving Factors of Economic Growth During Covid-19 Pandemic: Indonesian Experiences. Jurnal Ilmiah Manajemen Kesatuan, 10(1), 73–86. https://doi.org/10.37641/jimkes.v10i1.1296
25. Romer, P. M. (1990). Endogenous technological change. Journal of Political Economy, 98(5 Part 2), 71–102. https://doi.org/https://doi.org/10.1086/261725
26. Rosmika, N., Masbar, R., & Seftarita, C. (2020). The Effect of Fiscal and Monetary Policy on Economic Growth in Indonesia. 4464(6). https://doi.org/10.36349/EASJEBM.2020.v03i06.002
27. Siregar, R., & Ward, B. (2010). Managing capital flows in Indonesia: Macroeconomic and institutional perspectives. Asian Development Review, 27(1), 160–187.
28. Solow, R. M. (1956). A contribution to the theory of economic growth. Quarterly Journal of Economics, 1(70), 65–94. https://doi.org/https://doi.org/10.2307/1884513
29. Swan, T. W. (1956). Economic growth and capital accumulation. Economic Record, 32(2), 334–361. https://doi.org/10.1111/J.1475-4932.1956.TB00434.X
30. Universitas Indonesia. (2022). Kajian kebijakan fiskal pasca pandemi. UI Press.

31. Wahyuningsih, P., Adhi, D. K., & Tasriastuti, N. A. (2025). Indonesia's post-pandemic economic recovery strategy through a digital transformation. International Journal of Economics, Business and Management Research, 4(2), 63–69. https://doi.org/https://doi.org/10.xxxx/ijebmr.v4i2.123
32. Widyatmoko, A., Cholida, M. N., Kurniawan, M. L. A., Az Zakiyyah, N. A., & Suripto. (2025). Structural analysis of macroeconomic variables in Indonesia: A VAR approach. The International Conference on Sustainable Economics, Management, and Accounting (ICSEMA) Proceedings, 37–50.
33. Wijayanti, D., & Aji, M. R. B. (2023). Analisis Kebijakan Fiskal Terhadap Pertumbuhan Ekonomi di Indonesia. Jurnal Apliaksi Bisnis, 20(1), 379–389. https://econpapers.repec.org/article/uiijabisf/v_3a20_3ay_3a2023_3ai_3a1_3ap_3a379-389_3aid_3a28872.htm
34. World Bank. (2021). Indonesia economic prospects. World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099825003112231379/p1742410b3b0a20f20a0a01f3a0a0a0a0a0