

Effect of Monetary and Fiscal Policy Measures on Economic Growth in Nigeria

Jaja, Philomina Ejiroghene, Prof. C. G. Nwikina, Prof. C. R. Amadi, Prof. S. N. Amadi

Department of Economics,

Faculty of Social Sciences,

Rivers State University,

Nkpolu-Oroworukwo, Port Harcourt, Nigeria

<https://doi.org/10.56201/ijebm.vol.12.no9.2026.pg1.15>

Abstract

This study empirically investigated the effect of monetary and fiscal policy measures on economic growth in Nigeria from 1985 to 2024. Monetary policy was proxied by broad money supply, lending rate and monetary policy rate, while fiscal policy was proxied by government expenditure and government tax revenue. On the other hand, economic growth was proxied by Real Gross Domestic Product (RGDP). The study adopted an ex-post facto research design and relied on annual time series data sourced from the Central Bank of Nigeria Statistical Bulletin, the World Development Indicators of the World Bank, and the National Bureau of Statistics. Data were analysed using Augmented Dickey-Fuller unit root test, correlation matrix, bounds cointegration test, and the Autoregressive Distributed Lag estimation technique. The findings revealed that broad supply, government expenditure and government tax revenue have significant positive effects on Real Gross Domestic Product in Nigeria in both the short run and long run, while lending rate has a significant negative effect on Real Gross Domestic Product while monetary policy rate exerted a negative but statistically insignificant effect on Real Gross Domestic Product. The study concluded that monetary and fiscal policy measures play a vital and complementary role in driving economic growth in Nigeria. It was recommended, among others, that the Central Bank of Nigeria should calibrate monetary expansion toward productive credit channelling, and that fiscal authorities should prioritize the quality and composition of public spending toward capital and infrastructure projects that reinforce sustainable output growth.

1.0 Introduction

One of the most remarkable trends in contemporary economic history has been the growing importance attached to the growth of economic life. The achievement of macroeconomic goals such as full employment, price stability, high and sustainable economic growth, and external balance has, from time immemorial, been a policy priority of every economy, whether developed or developing, given the susceptibility of macroeconomic variables to fluctuations. Government policies designed to stabilize business cycles, reduce unemployment and promote growth typically operate through government spending and taxation, that is, fiscal policy, or through the regulation of money supply and credit conditions, that is, monetary policy (Olawunmi & Ayinla, 2017). Monetary policy plays a crucial role in influencing the overall performance of an economy through the regulation of money supply, interest rates, and credit conditions. According to Mbanefo and Nnebedum (2024), one of the major positive effects of monetary policy is its

ability to stimulate economic growth and improve real gross domestic product through credit expansion and investment promotion. When the central bank adopts an accommodative monetary policy by lowering policy rates or reducing reserve requirements, commercial banks are able to extend more credit to businesses and individuals, encouraging firms to expand operations, invest in new technologies, and employ more labour, thereby raising national output. Fiscal policy, on its part, is a deliberate action undertaken by government to achieve its economic objectives using the instruments of taxation, government spending and the budget deficit (Obiora, 2024). According to Nwikina and Nwankwo (2024), fiscal policy is a major macroeconomic tool used by governments to influence economic performance through public expenditure, taxation, and borrowing, designed to stimulate aggregate demand, encourage investment, and enhance productive activities within the economy. Government expenditure on infrastructure such as roads, power supply, and transportation improves the business environment and reduces production costs, thereby enhancing productivity and economic expansion (Nwogo, 2024).

Statement of the Problem

The effectiveness of monetary and fiscal policy measures remains a critical issue in determining the macroeconomic performance of the Nigerian economy. These policies are primarily designed to stabilize prices, promote economic growth, reduce unemployment, and maintain external balance. However, Nigeria has continued to experience macroeconomic instability despite various monetary and fiscal interventions by government and the Central Bank of Nigeria. Nigeria's real GDP growth slowed to about 2.9% in 2023, reflecting weak economic expansion compared to the country's population growth rate, which implies declining real income per capita and slow economic progress (Central Bank of Nigeria, 2024). Although growth was projected to improve to around 3.3% in 2024, this rate remains insufficient to significantly improve living standards in a rapidly growing economy. Despite several monetary tightening measures such as interest rate adjustments and liquidity control, and several fiscal interventions channelled through government expenditure and taxation, Nigeria's growth trajectory has remained fragile and below its potential. This raises the fundamental question of whether existing monetary and fiscal policy measures are sufficiently effective in stimulating economic growth in Nigeria. Although a growing body of literature has examined the broader monetary policy-growth and fiscal policy-growth nexus in Nigeria, most existing studies have tended to examine monetary and fiscal policy measures in isolation, rather than jointly, and comparatively few have simultaneously disaggregated both monetary policy, into money supply, lending rate and monetary policy rate, and fiscal policy, into government expenditure and government tax revenue, within a single unified model using contemporary annual data extending to 2024. This gap in the literature motivates this study, which examined the effect of monetary and fiscal policy measures on economic growth in Nigeria from 1985 to 2024. The specific objectives of the study are to determine the effect of money supply on Real Gross Domestic Product in Nigeria; to examine the effect of lending rate on Real Gross Domestic Product in Nigeria; to ascertain the effect of monetary policy rate on Real Gross Domestic Product in Nigeria; to investigate the effect of government expenditure on Real Gross Domestic Product in Nigeria; and to evaluate the effect of government tax revenue on Real Gross Domestic Product in Nigeria.

2.0 Literature Review

Theoretical Framework

The theories used in this study are explained as follows:

a. Keynesian Fiscal Theory of Output and Income

The Keynesian Fiscal Theory of Output and Income was developed by John Maynard Keynes in 1936 through his influential book *The General Theory of Employment, Interest and Money*. Keynes introduced this theory during the period of the Great Depression when classical economic ideas failed to explain persistent unemployment and economic stagnation. The theory emphasizes the role of government fiscal policy in influencing aggregate demand, output, and income levels in an economy. According to Keynes, the level of national income and output is primarily determined by aggregate demand, which consists of consumption, investment, government expenditure, and net exports, such that when aggregate demand is insufficient, economies may experience unemployment and low production levels, making government intervention through increased public expenditure and reduced taxation necessary to stimulate demand, increase output, and restore economic stability (Keynes, 1936; Blanchard, 2017).

The theory is based on the assumption that markets do not always automatically adjust to achieve full employment, contrary to the classical belief in self-correcting markets, and that aggregate demand is the main determinant of output, employment, and income levels in the short run. It further assumes that government spending has a multiplier effect, meaning that an increase in public expenditure leads to a more than proportional increase in national income, and that wages and prices may be rigid in the short run, preventing quick adjustments in the labour market (Mankiw, 2021). This theory is directly relevant to the present study as it provides the theoretical foundation for expecting government expenditure on infrastructure, education, healthcare, and public works to stimulate demand for goods and services, encourage businesses to increase production, and thereby raise Real Gross Domestic Product in Nigeria through the fiscal multiplier mechanism.

b. Endogenous Growth Theory

The Endogenous Growth Theory was mainly developed by Paul Romer in 1986 and later expanded by Robert Lucas Jr. in 1988. The theory emerged as a response to earlier neoclassical growth models that treated technological progress as an external factor beyond the control of economic agents and government policies. Endogenous Growth Theory argues that long-term economic growth is primarily generated from within the economy through investment in human capital, innovation, knowledge, research and development, and technological advancement. According to Romer (1986), government policies and institutional frameworks play an important role in promoting economic growth by influencing the accumulation of knowledge and productive capital. Unlike the traditional Solow growth model, which assumes diminishing returns to capital, the endogenous growth framework suggests that investment in education, infrastructure, and innovation can create sustained increases in productivity and output over time. The theory assumes that technological progress and knowledge accumulation are results of deliberate economic activities such as research, innovation, and human capital development, and that government policies, particularly fiscal policy measures such as public investment and taxation, can significantly influence the rate of economic growth. It further assumes that knowledge and human capital generate positive externalities that benefit the entire economy, and that there are increasing or constant returns to scale in knowledge-based sectors, which allows economies to sustain long-term growth without experiencing diminishing productivity (Romer, 1986; Lucas, 1988; Todaro & Smith, 2020). This theory is directly relevant to the present study because it provides the theoretical justification for expecting government expenditure and money supply, when productively channelled, to generate sustained increases in real gross domestic

product in Nigeria, by financing the human capital formation and infrastructural base upon which endogenous productivity growth depends.

Empirical Review

Amadi, Ewubare and Georgewill (2025) investigated the effect of monetary policy on economic growth in Nigeria from 1982 to 2022, using time series data sourced from the World Development Indicators and the CBN Statistical Bulletin. Employing the ARDL bounds testing approach, the study found that money supply has a significant positive effect on GDP in Nigeria, while cash reserve ratio, exchange rate and interest rate all exert a significant negative effect, leading the study to recommend an expansionary monetary policy stance anchored on open market operations and a gradual lowering of the cash reserve requirement.

Ayorinde (2025) analysed how monetary policy affects Nigerian economic growth from 1986 to 2023, using Gross Fixed Capital Formation as a proxy for growth. Applying the Autoregressive Distributed Lag model, the study found that money supply, exchange rate, private sector credit and inflation rate did not significantly affect economic growth over the period, and recommended that policymakers regulate the money supply and exchange rate more actively to control inflation and boost growth. Udeorah, Oladosu and Odiche (2025) explored the interplay between monetary policy and stock market development in Nigeria from 1990 to 2023, anchored on Monetarism Theory. Using the ADF unit root test and the ARDL approach, the study found that interest rate has a significant negative effect on stock market capitalization while broad money supply and exchange rate exert significant positive effects, concluding that monetary policy is a critical stabilization tool for financial market development in Nigeria.

Obentey and Odeke (2025) examined the impact of fiscal policy on economic performance in Nigeria from 1981 to 2024, focusing on government expenditure and government borrowing, using the Generalized Method of Moments estimation technique. The study found that government expenditure has a positive and statistically significant effect on GDP, while government borrowing exerts a negative and significant effect, recommending efficient expenditure allocation and sustainable debt management for long-term economic stability.

Adesodun and Isaac (2025) investigated the convergence relationship between fiscal policy and economic growth in Nigeria over 38 years, from 1986 to 2023, using trend analysis, descriptive statistics and OLS regression. The study found that public spending significantly and positively impacts economic growth, with a 1% increase in government expenditure raising GDP by approximately 8.62%, while tax revenue, though positively related to GDP, exerted a statistically insignificant effect. Mbanefo and Nnebedum (2024) examined the relationship between monetary policy and economic growth in Nigeria from 2007 to 2022, using cash ratio, interest rate and liquidity ratio to proxy monetary policy. Employing the Ordinary Least Square regression method, the study found that liquidity ratio and cash ratio have a positive and significant relationship with real gross domestic product, while interest rate showed an insignificant relationship, and recommended policies that promote financial inclusion and deepening. Ogunuku and Anumudu (2024) investigated the relationship between monetary policy and economic growth in Nigeria from 1980 to 2022, using the Seemingly Unrelated Regression Equations model alongside the Bounds Cointegration approach. The study found that interest rate and treasury bills had a significant effect on economic growth, while inflation and money supply showed no significant relationship with growth, recommending a policy framework that reduces interest rates to single digits to encourage investment.

Akintola, Omosebi, Babarinde, Olurin and Alu (2024) examined how Nigeria's monetary

policies affected economic development from 1994 to 2021, using a multiple regression model. The study found that monetary policy positively impacted Nigeria's economic expansion, concluding that monetary policy instruments are essential to Nigeria's long-term economic growth and should be actively deployed by monetary authorities to address the country's growth challenges. Tubotamuno and Oladosu (2024) determined the effect of monetary policy on stock market performance in Nigeria from 1985 to 2022, using the ADF unit root test and the ARDL approach. The study found that money supply and treasury bill rate have a positive and significant effect on stock market capitalisation, while monetary policy rate and lending rate exert negative effects, concluding that monetary policy variables are vital determinants of Nigeria's financial market performance.

Oluwayemisi, Oladele, Oladipo, Afolabi and Timilehin (2024) examined the impact of fiscal policy on Nigeria's economic growth from 1981 to 2022, using an ex post facto research design. The study found a complex relationship between fiscal policy and growth: government recurrent expenditure had a positive effect on economic growth, while government capital expenditure and tax revenue both exerted negative effects, providing nuanced evidence for data-driven fiscal policy design in Nigeria. Obiora (2024) examined the relationship between fiscal policy and economic growth in Nigeria from 1986 to 2019, using the Ordinary Least Square technique alongside unit root and cointegration tests. The study found that government expenditure and government tax receipts are positively related to real gross domestic product, while overall fiscal balance is negatively related to growth, recommending that government moderate deficit financing through borrowing to avoid debt crises and rising interest rates.

Mohammed and Sanusi (2024) investigated the impact of fiscal policy on stock market efficiency in Nigeria using quarterly data from 2010Q1 to 2023Q2 and a Structural Vector Autoregression model. The study found that shocks to public debt and government expenditure caused significant fluctuations in stock prices in both the short run and long run, concluding that effective use of fiscal policy instruments, particularly public debt management, can promote capital market stability and investor confidence.

Enang, Ele and Itoro (2024) examined the impact of fiscal policy on stock market performance in Nigeria from 1999 to 2023, using the Ordinary Least Squares regression method. The study found that government spending, taxation policies and government borrowing all have statistically significant effects on stock market performance, with government spending explaining 64.8% of the variability, recommending prudent fiscal policies to foster a conducive investment environment. Nnoje and Okonkwo (2024) explored how Nigerian stock market turnover ratio has been influenced by fiscal policy from 1990 to 2021, using the Ordinary Least Squares technique. The study found that fiscal policy variables contributed negatively and insignificantly to stock market turnover ratio over the period, recommending consistent and effective use of fiscal policy instruments to build investor confidence in the Nigerian market.

Nwogo (2024) investigated the effect of fiscal policy on stock market performance in Nigeria, adopting an ex post facto research design with the Johansen cointegration test. The study found that government capital and recurrent expenditure both have significant positive effects on stock market performance, while company income tax and petroleum profit tax exert significant negative effects, recommending increased capital spending on infrastructure to boost investor confidence.

Ukpemeku and Olele (2024) explored the nexus between fiscal operations and stock market performance in Nigeria from 1990 to 2022, using the Vector Autoregressive modelling technique. The study found that fiscal operation measures, comprising government expenditure

and revenue, have varied but significant effects on market capitalization, recommending that government provide an enabling environment for more companies to participate in the stock exchange. Bamaiyi and Dariyem (2023) examined monetary policy operations and economic growth in Nigeria from 1990 to 2022, using the Vector Error Correction Model. The study found that exchange rate exerted a positive relationship with lagged real GDP while inflation rate showed a negative relationship, concluding that exchange rate stability and inflation control are imperative for promoting sustained economic growth through monetary policy.

Adeneye, Moses and Florence (2023) investigated the effect of monetary policy on economic growth in Nigeria between 2004 and 2022, using the Autoregressive Distributed Lag technique. The study found that monetary policy rate and money supply have a positive impact on economic growth while lending rate has a negative impact, recommending that the monetary authority maintain the status quo on the policy rate and money supply while reducing the lending rate to encourage investment. Mohammed, Mustapha and Buba (2023) investigated the relationship between monetary policy and economic growth in Nigeria from 1990 to 2022, using the ARDL bounds test and the Granger causality test. The study found evidence of long-run relationships among money supply, interest rate, exchange rate and GDP, with unidirectional causality running from interest rate to exchange rate, recommending that the Central Bank of Nigeria strengthen the accountability and credibility of its monetary policy framework.

Oruku, Mumen, Ale and Chukwuto (2023) examined the effect of fiscal policy on economic growth of Nigeria from 1983 to 2022, using the Ordinary Least Squares regression technique. The study found that fiscal policy variables, including budget deficit, exchange rate, inflation rate, and public capital expenditure, met a-priori expectations in terms of their negative coefficients but did not significantly affect gross domestic product, recommending that deficit financing be focused more on productive sectors of the economy.

3.0 Methodology

Research Design

This study adopted the ex-post facto research design.

Data Collection Method and Sources

This study made use of annual time series data spanning from 1985 to 2024. These data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, the World Development Indicators (WDI) of the World Bank, and the National Bureau of Statistics (NBS).

Model Specification

To effectively capture the effect of monetary and fiscal policy measures on economic growth in Nigeria, in line with the research objectives, the study employed a multiple regression model within the Autoregressive Distributed Lag (ARDL) framework. This study was anchored on the Endogenous Growth Theory propounded by Romer (1986), which argues that long-term economic growth is generated from within the economy through productive investment, knowledge accumulation, and government policy. The model of this study was built on the empirical work of Sokunbi, Olayinka, Aworinde, Taiwo and Musa (2024), who evaluated the effects of fiscal and monetary policies on growth in Nigeria's economy between 1986 and 2023.

The model is specified as follows:

Functional Model Specification

$$RGDP = f(M2, LR, MPR, GEX, GTR) \quad (3.1)$$

Mathematical Model Specification

$$RGDP_t = \delta_0 + \delta_1 M2_t + \delta_2 LR_t + \delta_3 MPR_t + \delta_4 GEX_t + \delta_5 GTR_t \quad (3.2)$$

Econometrical Model Specification

$$RGDP_t = \delta_0 + \delta_1 M2_t + \delta_2 LR_t + \delta_3 MPR_t + \delta_4 GEX_t + \delta_5 GTR_t + \mu_t \quad (3.3)$$

RGDP = Real Gross Domestic Product, M2 = Money Supply, LR = Lending Rate, MPR = Monetary Policy Rate, GEX = Government Expenditure, GTR = Government Tax Revenue, δ_0 = Regression Intercept, $\delta_1 - \delta_5$ = Parameters of the Independent Variables, μ_t = Disturbance or Error Term

A Priori Expectation

The a priori expectations for each of the independent variables are presented based on economic theory and insights from previous empirical literature. Firstly, δ_1 , the coefficient of M2, is expected to exert a positive influence on Real Gross Domestic Product. This expectation derives from the Endogenous Growth Theory, which predicts that increased money supply, when channelled into productive investment, expands output. The coefficient of LR, δ_2 , is anticipated to negatively affect Real Gross Domestic Product, as higher lending rates raise the cost of capital and discourage private investment. Similarly, the coefficient of MPR, δ_3 , is expected to contribute negatively to growth, as monetary tightening constrains credit availability. The coefficient of GEX, δ_4 , is expected to have a positive impact on Real Gross Domestic Product, consistent with the Keynesian fiscal multiplier mechanism. Finally, the coefficient of GTR, δ_5 , is expected to have a positive effect on Real Gross Domestic Product, as improved tax revenue finances productive public goods. Mathematically, the expected signs for the parameters are: $\delta_1 > 0$; $\delta_2 < 0$; $\delta_3 < 0$; $\delta_4 > 0$; $\delta_5 > 0$.

Method of Data Analysis

The data analysis technique employed in this study was the Autoregressive Distributed Lag (ARDL) approach. This is because the result of the unit root test generated mixed stationarity, that is, I(0) and I(1).

4.0 Data Analysis and Discussion of Findings

Descriptive Analysis

The descriptive statistics for the study variables are summarized in Table 4.1:

Table 4.1: Descriptive Statistics for the Research Variables

	RGDP	M2	LR	MPR	GEX	GTR
Mean	43141.42	13114.09	17.79450	14.09375	3978.845	5198.243
Median	37604.19	2384.865	17.53000	13.50000	1711.950	4382.550
Maximum	80607.14	79422.59	29.80000	27.50000	22177.40	21058.30
Minimum	17170.08	22.30000	9.250000	6.000000	13.00000	12.60000
Std. Dev.	22039.77	19057.39	4.147205	4.316667	5398.042	5412.982
Skewness	0.317163	1.776556	0.597369	1.054144	1.885250	1.059825
Kurtosis	1.471683	5.794478	4.084472	4.977458	6.126888	3.748598
Jarque-Bera	4.563536	34.05618	4.339128	13.92537	39.99017	8.422193
Probability	0.102104	0.000000	0.114227	0.000947	0.000000	0.014830
Sum	1725657.	524563.5	711.7800	563.7500	159153.8	207929.7
Sum Sq. Dev.	1.89E+10	1.42E+10	670.7730	726.7109	1.14E+09	1.14E+09

Observations	40	40	40	40	40	40
--------------	----	----	----	----	----	----

Source: Authors' Computation, 2026 (EViews 12 Output).

Table 4.1 shows that Real Gross Domestic Product recorded a mean value of ₦43,141.42 billion during the study period, with a maximum of ₦80,607.14 billion and a minimum of ₦17,170.08 billion, reflecting the substantial growth of the Nigerian economy in nominal-adjusted terms over the forty-year period. Money supply averaged ₦13,114.09 billion, with a comparatively large standard deviation of ₦19,057.39 billion, reflecting the rapid monetary expansion recorded in recent years relative to the 1980s. Lending rate and monetary policy rate averaged 17.79 percent and 14.09 percent respectively, both showing moderate dispersion. Government expenditure and government tax revenue averaged ₦3,978.85 billion and ₦5,198.24 billion respectively, both exhibiting high positive skewness and leptokurtic distributions, reflecting a concentration of low values in the earlier years of the study period with a few substantially higher recent values as Nigeria's fiscal aggregates expanded markedly.

Unit Root Test

The results of the unit root test are presented in Table 4.2 below:

Table 4.2: Augmented Dickey-Fuller (ADF) Test Results

Variables	Level	5% Critical	1st Difference	5% Critical	I(d)	Stationary @
LOG(RGDP)	-0.713277	-2.941145	-4.135889	-2.941145	I(1)	1st Difference
LOG(M2)	-1.947251	-2.938987	-4.351919	-2.941145	I(1)	1st Difference
LOG(LR)	-3.914240	-2.938987	-	-	I(0)	Level
LOG(MPR)	-2.305174	-2.938987	-6.968948	-2.941145	I(1)	1st Difference
LOG(GEX)	-3.687781	-2.941145	-	-	I(0)	Level
LOG(GTR)	-2.275427	-2.938987	-6.362917	-2.941145	I(1)	1st Difference

Source: Authors' Computation, 2026 (EViews 12 Output).

The unit root test results in Table 4.2 show that lending rate (LR) and government expenditure (GEX) attained stationarity at level, integrated of order zero [I(0)], while Real Gross Domestic Product (RGDP), money supply (M2), monetary policy rate (MPR) and government tax revenue (GTR) attained stationarity only after first differencing, integrated of order one [I(1)]. The presence of mixed orders of integration justifies the adoption of the Autoregressive Distributed Lag (ARDL) modelling technique.

Correlation Analysis

The results of the correlation matrix are presented in Table 4.3:

Table 4.3: Correlation Matrix

	LOG(RGDP)	LOG(M2)	LOG(LR)	LOG(MPR)	LOG(GEX)	LOG(GTR)
LOG(RGDP)	1.000000					
LOG(M2)	0.577048	1.000000				
LOG(LR)	-0.281140	-0.248630	1.000000			
LOG(MPR)	-0.148440	-0.125260	0.327186	1.000000		
LOG(GEX)	0.644312	0.389611	-0.191850	-0.070530	1.000000	
LOG(GTR)	0.412959	0.567797	-0.119830	-0.101290	0.083811	1.000000

Source: Authors' Computation, 2026 (EViews 12 Output).

The correlation matrix in Table 4.3 shows that all pairwise correlations among the independent variables are below the conventional multicollinearity threshold of 0.80. The highest inter-

regressor correlation is between money supply and government tax revenue (0.567797), which remains well below the threshold. This confirms that the regression estimates for the RGDP model will be free from serious multicollinearity bias and can be interpreted with confidence.

Bound Cointegration Test

Table 4.4: ARDL Bounds Cointegration Test

	Critical Value		F-Statistics
Significance	I(0) Bound	I(1) Bound	
10%	2.08	3.00	
5%	2.39	3.38	5.025808***
2.5%	2.70	3.73	
1%	3.06	4.15	

*Note: Null hypothesis: No level relationship; K = number of regressors; *, ** and *** denote significance at 10%, 5% and 1% level, respectively.*

Source: Authors' Computation, 2026 (EViews 12 Output).

In order to determine the presence or absence of cointegration among Real Gross Domestic Product (RGDP), money supply (M2), lending rate (LR), monetary policy rate (MPR), government expenditure (GEX) and government tax revenue (GTR), the bounds cointegration test was conducted. The result of the ARDL Bounds cointegration test in Table 4.4 shows that the bounds test indicates the presence of a long-run relationship among the variables, given that the F-statistic value of 5.025808 is higher than the 5% upper bound critical value of 3.38. By this, the null hypothesis is rejected, leading the study to conclude that there is a cointegrating relationship among the variables. This confirmation of long-run dynamics necessitated the estimation of the Autoregressive Distributed Lag (ARDL) model.

Short-Run and Long-Run Dynamics of Autoregressive Distributive Lag (ARDL) Model

The results of the estimation are presented in Table 4.5:

Table 4.5: Estimated Long-Run and Short-Run Coefficients of ARDL Model.

Long-Run Results				
Dependent Variable = LOG(RGDP)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(M2)	12.64507	5.413740	2.335737	0.0338
LOG(LR)	-0.524020	0.158147	-3.313503	0.0047
LOG(MPR)	-13.39021	335.9901	-0.039853	0.9689
LOG(GEX)	7.720629	3.536056	2.183401	0.0453
LOG(GTR)	1.594253	0.218437	7.298469	0.0000
C	52.08889	1073.695	0.048514	0.9621
$EC = LOG(RGDP) - (12.6451*LOG(M2) - 0.5240*LOG(LR) - 13.3902*LOG(MPR) + 7.7206*LOG(GEX) + 1.5943*LOG(GTR) + 52.0889)$				
Short-Run Results				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DLOG(RGDP(-1))	-0.084714	0.117965	-0.718131	0.4864
DLOG(RGDP(-2))	0.188790	0.099934	1.889143	0.0833
DLOG(M2)	0.141872	0.031571	4.493743	0.0007

DLOG(M2(-1))	0.025717	0.030444	0.844750	0.4148
DLOG(M2(-2))	-0.004391	0.032339	-0.135770	0.8943
DLOG(LR)	-0.067531	0.020163	-3.349252	0.0058
DLOG(LR(-1))	0.053213	0.021884	2.431580	0.0316
DLOG(LR(-2))	0.065919	0.025453	2.589841	0.0237
DLOG(LR(-3))	0.054157	0.022355	2.422558	0.0322
DLOG(MPR)	-0.006322	0.022709	-0.278382	0.7855
DLOG(GEX)	0.131794	0.022901	5.754862	0.0001
DLOG(GEX(-1))	0.086261	0.027169	3.174992	0.0080
DLOG(GEX(-2))	-0.383857	0.255628	-1.501623	0.1481
DLOG(GEX(-3))	0.030535	0.193256	0.158005	0.8760
DLOG(GTR)	0.043960	0.012065	3.643592	0.0034
DLOG(GTR(-1))	0.092971	0.014390	6.460865	0.0000
DLOG(GTR(-2))	0.058622	0.012132	4.832060	0.0004
DLOG(GTR(-3))	0.066834	0.013568	4.925747	0.0004
CointEq(-1)*	-0.678932	0.109588	-6.195306	0.0000
$R^2 = 0.917722$; $Adjusted\ R^2 = 0.840015$; $Durbin-Watson\ stat = 2.162241$				

Source: Authors' Computation, 2026 (EViews 12 Output).

Interpretation of Short-Run and Long-Run Autoregressive Distributive Lag (ARDL) Model Estimation Results

Money Supply (M2): In the long run, money supply has a coefficient of 12.64507 with a probability value of 0.0338, indicating a positive and statistically significant effect on Real Gross Domestic Product at the 5 percent level. This implies that a one percent increase in money supply leads to a 12.64507 percent increase in RGDP in the long run, confirming that expansionary monetary policy stimulates economic activity and boosts national output. In the short run, money supply has an immediate positive effect of 0.141872 ($p = 0.0007$), confirming rapid transmission from monetary expansion to output growth.

Lending Rate (LR): Lending rate has a long-run coefficient of -0.524020 with a probability value of 0.0047, which is negative and statistically significant at the 5 percent level. A one percent increase in lending rate leads to a 0.524020 percent decrease in RGDP in the long run, confirming that high borrowing costs suppress private investment and economic output. In the short run, lending rate exerts a significant negative effect of -0.067531 ($p = 0.0058$), with further significant corrections across three lag periods.

Monetary Policy Rate (MPR): Monetary policy rate has a long-run coefficient of -13.39021 with a probability value of 0.9689, which is negative but statistically insignificant at conventional levels. This suggests that the policy rate does not independently determine long-run RGDP in the Nigerian context, consistent with the view that aggressive monetary tightening may have limited long-run output effects when transmission channels are structurally constrained.

Government Expenditure (GEX): Government expenditure has a long-run coefficient of 7.720629 with a probability value of 0.0453, which is positive and statistically significant at the 5 percent level. A one percent increase in government expenditure leads to a 7.720629 percent increase in RGDP in the long run, supporting the Keynesian fiscal multiplier mechanism whereby public investment creates income, stimulates demand, and expands productive capacity. In the short run, government expenditure has a coefficient of 0.131794 ($p = 0.0001$), with further significant correction at lag one. **Government Tax Revenue (GTR):** Government tax revenue has

a long-run coefficient of 1.594253 with a probability value of 0.0000, which is positive and highly significant. A one percent increase in government tax revenue leads to a 1.594253 percent increase in RGDP in the long run, likely operating through its role in financing productive public goods. In the short run, government tax revenue has a coefficient of 0.043960 ($p = 0.0034$), with further significant corrections across three lag periods, confirming sustained multi-period growth transmission.

Interpretation of CointEq (-1) Result

The error correction coefficient, CointEq (-1), of -0.678932 ($p = 0.0000$) is negative and highly significant, confirming stable convergence to long-run equilibrium. Approximately 67.89 percent of any short-run deviation from the long-run equilibrium relationship between RGDP and the monetary and fiscal policy variables is corrected within one year, indicating a fairly rapid adjustment speed.

Interpretation of Adjusted R-Squared (Adj. R²) Value

The R-squared value of 0.917722 indicates that approximately 91.77 percent of the total variation in Nigeria's Real Gross Domestic Product is explained by the monetary and fiscal policy variables included in the model. This very high explanatory power, confirmed by the adjusted R-squared of 0.840015, underscores the powerful and comprehensive role of monetary and fiscal policy measures as determinants of economic growth in Nigeria. The Durbin-Watson statistic of 2.162241 is within the acceptable range of 1.5 to 2.5, indicating the absence of first-order serial autocorrelation in the residuals and confirming the dynamic adequacy of the ARDL specification.

Post-Estimation Tests

The results of the diagnostic tests are presented and discussed below:

Table 4.6: Post-Estimation Test Results

Test	F-Statistic	P-value	Null Hypothesis	Decision
Jarque-Bera Normality Test	1.577491	0.4544	H ₀ : Normally distributed	Retain H ₀
Breusch-Godfrey Serial Correlation LM Test	2.295448	0.1217	H ₀ : No serial correlation	Retain H ₀
Heteroskedasticity Test (Breusch-Pagan-Godfrey)	0.984724	0.5332	H ₀ : Homoscedasticity	Retain H ₀
Ramsey RESET Test	0.723227	0.4132	H ₀ : Correctly specified	Retain H ₀

Source: Authors' Computation, 2026 (EViews 12 Output).

Table 4.6 presents the post-estimation diagnostic test results used to validate the reliability and robustness of the estimated ARDL model. The Jarque-Bera test result confirms that the residuals are normally distributed, satisfying a key assumption for valid statistical inference. The Breusch-Godfrey Lagrange Multiplier test suggests that the residuals are serially independent and that the model does not suffer from autocorrelation. The Breusch-Pagan-Godfrey test result confirms that the model is free from heteroscedasticity and that the variance of the error term is constant over time. Lastly, the Ramsey RESET test result implies that there are no major functional form or omitted variable problems in the model. Overall, the post-estimation diagnostic results confirm

that the estimated ARDL model is statistically sound, stable, and reliable for policy analysis and inference.

Discussion of Findings

This study has empirically analyzed time series data to determine the effect of monetary and fiscal policy measures on economic growth in Nigeria from 1985 to 2024, using the Autoregressive Distributed Lag (ARDL) estimation technique and EViews 12 statistical package. The findings indicate that broad money supply has a positive and significant effect on Real Gross Domestic Product in both the short run and long run, confirming that expansionary monetary policy stimulates economic activity and boosts national output. This finding is consistent with the Quantity Theory of Money, which posits that growth in the money supply, when channelled into productive investment rather than purely inflationary spending, supports real output expansion, and aligns with the results of Sokunbi et al. (2024), who found positive associations between broad money supply and economic growth in Nigeria.

Government expenditure exerts a positive and significant influence on Real Gross Domestic Product across both time horizons, supporting the Keynesian fiscal multiplier mechanism whereby public investment creates income, stimulates demand, and expands productive capacity, consistent with Obiora (2024) and Adesodun and Isaac (2025), who both found that government expenditure significantly and positively impacts economic growth in Nigeria. Government tax revenue similarly contributes positively to growth, likely through its role in financing productive public goods, aligning with Olukemi and Tayelolu (2021), who found a positive long-run relationship between fiscal policy tools and gross domestic product. The lending rate exerts a significant negative effect on Real Gross Domestic Product, confirming that monetary tightening suppresses private investment and output, consistent with the findings of Ogunuku and Anumudu (2024) on the growth-dampening effect of high interest rates in Nigeria. The finding that the monetary policy rate does not significantly affect Real Gross Domestic Product in the long run resonates with the endogenous growth theory of Romer (1986), which underscores the primacy of productive investment in knowledge and capacity over interest rate policy alone in driving sustained long-run growth in developing economies.

5.0 Conclusion and Recommendations

Conclusion

This study empirically examined the effect of monetary and fiscal policy measures on economic growth in Nigeria. The findings of the study indicated that money supply, government expenditure and government tax revenue, as indicators of monetary and fiscal policy, have significant positive effects on Real Gross Domestic Product in Nigeria in both the short run and long run, while lending rate has a significant negative effect. The monetary policy rate exerted a negative but statistically insignificant long-run effect. Premised on the findings, the study concluded that monetary and fiscal policy measures play a vital and complementary role in driving economic growth in Nigeria.

Recommendations

The following recommendations are proffered based on the findings of this study:

- i. The Central Bank of Nigeria should maintain a strategic approach to money supply management that balances growth promotion with price stability. Since broad money supply positively influences Real Gross Domestic Product, the Central Bank of Nigeria

- should calibrate monetary expansion toward productive credit channelling rather than undifferentiated liquidity injection, with targeted credit facilities directed toward agriculture, manufacturing, and small and medium enterprises.
- ii. Government should implement deliberate policies to reduce the cost of credit in the Nigerian economy. Since lending rates consistently suppress economic growth, there is an urgent need to deepen financial market reforms, enhance competition among deposit money banks, and introduce risk-sharing financing instruments that reduce the cost of capital for productive investment.
 - iii. The Federal Government should prioritize the quality and composition of public spending over its magnitude alone. Since government expenditure significantly promotes economic growth, fiscal authorities should shift the expenditure structure toward capital and infrastructure spending, ensuring that recurrent expenditure does not crowd out productive investment.

References

- Adeneye, O., Moses, T., & Florence, K. (2023). Monetary policy and economic growth in Nigeria: An ARDL approach. *Journal of Monetary Economics and Policy*, 11(2), 45–64.
- Adesodun, T., & Isaac, O. (2025). Convergence of fiscal policy and economic growth in Nigeria. *Journal of Public Finance and Development*, 9(1), 20–38.
- Akintola, A., Omosebi, T., Babarinde, G., Olurin, O., & Alu, C. (2024). Monetary policy and economic development in Nigeria. *African Journal of Economic Policy*, 31(1), 15–30.
- Amadi, N., Ewubare, D., & Georgewill, K. (2025). Monetary policy and economic growth in Nigeria: An ARDL analysis. *Journal of African Development Studies*, 19(1), 33–55.
- Ayorinde, F. (2025). Monetary policy and Nigerian economic growth: An ARDL approach. *Nigerian Journal of Economics and Financial Studies*, 14(1), 12–29.
- Bamaiyi, A., & Dariyem, L. (2023). Monetary policy operations and economic growth in Nigeria. *Journal of Monetary and Financial Economics*, 8(3), 55–74.
- Blanchard, O. (2017). *Macroeconomics* (7th ed.). Pearson Education.
- Enang, B., Ele, L., & Itoro, U. (2024). Fiscal policy and stock market performance in Nigeria. *Journal of Financial Economics and Policy*, 12(2), 66–89.
- Keynes, J. M. (1936). *The general theory of employment, interest and money*. Macmillan.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3–42.
- Mankiw, N. G. (2021). *Macroeconomics* (11th ed.). Worth Publishers.
- Mbanefo, C., & Nnebedum, C. (2024). Monetary policy and economic growth in Nigeria. *Journal of Economics and Sustainable Development*, 15(2), 40–58.
- Mohammed, A., Mustapha, U., & Buba, S. (2023). Monetary policy and economic growth in Nigeria: An ARDL and causality approach. *Journal of Applied Economics*, 10(1), 19–37.
- Mohammed, S., & Sanusi, K. (2024). Fiscal policy and stock market efficiency in Nigeria: Evidence from SVAR modelling. *Journal of Capital Market Studies*, 7(1), 22–41.
- Nnoje, A., & Okonkwo, C. (2024). Fiscal policy and stock market turnover ratio in Nigeria. *Journal of Financial Markets and Institutions*, 9(2), 48–65.
- Nwikina, C., & Nwankwo, O. (2024). Fiscal policy and macroeconomic performance in Nigeria. *Journal of Public Sector Economics*, 16(1), 10–28.
- Nwogo, C. (2024). Fiscal policy and stock market performance in Nigeria. *Nigerian Journal of Finance and Investment*, 13(1), 27–50.
- Obentey, K., & Odeke, S. (2025). Fiscal policy and economic performance in Nigeria: A GMM approach. *Journal of Development Finance*, 11(1), 8–26.
- Obiora, C. (2024). Fiscal policy and economic growth in Nigeria. *Journal of Economics and Policy Studies*, 14(2), 60–79.
- Ogunuku, T., & Anumudu, C. (2024). Monetary policy and economic growth in Nigeria: A SUR and bounds cointegration approach. *West African Journal of Economics*, 18(1), 35–54.
- Olawunmi, O., & Ayinla, T. (2017). Monetary policy and employment generation in Nigeria. *Journal of Labour Economics and Policy*, 6(2), 18–35.
- Oluwayemisi, A., Oladele, B., Oladipo, K., Afolabi, T., & Timilehin, O. (2024). Fiscal policy and economic growth in Nigeria: A 41-year review. *Journal of Fiscal Studies*, 10(1), 44–63.
- Oruku, E., Mumun, T., Ale, S., & Chukwuto, I. (2023). Fiscal policy and economic growth of Nigeria. *Journal of Applied Fiscal Economics*, 9(2), 30–49.
- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*,

94(5), 1002–1037.

Todaro, M. P., & Smith, S. C. (2020). *Economic development* (13th ed.). Pearson Education.

Tubotamuno, B., & Oladosu, I. O. (2024). Monetary policy and stock market performance in Nigeria. *Journal of Industrial Economics and Development*, 9(2), 30–48.

Ukpemeku, J., & Olele, H. (2024). Fiscal operations and stock market performance in Nigeria: A VAR approach. *Journal of Economic and Financial Review*, 12(1), 15–32.