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Macroeconomic Policies and Economic Growth: An Investigation of the Impacts in Nigeria

Victor AKIDI*[1], Nneka Uchenna NWANKWO[2], Daniel CHARLES[3] & Dennis Brown EWUBARE[4]

[1,2,4]Department of Economics, Faculty of Social Sciences, Rivers State University, Nkpolu-Orowurokwo, Port Harcourt, Rivers State, Nigeria

[3]Department of Economics, Faculty of Social Sciences, University of Port Harcourt, Nigeria

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***Corresponding author:** Victor AKIDI

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Abstract **Conference Article**

Being faced with the challenge of maintaining real economic growth, successive Nigerian governments have over time employed various economic management policies to drive the economy from the less desirable to more desirable real growth performance experience. Predicated on this prelude, this study empirically examined how macroeconomic policies (monetary policy tools of broad money supply and real interest rate, fiscal policy tools of capital expenditure and tax revenue, and trade policy measures of trade openness and official exchange rate) impacted on Nigeria's economic growth from 1985 to 2023. Applying the Autoregressive Distributed Lag (ARDL) measurement procedure on the yearly secondary series of the variables gathered from the statistical bulletin of the nation's Central Bank, the outcome indicated that broad money supply, capital expenditure and trade openness exerted short and long runs positively significant influence on the economy's real growth experience. Tax revenue in its one-year lagged form appeared to have contributed positively and significantly to short-run real growth rate but only positively insignificant in the long-run. However, lending rate appeared significantly negative on the explained variable while official exchange rate negatively and insignificantly influenced the regressand over both terms. Relying on the empirical estimates, it is concluded that; the selected macroeconomic policies' measures made encouraging and inverse contributions to Nigeria's real economic growth experience. Thus, it is suggested that monetary policy mix to ensure stable and production-linked broad money growth accompanied by market friendly lending rate; expansionary capital expenditure over recurrent spending to create enablers for private investment, aimed at broadening the tax base, as well as greater openness supported by stable and market-reflective official exchange rate should be pursued by the monetary, fiscal and trade policies' authorities to improvement the country's real GDP growth.

Keywords: Monetary Policy, Fiscal Policy, Trade Policy, Economic Growth, Nigeria, ARDL.

1.0 Introduction

One of the central aims of economic management is the pursuit of key macroeconomic objectives. Achieving full employment, stable consumer prices, high and sustainable economic growth, and external balance has long remained a priority for both developed and developing economies, particularly because these fundamentals are highly vulnerable to socio-political and economic uncertainties. The realization of these goals is not automatic; it requires deliberate policy direction and informed decision-making to guide the economy toward desired outcomes (Olawunmi & Ayinla, 2017).

Macroeconomic policies refer to the instruments deployed by governments, ministries, and public institutions to manage national economic activity in pursuit of sustainable growth. Economic growth; typically assessed through increases in gross domestic product (GDP), is a major indicator of national prosperity, influencing employment levels, living standards, and overall societal welfare. Fiscal, monetary, trade, and structural policy measures collectively shape economic conditions by stabilizing cyclical fluctuations, promoting investment, and driving productivity. Their positive effects have been demonstrated across countries at different development stages, where sound policy interventions have eased recessions, controlled inflation, and fostered long-term expansion. However, their effectiveness depends heavily on policy design, implementation quality, and the broader institutional and economic environment.

Over the years, Nigeria's Central Bank has employed various monetary policy measures to improve the performance of the financial system and pursue multiple, often conflicting macroeconomic objectives that can trigger economic imbalances (Anowor & Okorie, 2016). Uduakobong and Blessing (2017) contend that sound monetary management can stabilize economic conditions in ways that support growth. Yet, the extent of this stabilizing effect is constrained by competing policy goals, the transmission effectiveness of interest rate or money supply adjustments, and persistent uncertainties confronting decision-makers. Price stability remains a critical channel through which monetary policy influences long-term growth, since rising prices are largely attributed to excessive money creation. For this reason, central banks rely on a mix of tools to control money supply and keep inflation within desired ranges. Theoretical and empirical evidence alike indicate that low and stable prices help anchor expectations and strengthen the prospects for sustainable growth. Beyond interest rates, monetary policy also shapes credit conditions by influencing banks' lending behaviour, guiding risk decisions, and affecting credit availability. These signals shape how households and firms perceive future inflation and growth prospects, influencing consumption, investment, asset valuations, exchange rates, and overall spending patterns (Adigwe, Echekoba & Justus, 2015).

Fiscal policy, on the other hand, allows governments to influence economic activities directly through spending and taxation. Ewubare and Bidemi (2015) note that any deliberate change in expenditure, taxation, or both constitutes fiscal policy, which is considered expansionary when spending increases or taxes are reduced, and contractionary when spending falls or taxes rise. Well designed, expansionary fiscal policy can stimulate growth by boosting aggregate demand and generate employment. For example, public infrastructure projects create immediate jobs while enhancing long-term efficiency and reducing business costs (Ighodaro & Ajayi-Ojo, 2019). Tax incentives also encourage private investment and consumption. However, such gains depend on prudent debt management. While deficit financing can spur short-term growth, excessive public debt may raise interest rates, crowd out private investment, and hinder future expansion. Consequently, the growth-enhancing potential of fiscal policy depends on achieving a balance between short-term stimulus and long-term fiscal sustainability (Odo, Igberi & Anoke, 2016).

No modern economy functions in isolation, which underscores the importance of trade policy in managing international economic activities. Since the 1980s, many Sub-Saharan African countries have implemented sweeping trade reforms, easing import restrictions, simplifying

foreign-exchange systems, and reducing tariffs as part of broader measures for economic liberalization. The theoretical foundation is clear: greater openness facilitates growth. Access to imported capital goods, advanced technologies, and broader markets allows domestic firms to adopt better production methods, scale output, and enhance productivity. These benefits; including cost competition, knowledge spillovers, and expanded demand reinforce one another, translating trade liberalization into sustained increases in national income. Ilemona and Adejoh (2021) further argue that trade policy boosts domestic manufacturing by improving access to imported inputs and technology, reducing logistical bottlenecks, and enhancing competitiveness, thereby contributing to economic progress and development.

Despite its potential, Nigeria, one of Africa's largest economies has struggled to achieve sustained economic growth despite deploying various macroeconomic policy tools. Although endowed with abundant natural resources, a large labour force, and a vibrant private sector, the economy has experienced inconsistent performance, including recessions in 2016 and 2020. Accordingly, the effectiveness of monetary, fiscal, and trade policies in driving economic growth remains an issue of intense debate.

In monetary policy, Nigeria has faced challenges in balancing inflation control with growth promotion. The inflation-targeting framework adopted in 2006 has not succeeded in securing stable prices, with inflation averaging 12.4% between 2015 and 2023—well above the single-digit target (Central Bank of Nigeria, 2023). High interest rates, used to contain inflation, have restricted credit to the real sector, especially SMEs, which are essential for job creation and diversification. Additionally, the multiple exchange-rate system maintained until mid-2023 caused severe distortions, discouraged foreign investment, and created persistent foreign-exchange shortages that hindered production and growth.

Fiscal policy implementation has been undermined by institutional weaknesses and overreliance on volatile oil revenues. Although government expenditure increased from 12.3% of GDP in 2005 to 18.7% in 2022, its growth impact has remained modest due to low fiscal multipliers, estimated at 0.3 - 0.5 compared to 0.7 - 1.2 in peer emerging economies (Oyedele, 2021). Misallocation of resources is evident in the dominance of recurrent expenditures; especially wages and fuel subsidies, which absorbed 4.5% of GDP annually before partial removal in 2023. While capital spending could stimulate growth, execution rates are poor, with an average of only 40% of capital budgets implemented. Nigeria's low tax-to-GDP ratio of 6% further limits the fiscal space for productive investments (World Bank, 2023).

Trade policies have similarly failed to deliver structural transformation. Despite efforts to boost non-oil exports, crude oil still accounts for over 80% of export earnings and 50% of government revenue. Import restrictions and foreign-exchange controls aimed at protecting local industries have instead spurred smuggling and reduced competitiveness. As a result, manufacturing has stagnated at roughly 9% of GDP since 2015, reflecting the limited effectiveness of trade policy in driving overall growth.

Given these challenges, it becomes imperative to examine the influence of macroeconomic policies on economic growth in Nigeria. Accordingly, this study specifically aims to analytically investigate how broad money supply, lending rate, capital expenditure, tax revenue, trade openness, and the official exchange rate affect the real economic growth rate in Nigeria.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Monetarist Theory

The circulating amount of money is the primary factor that determines the price level or value of money, according to the monetarists, hence any change in money liquidity will cause a direct and proportionate change in the price level (Friedman, 1997). The quantity of money (QTM) is traceable to Irving Fisher's famous equation of exchange;

$$MV = PQ \quad (2.1)$$

where P is the overall level of price in the economy, M is the amount of money in circulation, V is the velocity of money circulation, and Q is the number of transactions that occur within the specified time period. By changing Q to Y (the total quantity of products and services traded for cash), the equation of exchange is transformed into;

$$MV = PY \quad (2.2)$$

The variable Y being introduced neatly links the monetary and real aspects of the economy, giving a single picture that charts spending and production at once. In this setup, P, V, and Y are not determined outside the model but within. Money, symbolized by M, remains the one that the central bank sets deliberately. Monetarists have long argued that a change in M first alters prices and then, through second-round effects, the amount of goods and services produced. Because of that, shifts in the money stock hit the value of sales straight away while the real economic side comes along later, if it does at all. The whole framework therefore highlights what supply looks like over time, not just how demand jumps around from week to week (Friedman, 1997). Thus, faster rise in money supply than production of goods and services basically leads to price increase, eroding purchasing power, investment downturn and slow growth (Jinghan, 2002).

Keynesian Fiscal Theory of Output and Income

Keynes (1883-1946), John Maynard Keynes opined a theory that firmly placed the state at the center of economic management. He argued that, when unemployment lingers or economies stagnate, the government must step in by adjusting taxes downward and boosting public spending in order to turn output, growth, and jobs around. To lift activity, policymakers can either raise budget outlays, lower tax rates, or combine the two tools, which together form the fiscal policy stance. Keynesian thinking holds that by spending, consumers, firms, and officials choose to expand outlays; this spurs production, opens work opportunities, and sets a chain of fresh incomes in motion. Total spending, or aggregate demand, then stimulates business to increase investments and supply more goods and services; thus, further expand total demand and output grows with it. Changes in public purchases feed directly into earnings, thanks to the multiplier, meaning every dollar spent reverberates through households and firms several times. Consequently, government outlays emerge as a vital pillar of aggregate demand and the recovery playbook.

Higher taxation, whether through increased rates or fixed levies, dampens overall economic activity (Nyong, 2001). This observation supports Keynes' argument that persistent unemployment and prolonged recessions often stem from government's failure to steer the economy with sound policy (Iyoha, 2003). In response, Keynes urges a proactive fiscal role in which the state adjusts spending and taxation to stabilize output and create jobs (Ogar, Arikpo, & Suleiman, 2019). Such policy encompasses deliberate decisions to raise or lower expenditures and tax revenues in order to guide growth, employment, and inflation along desirable paths (Ekpo, 2010). For Keynes, effective fiscal intervention is necessary whenever private demand falters (Ogar, Arikpo, & Suleiman, 2019).

Diamond Model of National Advantage

Postulated by Michael Porter in his book in 1990, the Diamond Model provides a framework for understanding the competitive advantages of nations in international markets. The model outlines four interrelated factors that contribute to a nation's competitiveness and growth. The first is the factor conditions, stating that with resources, as skilled labour, natural resources, modern technology and quality infrastructure a nation's growth improves. The demand condition is that the nature and size of domestic demand for products and services can drive innovation and output growth. More so, the related and supporting industries condition holds that presence of competitive supplier industries and related sectors can enhance productivity and innovation for economic growth. The last condition which is firm strategy, structure, and

rivalry entail that, the competitive environment businesses operate if fair, will spur innovation and real growth (Osakwe, 2022). However, issues such as inadequate infrastructure and limited access to financing can hinder growth. International trade policies that enhance infrastructure investment and access to capital can significantly improve these factor conditions. Also, demand for goods and services in both domestic and international markets influence production and growth. Thus, trade policies that encourage consumption of locally produced goods can stimulate demand and encourage investment and hence improve growth.

2.2 Empirical Review

In examining the effects of macroeconomic policy and institutional quality on Nigeria's economic growth over the period 1981–2021, Ofem, Ubi, Ekpobodo, and Okoi (2024) employed monetary and fiscal policy measures, using contract intention money as a proxy for institutional quality and real gross domestic product (GDP) as a measure of economic growth. Their Ordinary Least Squares (OLS) estimation revealed that monetary policy had a positive but statistically insignificant impact on economic growth, whereas fiscal policy and institutional quality exerted positive and significant effects. Similarly, Madaki (2024), using the Autoregressive Distributed Lag (ARDL) model, found that the foreign exchange rate significantly influenced growth, while interest rate, inflation rate, and foreign direct investment (FDI) were statistically insignificant. Ilugbusi (2023) studied Nigerian macroeconomic policy and growth from 1980 to 2014 using OLS, concluding that gross fixed capital formation from FDI and total government spending were the main drivers of economic development. In a related study covering 1980–2018, Ayana (2021) applied the Panel Vector Autoregression (PVAR) technique and reported that tax revenue and broad money supply positively affected growth, while government expenditure had a contractionary effect and the real exchange rate showed no significant impact.

Madueke, Ozoh, Okeke, and Anisiobi (2024) found that money supply, government expenditure, government revenue, inflation, and exchange rate exerted insignificant positive effects on Nigeria's growth; however, the monetary policy rate was significant, and fiscal–monetary policy coordination had a substantial impact. Their study employed multiple regression analysis on data spanning 1985–2021. Similarly, Oseni and Oyelade (2023) demonstrated that gross capital formation, employment, money supply, and lending rates influence growth, though higher lending rates hinder economic progress. Onyinyechi (2023) applied error-correction and Granger-causality tests for 1981–2021, finding that monetary policy rate, reserve ratio, treasury-bill yield, and fiscal deficit had minimal or negative effects on per-capita growth; government expenditure positively impacted growth, while tax revenue had an insignificant positive effect, and no causality with economic growth was observed. Udo (2014) similarly reported that monetary and fiscal policies had negligible effects on aggregate investment and growth, with monetary policy failing to stimulate savings and investment.

Adegboyo, Keji, and Fasina (2021) examined fiscal, monetary, and trade policies over 1985–2020 using the ARDL method. They found that government spending promoted growth, government revenue did not, high interest rates tended to boost growth, while excessive money supply slowed it, and trade policies negatively affected the economy in both the short and long run. Okoh (2020) reviewed historical policy plans; SAP (1986), NEEDS (2004), the 2011 Transformation Agenda, and the 2016 ERGP using content analysis, finding only brief episodes of growth and modest development. A focused examination of agriculture revealed that GDP, lending to farmers, and exchange rates positively influenced output, while money supply hindered growth; interest rates had limited effect, and income responded as expected (Aroriode & Ogunbadejo, 2014).

Using ARDL methods, Ogundipe and Akinbobola (2020) and Havi and Enu (2014) decomposed monetary policy into money supply, interest rate, and exchange rate components. In the short run, only money supply had a clear positive effect on growth, while in the long run, both money supply and exchange rate

significantly supported growth; higher interest rates consistently dampened growth. Umar and Murtala (2020), examining Nigeria between 1981 and 2017 with ARDL, found that government spending contributed more to growth than tax revenue. Ighodaro and Ajayi-Ojo (2019), employing a three-stage least squares approach, showed that increased industrial output drives growth and a stable exchange rate supports manufacturing sector expansion. Salis and Saibu (2019), analyzing 1999–2016, found that while individual fiscal or monetary tools raised real output, their combined application paradoxically reduced real GDP. Yakubu, Barfour, and Shehu (2013) further emphasized the importance of coordinated stabilization policies for achieving economic progress.

2.3 Empirical Gap

This study reviewed related empirical literatures on the effects of macroeconomic policies on economic growth. The excursion revealed that numerous studies exist in this area in Nigeria. However, scant studies (Adegboyo, Keji & Fasina, 2021) have considered macroeconomic policies by additionally capturing trade policy using two instruments of each policy. This suggests existence of research gap which necessitates the current study as a departure from and attempt to bridging such gap. Therefore, this study is conducted by disaggregating macroeconomic policies into monetary, fiscal and trade policies; employing broad money supply, lending rate, capital expenditure, tax revenue, official exchange rate, trade openness as respective policy proxies.

3.0 Methodology

3.1 Model Specification

The research design adopted for the current study is the *ex-post-facto* research design. This is a strategy based on fact or already established event which employs the investigation and basic logic of enquiry like the experimental method. In corroboration with the purpose and design of this study, annual time series data for the variables ranging from 1990 to 2023 were gathered from the Central Bank of Nigeria (CBN) statistical bulletin, 2023 edition.

The multiple regression economic model is used in this investigation. It articulates how the variables that will be investigated in this study relate to one another. With the necessary adjustments, the empirical model of this study is based on that of Ilugbusi (2023), "who investigated the effect of macroeconomic policy on economic growth in Nigeria. The paper outlines a functional link between macroeconomic policy measures and economic growth in Nigeria based on the aforementioned":

$$REG = f(BMS, LDR, CAE, TXR, OER, TOP) \quad (3.1)$$

The functional relationship in Equation (3.1) is stated in mathematical form as follows:

$$REG = \delta_0 + \delta_1 BMS + \delta_2 LDR + \delta_3 CAE + \delta_4 TXR + \delta_5 OER + \delta_6 TOP \quad (3.2)$$

The mathematical model (3.2) is stated in econometric form to enhance its estimation as follows:

$$REG = \delta_0 + \delta_1 BMS + \delta_2 LDR + \delta_3 CAE + \delta_4 TXR + \delta_5 OER + \delta_6 TOP + u_t \quad (3.3)$$

In the current study, the regressand is economic growth, proxied as real economic growth rate (*REG*). Here, it is expressed as the yearly percentage growth in the value of all Nigerian-produced products and services adjusted for inflation. The overall quantity of monetary infusions into an economy, including narrow money, savings, time, and foreign currency deposits, is represented by the broad money supply (BMS), a monetary policy instrument. Real growth keeping up with money supply is expected to be impacted positively. Lending rate (*LDR*) is the price for accessing loan from commercial banks. It is a tool of monetary policy with expected inverse influence on investment decisions and real growth. Capital expenditure (*CAE*) is a fiscal policy instrument described as government payments for long-term physical assets like infrastructure, which by expectation are to boost productivity and stimulate economic growth. Tax revenue (*TXR*) is the government's mobilized aggregate revenue from various taxes on corporate profits, personal incomes, Value Added, and customs duties. It finances public services and infrastructure. A low tax-to-GDP

ratio (like Nigeria's 6%) limits fiscal capacity for growth-enhancing investments. Official exchange rate (OER) is utilized as the central bank's approved value of the domestic currency against foreign currencies (e.g., Naira to USD). Adopted as trade policy measure, its effect on real growth of the economy is expected to be negative. Trade openness (*TOP*) as a trade policy strategy measures a country's integration into global markets, accounted as the ratio of total trade (exports + imports) to Gross Domestic Product. Higher openness indicates greater exposure to international trade, with expected real growth *ceteris paribus*. δ_0 is regression intercept, δ_1 - δ_6 are parameter of the regressors and μ_t is the error term.

3.2 Techniques of Analyses

To empirically examine the study's objectives, the summary statistics for ascertaining the normality properties of the variables is conducted relying on the Jarque-Bera statistics. Following this in principle is the pre-estimation unit root test of the individual variables. It is employed to obtain the orders of integration. The Augmented Dickey-Fuller (ADF) (Dickey & Fuller, 1981) test at 5 percent significant benchmark is applied. A general form of the ADF model for unit root estimation is specified as follows:

$$\Delta Y_t = \lambda_0 + \lambda_1 + \delta Y_{t-1} + \sum_{i=1}^{n} \lambda_1 \Delta Y_{t-i} + \mu_t \quad (3.4)$$

Where,"Y is the time series variables under consideration, t is Linear time trend, Δ is First difference operator, λ_0 is Constant term, n is Optimum number of lags on the dependent variables and μ_t is the stochastic error term."

In addition, to ascertain existence of long-run effect in this study, the ARDL Bounds cointegration pre diagnostic test is conducted (Pesaran, Shin and Smith, 2001). It is employed when *I(0)* and *I(1)* mixed order of integrations are establish in unit root test for the variables. This method has three decision options which are existence of cointegrating, no cointegrating and inconclusive relationships, when the calculated F-statistic value is respectively greater than the upper bound *I(1)*, below the lower bound *I(0)* and between the lower *I(0)* and the upper *I(1)* bounds. Presented below is the general form of the ARDL Bounds cointegration model:

$$Y_t = \Delta_t Y_{t-1} + \ldots \Delta_p Y_{t-p} + \delta R_t + U_t \quad (3.5)$$

Where "Y_t is the time series variables under consideration in time t, Y_{t-1} and Y_{t-p} is cointegrating equations estimates, Δ is First difference operator and U_t is stochastic error term."

Based on the ARDL bounds cointegration test result, the ARDL long-run and the short-run dynamic analyses are conducted to ascertain the theoretical and significance effects of the independent variables on the regressand. Pursuant to that, the ARDL model capturing the error correction term is constructed below:

$$\begin{aligned}\Delta ln(REG_t) = {} & \delta_1 + \delta_{1i}\Delta ln(REG_{t-1}) + \delta_{2i}\Delta ln(BMS_{t-1}) + \delta_{3i}\Delta LDR_{t-1} + \delta_{4i}\Delta ln(CAE_{t-1}) \\ & + \delta_{5i}\Delta ln(TXR_{t-1}) + \delta_{6i}\Delta ln(OER_{t-1}) + \delta_{7i}\Delta ln(TOP_{t-1}) + \sum_{t=1}^{q} \beta_{1i}\Delta ln(REG_{t-1}) \\ & + \sum_{t=1}^{q} \beta_{2i}\Delta ln(BMS_{t-1}) + \sum_{t=1}^{q} \beta_{3i}\Delta LDR_{t-1} + \sum_{t=1}^{q} \beta_{4i}\Delta ln(CAE_{t-1}) \\ & + \sum_{t=1}^{q} \beta_{5i}\Delta ln(TXR_{t-1}) + \sum_{t=1}^{q} \beta_{6i}\Delta ln(OER_{t-1}) + \sum_{t=1}^{q} \beta_{7i}\Delta ln(TOP_{t-1}) + \Omega ECT_{t-1} \\ & + U_{1i} \end{aligned} \quad (3.6)$$

Where Δ defines difference operator and indicates the optimum lag; δ_1 to δ_7 are long-run coefficients β_1 to β_7 are short-run dynamic coefficients; U_{1i} is stochastic term. Further, the ECT_{t-1} is the error correction term given in the short-term analysis, and Ω is the error correction term's coefficient, indicating the yearly rate at which the level of adjustment from its prior disequilibrium condition is restored to long-term stability. It is anticipated that this ECT coefficient indication would be large and negative. Nevertheless, when all variables are first difference stationary in unit root analysis, this approach is constrained.

In addition, post diagnoses like Ramsey RESET test is conducted on the model for correctness of the specified model, the Jarque-Bera normality statistic test for variables' data joint normality, the serial correlation test to know whether the residuals are serially independent, the heteroscedasticity test to check for homoscedasticity and the CUSUM stability test to test whether the estimated regression result is stable.

4.0 Data Analyses and Discussion of Findings

This section reports the empirical analyses of the effects of macroeconomic policies on growth.

4.1 Descriptive Analysis

Table 4.1 below displayed the descriptive statistics analysis outcomes of the variables (real economic growth rate, broad money supply, lending rate, capital expenditure, tax revenue, official exchange rate, and trade openness) over the sampled 1985 to 2023 period.

Table 4.1: Descriptive Statistics

	REG	BMS	LDR	CAE	TXR	OER	TOP
Mean	32.19753	11413.87	18.19128	774.8904	4791.574	141.1169	30.96156
Median	28.00000	2131.820	17.59000	498.0276	3920.500	125.8300	32.28800
Maximum	172.0965	63512.40	29.80000	4486.206	19251.10	645.1900	55.02100
Minimum	-27.45263	22.30000	9.250000	5.464700	12.60000	0.890000	7.521000
Std. Dev.	40.20057	15939.55	4.447919	957.8913	4825.163	143.6582	10.19039
Skewness	1.703517	1.523376	0.562854	2.097190	0.846164	1.475941	-0.127664
Kurtosis	6.993776	4.659653	3.645907	7.710073	3.189848	5.335976	2.877124
Jarque-Bera	44.78196	19.56037	2.737173	64.63862	4.712525	23.02689	0.130472
Probability	0.000000	0.000057	0.254466	0.000000	0.094774	0.000010	0.936846
Sum	1255.704	445140.9	709.4600	30220.72	186871.4	5503.560	1207.501
Sum Sq. Dev.	61411.27	9.65E+09	751.7914	34867119	8.85E+08	784231.5	3946.073
Observations	**39**	**39**	**39**	**39**	**39**	**39**	**39**

Source: Authors' Computation (2025).

As presented above, during the sampled period, the real economic growth rate (REG) recorded an average of 32.197%, with a maximum of 172.096% and a minimum of -27.453%. Its standard deviation of 40.201% suggests that REG exhibited relatively low dispersion around the mean over the period. Broad money supply (BMS) had a mean value of N11,413.87 billion, a maximum of N63,512.4 billion, and a minimum of N22.3 billion. The standard deviation of N15,939.55 billion indicates high variability around its mean. The lending rate (LDR) averaged 18.19%, ranging from a minimum of 9.25% to a maximum of 29.8%,

with a standard deviation of 9.25%, reflecting considerable dispersion from the mean. Capital expenditure (CAE) recorded a mean of N774.89 billion, with a maximum of N4,486.206 billion and a minimum of N5.46 billion, and a standard deviation of N957.8913 billion, indicating high variation. Tax revenue (TXR) had an average of N4,791.57 billion, with a maximum of N19,251.1 billion and a minimum of N12.6 billion. Its standard deviation of N4,825.16 billion suggests moderate dispersion. The official exchange rate (OER) averaged 141.12%, with a maximum of 645.19% and a minimum of 0.89%, and a standard deviation of 143.65%, implying moderate variation around the mean. Finally, trade openness (TOP) had an average of 30.96%, a maximum of 55.02%, and a minimum of 7.52%, with a standard deviation of 10.19%, indicating relatively low dispersion over the period.

4.2 Unit Root Estimates

As a prerequisite, the individual variable's level of integration is estimated here. The nature of the output supports decision making as to the applicable technique for cointegration assessment. Thus, Table 4.2 below summarized the Augmented Dickey-Fuller (ADF)'s unit root estimation outputs.

Table 4.2: ADF's Estimates' Summary

	At Levels		At 1st Difference		Stationarity	
Variables	ADF	Mackinnon Critical Value @ 5%	ADF	Mackinnon Critical Value @ 5%	Decisions	Orders
LOG(REG)	-5.052263	-2.941145	-	-	At Level	I(0)
LOG(BMS)	-2.011044	-2.941145	-4.269631	-2.943427	At First Diff.	I(1)
LOG(LDR)	-4.093605	-2.941145	-	-	At Level	I(0)
LOG(CAE)	-1.700767	-2.941145	-7.074634	-2.943427	At First Diff.	I(1)
LOG(TXR)	-2.226986	-2.941145	-6.244661	-2.943427	At First Diff.	I(1)
LOG(OER)	-3.171743	-2.941145	-	-	At Level	I(0)
LOG(TOP)	-3.417477	-2.941145	-	-	At Level	I(0)

Source: Authors' Computation (2025).

The results' summary showed that real economic growth rate (REG), lending rate (LDR), official exchange rate (OER) and trade openness (TOP) appeared clearly stability at levels. This is substantiated as their ADF's values are individually greater than the associated

Mackinnon critical values at the conventional 5% level. This suggests that these variables are stationary at order zero [i.e., I(0)]. On the flip side, broad money supply (BMS), capital expenditure (CAE), tax revenue (TXR) attained stability after first differencing, as evident by their test statistic values being greater than the relevant 5% Mackinnon critical values. It is clear from this that these sets are integrated at order one, or I(1). In order to estimate the long-term correlations between the variables as well as the error correction model, the ARDL procedure is required due to the evident mixed stationarity of orders zero and one.

4.3 The Optimum Lag Selection Estimate

The optimum lag length result as ascertained from the selection principle is displayed in Table 4.3 below:

Table 4.3: Optimum Lag Estimate

Lag	LogL	NNE	FPE	AIC	SC	HQ
0	-1560.598	NA	1.57e+29	87.08880	87.39671	87.19627
1	-1395.469	256.8681*	2.61e+26*	80.63716	83.10041*	81.49690*
2	-1349.071	54.13139	4.17e+26	80.78170	85.40030	82.39371
3	-1275.378	57.31614	2.92e+26	79.40991*	86.18385	81.77420

Source: Authors' Computation (2025).

As the above table revealed evidently, lag three is the ideal lag length established relying on the Akaike Info Criterion (AIC). It is therefore believed that this optimal lag length three when used in further required analyses will produce a significant cointegration result.

4.4 ARDL's Bounds Estimates

Table 4.4: ARDL's Bounds Cointegration Estimates

Significance	I(0) Bound	I(1) Bound
10%	1.99	2.94
5%	2.27	3.28
2.5%	2.55	3.61
1%	2.88	3.99
Computed F-statistic: F_{REG}(BMS LDR CAE, TXR, OER, TOP) = 6.190984		
Unrestricted intercept and no trend for ***K = 6***.		

Source: Authors' Computation (2025).

In Table 4.4, the ARDL's Bounds cointegration test is summarized. The cointegration between Nigeria's macroeconomic policies and economic growth indicators is evident, underscoring the importance and pertinence of the long-run notion. Evidently, the calculated F-statistic value, FREG(BMS LDR CAE, TXR, OER, TOP), of 6.190984 is higher than the upper bound critical values, which are 2.94, 3.28, 3.61, and 3.99 at the respective 10%, 5%, 2.5%, and 1% significance levels. Accordingly, the expected null hypothesis of no cointegration is disproved in light of the variables' cointegration. For the series to be confirmed to have long-term

dynamics, the Autoregressive Distributed Lag (ARDL) model has to be used to estimate the degree of statistical and economic association between the dependent and independent variables.

4.5 The ARDL's Long-and Short Runs' Estimates

The both estimation outcomes of macroeconomic policies indicators on economic growth using ARDL method are scheduled in Table 4.5.

Table 4.5: Estimated ARDL's Long and Short Runs' Results

Regressand = REG				
Long-Run's Results				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(BMS)	24.34868	10.42350	2.335940	0.0313
LOG(LDR)	-48.55911	17.48418	-2.777318	0.0124
LOG(CAE)	0.448729	0.159384	2.815403	0.0098
LOG(TXR)	4.534936	12.24424	0.370373	0.7154
LOG(OER)	-18.96306	11.80674	-1.606121	0.1256
LOG(TOP)	56.00676	19.03998	2.941534	0.0073
C	314.5930	94.94555	3.313405	0.0039
Short-Run Results				
D(REG(-1))	0.931422	0.183510	5.075585	0.0001
DLOG(BMS)	219.7525	45.15309	4.866831	0.0001
DLOG(BMS(-1))	41.81719	42.10588	0.993144	0.3338
DLOG(LDR)	-108.4451	44.50870	-2.436492	0.0230
DLOG(CAE)	50.50236	22.04262	2.291124	0.0314
DLOG(TXR)	-28.36292	30.53525	-0.928858	0.3653
DLOG(TXR(-1))	66.11632	20.21996	3.269855	0.0043
DLOG(OER)	-37.34656	21.93951	-1.702251	0.1059
DLOG(TOP)	90.83688	27.92204	3.253233	0.0044
DLOG(TOP(-1))	-104.3309	23.32174	-4.473548	0.0003
DLOG(TOP(-2))	73.96753	32.54314	2.272907	0.0355
CointEq(-1)*	-0.982923	0.154418	-6.365344	0.0000
R^2 = 0.812688; Adj. R^2 = 0.737763; DW Stat. = 1.867655				

Source: Authors' Computation (2025).

Broad Money Supply (BMS) and Real Economic Growth Rate (REG)

The long-run estimates revealed that broad money supply exerted positively significant impact on Nigeria's real economic growth rate. This is evident by the positive slope value (24.34868) and its 0.0313 p-value which is below 0.05. This is suggestive that money supply easing by a billion Naira will lead to ₦24.34868 billion long-run increase in real economic growth rate. Conforming, the short-run estimates revealed that expanded money supply had positively significant influence on the explained variable. This is justified by its 219.7525 coefficient value with p-value (0.0001) that is less than 0.05, implying that expansionary

monetary policy of a billion Naira will lead to ₦219.7525 short-run real economic growth rate boost.

Lending Rate (LDR) and Real Economic Growth Rate (REG)

The lending rate charged by Nigerian banks had a significant negative effect on the economy's real growth rate in the long run. This is evident by its coefficient of -48.55911 and a p-value of 0.0124, which is below the 0.05 significance threshold. The result implies that a percent increase in the lending rate is associated with approximately a 48.56% decrease in the real economic growth rate. Similarly, in the short run, the lending rate also exhibited an inversely significant impact, as indicated by its slope of -108.4451 and a p-value of 0.0230, suggesting that a reduction in the lending rate would lead to about a 108.45% short-run decrease in real economic growth.

Capital Expenditure (CAE) and Real Economic Growth Rate (REG)

Capital expenditure, as a fiscal policy instrument, exerted a significant positive influence on real economic growth in the long run. This is demonstrated by a coefficient of 0.448729 and a p-value of 0.0098. The result suggests that one-billion Naira increase in public capital expenditure would boost the economy's long-run real output by approximately N0.45 billion. In the short run, capital expenditure also significantly stimulated growth, with a coefficient of 50.50236 and a p-value of 0.0314, indicating that one-billion Naira increase in capital outlay would lead to roughly N50.50 billion growth in real output.

Tax Revenue (TXR) and Real Economic Growth Rate (REG)

Tax revenue, as a fiscal tool, had a positive but statistically insignificant long-run effect on real economic growth, as indicated by a coefficient of 4.534936 and a p-value of 0.7154. This implies that a billion Naira increase in tax revenue would lead to about N4.53 billion long-run growth. Conversely, in the short run, tax revenue had a significant positive impact, with a lagged coefficient of 66.11632 and a p-value of 0.0043, suggesting that a billion Naira increase in tax revenue in the previous year would raise real economic growth by approximately N66.12 billion in the current period.

Official Exchange Rate (OER) and Real Economic Growth Rate (REG)

The official exchange rate showed a non-significant negative impact on real economic growth in both the long and short run. In the long run, the coefficient of -18.96306 with a p-value of 0.1256 indicates that a one-percent devaluation of the exchange rate would reduce long-run real economic growth by roughly N18.96 billion. In the short run, a similar effect was observed, with a coefficient of -37.34656 and a p-value of 0.1059, implying that a one-percent devaluation would lower short-run real growth by approximately N37.35 billion.

Trade Openness (TOP) and Real Economic Growth Rate (REG)

Trade openness had a significant positive impact on Nigeria's real economic growth in both the long and short run. In the long run, the coefficient of 56.00676 with a p-value of 0.0073 suggests that one-percent increase in trade openness would enhance real economic growth by about N56.01 billion. In the short run, the effect was even more pronounced, with a coefficient of 90.83688 and a p-value of 0.0044, indicating that a percentage increase in trade openness would raise real growth by approximately N90.84 billion.

Error Correction Term (CointEq(-1))

The short-run results align with the long-run findings, as indicated by the error correction term. The coefficient of -0.982923 with a p-value of 0.0000 is highly significant and correctly signed, demonstrating a rapid adjustment to long-run equilibrium after a shock. Approximately 98% of deviations caused by past

shocks are expected to be corrected within the current period.

Adjusted R-Squared (Adj. R^2)

The model exhibits a good fit, with an adjusted R-squared of 0.737763. This indicates that about 74% of the variation in real economic growth is explained by the independent variables (broad money supply, lending rate, capital expenditure, tax revenue, official exchange rate, and trade openness), while the remaining 26% is due to factors not captured in the model.

Durbin-Watson Statistic

Finally, the Durbin-Watson statistic of 1.867655, being close to 2, indicates that there is no issue of autocorrelation in the model.

4.6 Post-Diagnostic Estimates

The post-diagnostic tests' outcomes as tabulated in Table 4.6 reported below. The Jarque Bera (Normality) test result established that the probability value of 0.7482 is above the conventional 0.05 benchmark. This outcome suggests that the variables estimated together in the model are normally distributed, thereby validating the null proposition of Normal distribution. Also, the null premise of no serial correlation is acknowledged with a Breusch-Godfrey Serial Correlation LM probability test value of 0.8548 that is above 0.05, indicating the model is not fraught with serial correlation issue. Additionally, the 0.0836 probability test value of the Breusch-Pagan-Godfrey heteroskedasticity is of course above 0.05. Thus, its null supposition of homoscedasticity is valid inferring that the analyzed REG model is homoscedastic. This suggests that pertinent factors were not omitted. Finally, the model's functional form is accurate based on the Ramsey RESET as its 0.1341 probability estimate's value is higher than the 0.05 level of significance. Thus, enabling inference that the null assumption of correctly specified model is effective.

Table 4.6: Post-Diagnostic Estimates

Test	Null Hypothesis	Test Type	F-stat.	Prob.
Normality Test	**H_0:** Normal distribution exists	Jarque-Bera Test	0.568008	0.7482
Serial Correlation Test	**H_0:** Serial correlation does not exist	Breusch-Godfrey LM Test	0.158377	0.8548
Heteroscedasticity Test	**H_0:** Homoscedasticity exists	Breusch-Pagan-Godfrey	1.958287	0.0836
Functional Form Test	**H_0:** Model is stable	Ramsey RESET	1.555499	0.1341

Source: Authors' Computation (2025).

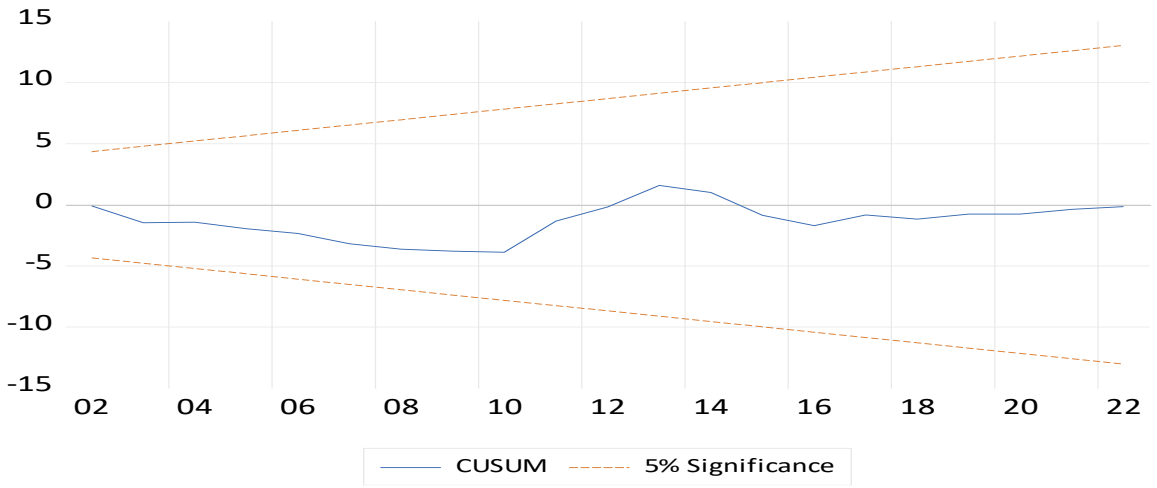

Figure 4.1: CUSUM's Stability graph

The above presented cumulative sum's graph in Figure 4.1 made clear that the centralized CUSUM plot did not stray outside the 5 percent critical bounds' lines, but rather remained within critical limits. This implies that the research variables' long-term coefficients are stable.

4.7 Discussion of findings

The study revealed that broad money supply, capital expenditure, and trade openness exerted positive and significant effects on Nigeria's real economic growth rate in both the short and long run. Tax revenue had a positively significant impact on real growth in the short run, while in the long run it maintained a positive but statistically insignificant effect. Conversely, the official exchange rate had a negative and non-significant influence on real growth in both periods, whereas the real lending rate had a significant negative impact on the explained variable in both the short and long run. These findings align with previous research. Ayana (2021) reported that while the real exchange rate had no significant effect on the growth indicator, tax revenue and broad money supply were positively influential. Similarly, Oseni and Oyelade (2023) found that the lending interest rate significantly affected economic growth, but with a negative impact. Adegboyo, Keji, and Fasina (2021) established that government spending boosted growth in Nigeria, a conclusion also supported by Umar and Murtala (2020), who found that government expenditure significantly influenced economic growth in both the short and long run.

5.0 Conclusion and Recommendations

This study empirically investigates the impact of macroeconomic policies on Nigeria's economic growth. The findings indicate that these policies exert a mix of positive and negative effects on the country's real economic growth performance. Based on these results, the following policy recommendations are proposed:

i. **Monetary Policy:** The Central Bank of Nigeria (CBN) should adopt a balanced monetary policy that ensures stable and sustainable growth of the broad money supply while maintaining lending rates at levels that facilitate credit access for productive sectors of the economy.

ii. **Fiscal Policy:** The government should prioritize capital expenditure over recurrent spending to enhance infrastructure development, improve logistics, and attract private investment; key drivers of long-term real GDP growth. Additionally, the tax revenue base should be expanded and administered more efficiently without overburdening businesses, through measures such as closing loopholes and digitizing tax collection systems.

iii. **Trade Policy:** Trade policy should foster real economic growth by encouraging greater trade openness while ensuring that the official exchange rate remains stable and reflective of market conditions.

References

Adegboyo, O. S., Keji, S. A., & Fasina, O. T. (2021). The impact of government policies on Nigeria economic growth (case of fiscal, monetary and trade policies). *Future Business Journal, 7*(1) 1-14.

Adigwe, P. K., Echekoba, F. N., & Justus, B. C. O. (2015). Monetary policy and macroeconomic stabilization in Nigeria: a critical evaluation. *IOSR Journal of Business and Management (IOSR-JBM), 17*(2), 110-119.

Anowor, O. F. & Okorie, G. C. (2016). A reassessment of the impact of monetary policy on economic growth: Study of Nigeria. *International Journal of Developing and Emerging Economies*, *4*(1), 82-90.

Aroriode, O. R. & Ogunbadejo, H. K. (2014). Impact of Macroeconomic Policy on Agricultural Growth in Nigeria. Journal of Agriculture and Veterinary Science (IOSR-JAVS), 7(11), 1-5.

Ayana, W. (2021). The impact of macroeconomic policy on economic growth in a panel of 35 sub-Saharan African economies from 1980 to 2018. *Science Open Preprints for Open Peer Review, 8:* 43-55.

Central Bank of Nigeria (CBN) (2023). Central Bank of Nigeria Annual Report 2016. Available from: www.cbn.gov.ng.

Central Bank of Nigeria (2013). *Instruments of monetary Policy*. CBN Educational Series.

Dickey, D. A., & Fuller, W. A. (1981). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, *74*(366), 427-431.

Ekpo, H. A. (2010). Nigeria and its budgeting expenditures dilemma. *Business Journal, 2*(1), 21-30.

Ewubare, D. B. & Bidemi, J. O. (2015). Fiscal policy measures and balance of payments in Nigeria. *Journal of Global Economics*, 3(4), 1-6.

Friedman, M. (1997). T*he role of monetary policy: American econometric Review*. New York: American Press.

Havi, K., & Enu, G. (2014). Monetary policy and economic growth in Nigeria. *Journal of Business, Management and Social Research, 4*(2), 88 – 101.

Ighodaro, C. A. & Ajayi-Ojo, V. O. (2019). Macroeconomic policies, industrialization and economic growth in Nigeria. *Tanzanian Economic Review, 9*(1), 1–14.

Ilemona, A., & Adejoh, M. O. (2021). Trade openness and industrial output growth in Nigeria. *Journal of Economics and Allied Research, 6*(2), 23-34.

Ilugbusi, S. B. (2023). Macroeconomic policy and economic growth in Nigeria. *Adekunle Ajasin University Journal of Financial & Social Issues Volume 3*(1), 177 – 190.

Iyoha, M. A. (2003). *An overview of Leading issues in the structure and development of Nigerian Economy since 1960*: In Iyoha, M.A. and C.O. Itsede (eds.), Nigeria Economy: Structure, Growth and Development, Benin City: *Mindex publishing.*

Jhingan, M. L. (2002). *Macroeconomic theory*. Vrinda Publication ltd. Pp 647-651.

Jhingan, M. L. (2002). *The economics of development and planning*. Vrinda Publications.

Keynes, J. M. (1934). *The general theory of employment, interest and money*. New York: Macmillan Publishers.

Madaki, L. J. (2024). Effect of macroeconomic variables on economic growth in Nigeria. *Journal Of Agripreneurship and Sustainable Development (JASD), 7*(2), 43 – 53.

Madueke, C. M. Ozoh, J. N., Okeke, C. T. & Anisiobi, C. A. (2024). Macroeconomic effect of monetary and fiscal policy coordination on economic growth in Nigeria. *Journal of Economics and Allied Research, 9*(1), 74-85.

Nyong, M. O. (2003). Predictability and volatility of stock return in three emerging markets: Nigeria, South Africa and Brazil. *Nigeria Journal of Economics and Development Matters*, 2(1), 12 -29.

Odo, S. I., Igberi, C. O., & Anoke, C. I. (2016). Public debt and public expenditure in Nigeria: A Causality Analysis. *Research Journal of Finance and Accounting*, 7(10), 27-38.

Ofem, L. U., Ubi, T., Ekpobodo, O. R. & Okoi, M. E. (2024). Macroeconomic policy, institutional quality and economic growth in Nigeria. *ADSU International Journal of Applied Economics, Finance & Management, 9*(1),446 – 461.

Ogar, A., Arikpo, O. F., & Suleiman, L. G. (2019). Fiscal and macroeconomic policies dynamics in Nigeria. *Global Journal of Social Sciences, 18*(2), 33-51.

Ogundipe, A. A., & Akinbobola, T. O. (2020). An appraisal of monetary policy on economic growth in Nigeria. *Asian Economic and Financial Review, 10*(7), 765-774.

Okoh, J. O. (2020). Restructuring macroeconomic policy for sustainable development in Nigeria. *UJAH, 21*(3), 274-294.

Olawunmi O. & Ayinla, T. (2017). Fiscal policy and Nigerian economic growth. *Journal of Research in National Development*, 5(2), 67-78.

Onyinyechi, N. (2023). Economic policies and the growth of the Nigerian economy: The role of monetary and fiscal policies. *British International Journal of Applied Economics, Finance and Accounting, 7*(1), 58 – 70.

Osakwe, P. (2022). *Export diversification and economic growth: Theory and evidence from Nigeria*. Springer.

Oseni, I. O. and Oyelade, A. O. (2023). The Effects of monetary policies on economic growth in Nigeria. *African Journal of Economic Review, 11*(3), 13 – 28.

Oyedele, O. (2021). Government expenditure and economic growth in Nigeria. *Journal of Economic and Financial Development, 2*(1), 14-21.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289–326.

Salis K.Y., & Saibu, M. O. (2019) *Macroeconomic effects of monetary and fiscal policies interactions on economic growth dynamics in Nigeria in leading issues in macroeconomic stabilization and financial development*: A festschrift in Honour of Professor Oluwatayo Fakiyesi Edited by R. O. S. Dauda, S. O. Akinleye & E. D. Balogun, Chapter 19 Pp 391-410.

Udo N. E (2014). The nexus of macroeconomic policy, investment and economic growth in Nigeria. *Journal of Economics and Finance (IOSR-JEF), 3*(4), 12-22.

Uduakobong, S. I., & Blessing, S. (2017). Monetary policy and economic growth in Nigeria: Evidence from Nigeria. *Advances in Social Sciences Research Journal, 4*(6), 41-59.

Umar, H., & Murtala, K. B. (2020). Fiscal policy and economic growth in Nigeria: An ARDL approach. *Global Business Review, 21*(4), 981-994.

World Bank (2023). Expenditure and growth 2023 report.

Yakubu, I. M., Barfour, K. A., Shehu, U. G. (2013). Effect of monetary-fiscal policies interaction on price and output growth in Nigeria. *CBN Journal of Applied Statistics*, *4*, 55-74.