EFFECTS OF MONETARY AND FISCAL POLICY ON ECONOMIC GROWTH IN NIGERIA: AN ANALYSIS

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ABSTRACT
Monetary and fiscal policy instruments administered by the CBN and Federal government, respectively, hold significant influence over crucial the Nigerian economy. The study examined the effects of monetary and fiscal policy on economic growth in Nigeria from 1986 to 2020. Stationarity tests were conducted using the Augmented Dickey Fuller test and the Phillips-perron test. As the variables showed mixed integration order, the ARDL Bounds Co-integration test checked for long-run relationships among the variables. The Auto Regressive Distributed Lag (ARDL) was employed to estimate the model. The findings revealed both short run and long relationship between monetary and fiscal policy variables on economic growth in Nigeria. Majorly, government revenue has a negative effect on economic growth while expenditure boosts the economy in the short and long run. External debt slows down the economy in the long run, usually due to debt financing. Interest rate was positively associated with economic growth, but money supply tends to hurt the economy. The study recommends that the CBN and the federal government should collaborate more closely and synchronize their policy objectives. Second, the Budget Office of the Federation (BOF) and the Ministry of Finance should ensure that more funds are directed towards capital projects and social infrastructure. Already, external debts slow down the economy as observed in the results of this study. The Debt Management Office (DMO) should explore sustainable debt management strategies that will drive the implication that the extra funds used to service unnecessary debts are used for more productive economic activities.
Keywords: Fiscal Policy, Monetary Policy, Economic Growth, Interest rate, ARDL
JEL Classification: E

1. INTRODUCTION

Governments around the globe, particularly those in developed and developing nations, aim to maintain their relevance in international economic affairs by achieving consistent and rapid economic growth. Therefore, they consider regulating and managing their individual

economies to be crucial, and they often utilize macroeconomic policies such as fiscal and monetary policies to achieve these goals, especially of promoting sustained economic growth. According to Dakasku *et al*., (2020), economic growth refers to the ability of an economy to increase its production of goods and services while using its existing capital and other production-related factors. This leads to an increase in the quantity and quality of goods and services generated within a society. Economic growth can be seen as a part of the actions taken to promote economic development (Adegboyo *et al.*, 2021). In developed countries, monetary and fiscal policies are employed to achieve continuous economic growth and reduce economic instability. Fiscal policy refers to the government's policies related to the level and structure of spending, and the methods for generating revenue through taxation and other means (Aliyu et al., 2019).

The scope of fiscal policy encompasses taxation and other sources of revenue, public borrowing (domestic and foreign), and public spending intended to influence national objectives and macroeconomic goals. Fiscal policy is often used alongside monetary policy, which is employed by a country's central bank to influence the money supply and maintain price stability. Monetary policy is an economic policy utilized by the government, typically through the central bank, to promote economic development and stability, which are the objectives of every country (Sulaiman & Migiro, 2014).

In Nigeria, monetary policy has been utilized since the creation and implementation of this policy by the Central Bank of Nigeria Act of 1958. Generally, monetary and fiscal policies deal with aspects such as money supply which hit historic N94 trillion in February 2024, interest rates which is now benchmarked at 26.25 percent as at May 2024, cash reserve ratio now at 45 percent, revenue generation through taxation and other sources, and determining expenditure levels to influence economic activities. This has resulted in the development of a dynamic money market where treasury bills, a financial instrument used for open market operations and issuing government debt, have grown in volume and value, becoming a significant earning asset for investors and a source of market-balancing liquidity. For instance, Olakojo et al., (2021) explained that the Treasury Bill rate is pro-economic growth when monetary policy rate is at least 7.8%, making the Treasury Bill is a proper monetary instrument that can deliver improved economic growth in Nigeria. The impact of monetary policy tools on the financing conditions of the economy is extensive, influencing not only borrowing rates but also credit availability and banks' willingness to take certain risks, among other factors. In the past, national governments have traditionally controlled both fiscal and monetary policy instruments. This study aims to investigate the effect of monetary and fiscal policies on economic growth in Nigeria and identify some of the issues that have not been thoroughly explored.

The first problem is the challenge of achieving the desired outcome of monetary policy. Despite the efforts of the Central Bank of Nigeria (CBN) to stabilize prices, the country has continued to experience high inflation rates. The relationship between monetary policy instruments such as interest rates and inflation has not been clearly established in Nigeria, leading to ineffective policy implementation. The study will examine the factors responsible for this situation and suggest possible solutions. For instance, in 2020, despite several policy interventions such as the reduction of the monetary policy rate and the introduction of the Loan-to-Deposit Ratio policy, the inflation rate in the country continued to increase, reaching a high of 14.23% in October 2020 (National Bureau of Statistics, 2020). This suggests that there are other factors beyond the control of monetary policy that are driving inflation in Nigeria.

The second problem is the effectiveness of fiscal policy in stimulating economic growth. The government has implemented various fiscal policies aimed at promoting economic growth, such as tax incentives and public spending. Taxation in any country serves multiple purposes, including generating revenue for the government, redistributing income, acting as a tool for

social and economic development, correcting balance of payment imbalances through fiscal policy, and protecting local and emerging industries, among other functions (Etim & Ekanem, 2020). However, there is a lack of clarity on the effect of these policies on economic growth in Nigeria. The third problem is the issue of coordination between monetary and fiscal policies. The lack of coordination between the CBN and the federal government has led to conflicting policies, which have had adverse effects on economic growth. For instance, while the CBN might be focused on reducing inflation by increasing interest rates, the government might be increasing public spending to stimulate economic growth.

The fourth problem is the impact of corruption on monetary and fiscal policies. Corruption remains a significant challenge in Nigeria and has had adverse effects on monetary and fiscal policies. For instance, corruption in the banking sector can lead to mismanagement of monetary policy instruments, while corruption in tax administration can undermine the effectiveness of fiscal policies. In 2013, the then Governor of the Central Bank of Nigeria, Sanusi Lamido Sanusi, reported that the NNPC failed to remit $20 billion in oil revenue to the federation account. This revelation had a significant impact on monetary and fiscal policies, as the missing funds could have been used to support government spending and investments.

Although several studies have investigated the impact of monetary and fiscal policies on economic growth in Nigeria, there is still a need for further research in this area. For instance, a study by Adofu *et al.* (2019) explored the impact of monetary policy on economic growth in Nigeria but did not consider the influence of fiscal policy. On the other hand, a study by Ogunbiyi *et al.* (2020) focused on the impact of fiscal policy on economic growth in Nigeria but did not consider the influence of monetary policy. Therefore, this study will address the gap in literature by investigating the joint impact of monetary and fiscal policies on economic growth in Nigeria.

The study is decomposed into six distinct sections. This section discussed the background to the study and the problems identified. Section two focuses on literature review which comprises theoretical and empirical review as well as gaps identified while section three discusses methodology employed in the study. Section four of the study presents the results of the regression analysis while section five and six focus on conclusion and policy recommendations.

2. LITERATURE REVIEW

This section discusses theoretical and empirical literature and the value addition of this study in the form of identified literature gaps.

2.1 Theoretical Literature

Several theories have put forward explanations on how management of the economy through the regulation of price levels (monetary instruments) and the control of government spending and expenditure (fiscal policy) affects economic performance. The Keynesian theory of output and income, for instance, advocates for government intervention in the economy to address unemployment and economic downturns through fiscal policy, which involves government spending and taxation. Keynesian economics postulates that proper fiscal policy measures are needed to address unemployment, which can be achieved by increasing government spending, decreasing taxes, or a combination of the two. He argued that spending stimulates output, employment, and generates revenue, which encourages business firms to supply goods and services.

However, a decrease in aggregate demand, caused by consumer expectations and savings, leads to a decline in production and output, which negatively affects other macroeconomic indicators. For example, during a recession, the economy may not automatically recover to full

employment. As a result, the government must intervene and increase government spending to stimulate economic growth. The economy operates below its potential output and growth rate due to lack of investment in goods and services.

Milton Friedman's k-per cent Model, which was an offshoot of the Monetarist theory, on the other hand suggested that money supply should increase by a set k% every year to achieve growth. This rule will prevent the extremes of deflation (falling money supply, e.g., the Great Depression) and inflation (increasing money supply). It would give businesses strong expectations about what would happen to the money supply and inflation.

The theory argues that in the short run, expansionary monetary policy may increase real GDP by boosting aggregate demand, but in the long run, it only causes inflation without affecting the real GDP level. The theory further suggested that increasing the money supply would take 9 to 12 months before boosting output and emphasized the importance of price expectations in determining the effectiveness of monetary policy. Monetarist policies could help lower expectations and restore equilibrium in the long run. Essentially therefore, theories have suggested that the management of monetary and fiscal instruments has several implications for the economy of a nation.

2.2 Empirical Literature

The relationship between monetary and fiscal policies and economic growth is one that several past and contemporary studies have shown deep interest in. For instance, Adegboyo *et al.* (2021) examined the impact of fiscal, monetary and trade policies on Nigerian economic growth from 1985 to 2020. The study adopted endogenous growth model (AK model) as its theoretical framework. The result indicated that government expenditure and interest rates positively influence economic growth in the short run. In another study, Nuru (2020) examined the effect of fiscal policy on economic development (comparative study on gross domestic product and human development index in Nigeria from 1990 to 2017) and found that fiscal policy variables such as government revenue and expenditure have negative effect on the gross domestic product but positive and significant on human development index of Nigeria, while government debt had positive effect on GDP and significantly negative effect on HDI.

Etim and Ekanem (2020) investigated the impact of taxation on economic development in Nigeria, measured through the Human Development Index (HDI), using data from 1985 to 2018. Their study concluded that taxation can significantly contribute to positive economic development in Nigeria, provided that the tax base is broadened, loopholes in the tax administration system that lead to revenue losses are closed, and the taxation framework is strengthened. This shift would help transition the Nigerian economy from being primarily oil-based to a more tax-based economy.

Olakojo *et al.* (2021) examined the main monetary policy factors influencing economic recovery, identified the optimal monetary policy target, and evaluated the moderating effect of fiscal policy on economic growth in Nigeria using Friedman's plucking model, estimated with Markov-switching. The findings revealed significant asymmetry in growth cycles, with both monetary and fiscal policies being pro-cyclical. Additionally, an increase in reserves during periods of slow economic growth was not found to support growth.

Further, Uzoamaka *et al.* (2019) examined the effect of fiscal and monetary policy instruments on economic growth of Nigeria from 1985 to 2016 using Autoregressive Distributed Lag Model (ARDL) technique. The result indicated that monetary policy measured by monetary policy rate and fiscal policies proxied by government recurrent expenditure have not significantly affected economic growth in Nigeria. Around the same time, Aliyu *et al.* (2019) examined the

impact of fiscal policy on economic performance in Nigeria between 1981 and 2016 using the Error Correction Model (ECM). The result indicated that fiscal policy was partially effective on economic growth (surrogate of economic performance) in Nigeria between 1981 and 2016.

Prior to these studies, Ufoeze *et al.* (2018) investigated the effect of monetary policy on economic growth in Nigeria. The study adopted an Ordinary Least Squared technique and conducted the unit root and co-integration tests. The result indicated that money supply has significant positive effect on economic growth in Nigeria and exchange rate has significant negative effect on GDP in Nigeria. In an even recent study, Sule *et al.* (2023) who employed a two-stage least square technique as estimation technique argued that a rise in interest rates leads to an increase in savings, a decrease in investment, and an improvement in the current account balance in Nigeria. Titiloye and Ishola (2020) also explored study the effect of fiscal and monetary policy on economic growth in Nigeria. The major objective of this research work is to examine how monetary policy influences economic growth in Nigeria. Findings drawn from the research were that money supply and government total expenditure and revenue has a significant impact on economic growth in Nigeria. The study further positioned that to maintain a stable economic growth in Nigeria, the central bank needs to inject more money into the economy and the government should use her revenue and expenditure at full optimization.

Studies outside of Nigeria, both in developed and developing countries also seem to contain similar informational value. Cattan (2018) examined the relationship between fiscal policy and economic growth in Brazil from 2002-2016 using the Structural Vector Auto Regressive model (SVAR) model. The results show that consumption and expenditure have a significant effect on GDP and there is a positive relationship between public revenue and GDP. Dabwor *et al.* (2016) examined the importance of monetary measure in promoting economic growth of Pakistan. Findings showed that long-run relationship exists among variables, money supply and exchange rate, which positively influence economic growth. Focusing on developed countries, Ćorić, Šimović, and Škrbić (2015) analyzed the potential of monetary and fiscal policies to achieve economic policy goals, such as price stability and economic growth, in Croatia from 2004 to 2012, using a structural vector auto regression (VAR) model. The findings of the study suggest that both fiscal and monetary policies can promote economic growth while maintaining price stability in Croatia.

Summarily, empirical evidence in Nigeria, developed and developing countries suggest a strong relationship between monetary and fiscal policies and economic growth. While these studies were conducted at different periods, using different samples and methodology, their conclusions seem to present similar empirical claims.

2.3 Gaps in Literature and Value Addition

After analyzing previous studies, it was observed that many researchers have investigated the impact of monetary and fiscal policies on macroeconomic indicators and economic activities in developed and developing countries. However, there is no consensus on the effectiveness of these policies in promoting economic growth. For example, Ubi-Abai and Ekere (2018) found that fiscal policy had a greater impact on economic activity than monetary policy in Sub-Saharan African countries. Yet, there is no empirical consensus as to whether that monetary policy is more effective than fiscal policy in affecting real output or not.

The gap in literature in this study pertains to the limited attention given to the joint impact of monetary and fiscal policies on economic growth in Nigeria. While several studies have explored the effect of each policy independently, few have investigated their combined influence. As a result, there is limited empirical evidence on how monetary and fiscal policies interact to affect economic growth in Nigeria, and the extent to which their joint impact can be

harnessed to promote sustainable economic development. This gap in literature highlights the need for this study, which seeks to address this research question and provide valuable insights for policymakers, investors, and researchers seeking to improve policy formulation and implementation in Nigeria.

3. METHODOLOGY

The methods used in this study are designed to reflect the study's objectives, which focus on examining the relationship between monetary and fiscal policies and economic growth, as measured by real gross domestic product.

3.1 Theoretical Framework

This theoretical framework of this study is built upon the Keynesian theory of output and income, which argues for government intervention in economic stabilization and growth. The independent variables employed are interest rate, money supply, government revenue and expenditure, and public external debt. This situation necessitates proactive government intervention to boost demand, primarily through increased public spending and strategic fiscal policies. For Nigeria, such intervention is critical to stimulate growth and reduce unemployment.

Government Spending and Economic Growth

Keynesian theory advocates increased government spending to elevate aggregate demand, thereby boosting output and employment. In Nigeria, government expenditure on infrastructure, education, and healthcare can significantly impact economic growth by creating jobs and enhancing productivity. This public investment is crucial for addressing structural weaknesses and driving sustainable development.

Government revenue: taxation and Disposable Income

According to Keynesian postulate, lowering taxes can increase disposable income, leading to higher consumer spending and investment. This rise in aggregate demand can stimulate economic growth. For Nigeria, reducing taxes could invigorate sectors (manufacturing for example) crucial for development by enhancing household consumption and business investment, ultimately reflecting in an increase in real GDP.

Interest Rate and Investment

Within the Keynesian framework, interest rates and money supply play a pivotal role in influencing investment decisions. Lower interest rates reduce borrowing costs, encouraging businesses to invest in capital projects, which can boost productive capacity and spur economic growth. The CBN adjustment of interest rates to foster a conducive investment climate can lead to significant increases in real GDP by enhancing private sector activity.

Money Supply and Aggregate Demand

An increased money supply can lower interest rates and boost liquidity, leading to higher levels of consumption and investment. This stimulates aggregate demand and drives economic growth. Effective monetary policy that ensures an adequate money supply can support financial stability and encourage economic activities, positively affecting real GDP.

Public External Debt

While Keynesian economics supports borrowing for productive government spending, excessive public debt can lead to financial instability. Managing Nigeria's public external debt is crucial to ensure that borrowing finances growth-enhancing projects without becoming a burden on the economy. On the other hand, Proper debt management can facilitate infrastructure development and other critical investments, fostering economic growth.

Based on the Keynesian theory, the study proposes the following null hypotheses:

(1) Government revenue and expenditure have no significant relationship with economic growth in Nigeria.

(2) Increased money supply no significant effect on real GDP in Nigeria.

(3) Lower interest rates positively affect real GDP in Nigeria.
(4) Public external debt has no significant long run relationship on real GDP in Nigeria.
These hypotheses guide the analysis of how fiscal and monetary policies drive economic growth in Nigeria.

3.2 Model Specification

The specific functional form of the model utilized in this study is as follows:
RGDP= f (GR, GE, M3, IR, DS) …… (3.1)

The functional form is further expressed as an econometric model.

Due to the high series of real gross domestic product, government revenue, debt stock and government expenditure, the model adopted a semi-log linear structure. The structure of the model is presented below:

$LINRGDP_t = \beta_0 + \beta_1 LINGR_t + \beta_2 LINGE_t + \beta_3 M3_t + \beta_4 IR_t + \beta_5 LINDS_t + \mu_t$ ……. (3.2)

Where;

RGDP = Real Gross Domestic Product, **GR** = Government Revenue, **GE** = Government Expenditure, **M3** = Broad Money Supply, **IR** = Interest Rate **DS** = External Debt Stock, and $\boldsymbol{\mu_t}$ **=** Stochastic or disturbance form (refers to the error term in a model which represents the variables that are not explicitly included in the model). LIN is the Logarithm.

β_0 = Intercept: It tells the value of the dependent variable when all the independent variables are zero (0).

β_1 and β_5 **=** Slope coefficients. They measure the effect of a limit change in the independent variables on the dependent variable (of each of the respective variables).

The research work employs the econometric technique of Auto- Regressive Distribution Lag (ARDL) for developing reliable models that capture the relationship between monetary and fiscal policy variables and economic growth. Therefore, the equation below is expressed in its dynamic form to capture the short and long run estimates of ARDL model as:

$$\Delta LINRGDP_t = \alpha_0 + \alpha_1 LINRGDP_{t-1} - \alpha_2 LINGR_{t-1} + \alpha_3 LINGE_{t-1} - \alpha_4 M3_{t-1} + \alpha_5 IR_{t-1} + \alpha_6 LINDS_{t-1} + \sum_{i=1}^{o} \beta_1 \Delta LINRGDP_{t-1} - \sum_{i=0}^{p} \beta_2 \Delta LINGR_{t-1} + \sum_{i=0}^{q} \beta_3 \Delta LINGE_{t-1} - \sum_{i=0}^{r} \beta_4 \Delta M3_{t-1} + \sum_{i=0}^{s} \beta_5 \Delta IR_{t-1} + \sum_{i=0}^{s} \beta_6 \Delta LINDS_{t-1} \ldots \ldots (3.3)$$

Where:

α_1 = Long-run coefficient of Real Gross Domestic Product, $\alpha_2 - \alpha_5$= Long-run coefficients of the independent variables β_1 = Short-run coefficient of Real Gross Domestic Product, $\beta_2 - \beta_5$ = Short-run coefficients of the independent variables, Δ = changes in the short run.

4. RESULTS AND DISCUSSION

This section presents the analysis used in the study. The E-views 12 analytical software was used to analyze the model and results of the regression model are presented and discussed in this section.

The study used two types of tests, the Augmented Dickey-Fuller (ADF) and Phillip Perron (PP) tests presented in table 1 below.

Table 4.1: Results of ADF Unit Root Test

Variables	Augmented Dickey Fuller				Phillips-Perron			
	ADF	5% Critical Value	Included in the equation	Remarks	PP	5% Critical Value	Included in the equation	Remarks
LINRGDP	-3.58	-3.56	Trend & Intercept	I(0)	-11.8	-3.56	Trend & Intercept	I(0)
LINIR	-3.64	-3.56	Trend & Intercept	I(0)	-5.73	-3.54	Trend & Intercept	I(0)

LINM3	-5.53	-3.55	Trend & Intercept	I(1)	-6.23	-3.55	Trend & Intercept	I(1)
LINGR	-6.20	-3.56	Trend & Intercept	I(1)	-14.2	-3.56	Trend & Intercept	I(1)
LINGE	-10.2	-3.56	Trend & Intercept	I(1)	-10.8	-3.56	Trend & Intercept	I(1)
LINDS	-4.12	-3.55	Trend & Intercept	I(1)	-4.13	-3.55	Trend & Intercept	I(1)

Source: Researchers' Computation (2024)

Table 4.1 presents the ADF unit root test results, indicating that the variables have mixed orders of integration. Interest rate and log of real gross domestic product were stationary at level I (0), while broad money supply, log of government revenue, log of government expenditure and log of external debt stock were stationary at first difference I (1). As the orders of integration are mixed, the ARDL bounds test was used to check for co-integration.

4.2 Co-integration test

Table 4.2: ARDL Bounds Test Co-integration

Model	F-statistics	
LNCMR = f (LNGR, LINGE, M3, IR, LINDS)	8.1681	
	k=5	
Critical value	Lower Bound	Upper Bound
10%	2.08	3.00
5%	2.39	3.38
1%	3.06	4.15

Source: Researchers' Computation (2024)

Table 4.2 presents the result of the bounds test. In this case, the F-statistic of 8.1681 was higher than the upper bound critical value at 10%, 5%, and 1% significance levels. Therefore, it is concluded that co-integration exists, indicating long-run relationship among the variables in the model. Thus, both short run and long run ARDL models are estimated.

4.3 Estimation

Table 4.3: Short-run ARDL estimates

Dependent Variable: LINRGDP

Variable	Coefficient	Std. Error	t-Statistics	Prob.
D(LINGR)	-0.0317	0.0104	-3.0397	0.0288
D(LINGE)	0.1651	0.0190	8.7071	0.0003
D(IR)	0.0104	0.0013	8.0215	0.0005
D(M3)	-0.0099	0.0012	-8.1909	0.0004
D(LINDS)	0.0191	0.0056	3.3644	0.0200
CointEq(-1)	-0.0833	0.0074	-11.2156	0.0001
R-squared	0.9844	F-statistic	1829.901	
Adjusted R-squared	0.9575	Prob(F-statistic)	0.0000	

Source: Researchers' Computation (2024)

Table 4.3 presents the short run ARDL estimates for the model. The short-run coefficient of the log of government revenue (LINGR) was -0.03, indicating a negative impact on Real Gross Domestic Product (RGDP). This suggests that a one percent increase in the interest rate will lead to a 0.03 percent decrease in RGDP. This coefficient was statistically significant at the 5% level of significance, as its p-value was less than 0.05.

On the other hand, government expenditure has a positive effect on growth with a coefficient of 0.1651. This implies that increasing government expenditure also spurs economic growth in the short run. The variable was also statistically significant. The short-run coefficient of interest rate was 0.0104, indicating a positive impact on Real Gross Domestic Product (RGDP). Increasing interest rate is therefore closely associated with economic growth and expansion.

Also, the short-run coefficient of the broad money supply was -0.0099, indicating a negative effect on RGDP. This variable does not conform with a priori expectation. This coefficient was statistically significant at the 5% level of significance. External debt stock had a positive effect on economic growth with elasticity of 0.0191. It was also statistically significant as its p-value of 0.0200 was less than 0.05. The error correction term of 8 per cent represents the speed of adjustment of the model to equilibrium. It is negative, less that one and statistically significant.

The coefficient of determination (R^2) is 0.9844, which means that about 98.4% of the systematic variation in the dependent variable (growth) are explained by the explanatory variables in the model. The remaining 1.6% of the variation was accounted for by other factors not included in the model but captured by the error term.

Table 4.4: Long-run ARDL estimates

Dependent Variable: LINRGDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LINGR	-3.1853	4.2046	-0.7576	0.4829
LINGE	3.2434	4.3759	0.7411	0.4919
IR	0.1315	0.1595	0.8244	0.4472
M3	-0.0925	0.0628	-1.4726	0.2009
LINDS	-0.3994	0.5223	-0.7649	0.4789
C	7.4613	3.0237	2.4676	0.0057

Source: Researchers' Computation (2024)

$$LINRGDP_t = 7.46 - 3.19LINGR_t + 3.24LINGE_t + 0.13IR_t - 0.09M_t3 - 0.39LINDS_t + \varepsilon_t \ldots (4.1)$$

NOTE: LINGR= log of Government Revenue, LINGE = log of Government Expenditure IR = Interest Rate, M3 = Broad Money Supply and LINDS = Log of External Debts

From table 4.4, the analysis shows that the long run coefficient of the log of government revenue was negative (-3.1853), meaning that an increase in government revenue results in a decrease in RGDP. On the other hand, the short run coefficient of the log of government expenditure was 3.2434, indicating that an increase in government expenditure leads to an increase in real gross domestic product. Money supply and debt stock have negative effects on growth in the long run while interest rate is positively associated with economic growth. However, these coefficients are statistically insignificant at the 5% level of significance.
The intercept of the regression model (C) is 0.7.46, which represents the value of the dependent variable when all independent variables are zero.

4.4 Model Evaluation

The F and t tests were used for this purpose of the model evaluation.

Table 4.5: Joint Hypothesis testing: Representation of the F-Statistics

Monetary Policy	F-statistics	Probability	Decision
	1829.901	0.0000	Accept H_1

Source: Researchers' Computation (2024)

The F-statistics was used to test the significance of the overall models. Generally, if the probability is ≤ 0.05, the explanatory variables' parameter estimates will be jointly statistically significant. Any value greater than 5% makes them jointly statistically insignificant.

H_0: There is no joint significance.

H_1: There is joint significance.

The table 5 presents the results of the F-test for the model. The F-statistic for the monetary policy model is 1829.901 with a probability value of 0.0000, indicating that the model is statistically significant at the 5% level of significance.

Table 4.6: Individual Hypothesis testing: Representation of the t-Statistics

Variables	t-statistic	Probabilities
D(LINGR)	-3.0397	0.0288
D(LINGE)	8.7071	0.0003
D(IR)	8.0215	0.0005
D(M3)	-8.1909	0.0004
D(LINDS)	3.3644	0.0200

Source: Researchers' Computation (2024)

The t-test is a test of individual statistical significance of the repressors. The hypotheses are stated as:

H_0: The variable is individually insignificant.

H_1: The variable is individually significant.

From Table 6, we can see that the associated p-values of the t-statistic for all the regressors were less than 0.05 significance threshold ($0.0288<0.05$, $0.0003<0.05$, $0.0005<0.05$, $0.0004<0.05$ and $0.02<0.05$). This implies that all regressors were individually statistically significant.

4.6 Post-Estimation tests

The results of the post estimation tests are summarized in table 4.7.

Table 4.7: Post-Estimation test results

Tests	F-statistic	Prob.	Result
Heteroskedasticity Test: Breusch-Pagan Godfrey	2.2072	0.1930	No heteroscedasticity
Normality test: Jarcque-Bera test	5.6018	0.0607	There is normality
Ramsey RESET Linearity test	0.4339	0.5461	The model is correctly specified

Source: Researchers' computation (2024)

Both the Breusch-Pagan Godfrey test and the Ramsey reset test indicate the absence of heteroscedasticity and confirmed the linear specification of the model.sAlso, the Jarque-Bera normality test affirmed that the error term in the model were normally distributed.

4.7 Discussion

The aim of the study was to examine the effect of monetary and fiscal policies on economic growth in Nigeria between 1986 and 2020. The study collected its data from various sources, including official publications of the Central Bank of Nigeria (CBN). The study conducted ADF and Phillips Perron tests to check for stationarity of the variables in both the monetary and fiscal policies variables. The study then conducted regression analysis to estimate the short and long run coefficients of the variables on economic growth. Furthermore, the study found that government revenue has a negative effect on economic growth, with an elasticity of -0.03. This means that an increase in government revenue reduces economic growth by 0.03%. The same is also true in the long run. In contrast, government expenditure had a positive effect on economic growth, with an elasticity of 0.165. This implies that an increase in government expenditure leads to increase in economic growth in both short and long run.

Further, the results showed that an increase in the number of broad money supply has a negative effect on economic growth, with an elasticity of -0.009. On the other hand, interest rates had a negative effect on economic growth, with an elasticity of 0.01. External debts had positive effect on growth indicating that debt accumulation spurred economic activities in the short run. This, however, was not the case in the long run.

To ensure the reliability of the estimation results, the study conducted several post-estimation tests models. The Breusch-Godfrey test was used to test for serial correlation, and it was found that there was no autocorrelation present in either model. The normality test was also conducted, and it was observed that the sample data was not significantly different from a normal distribution, indicating that the residuals followed normality. Heteroscedasticity was also tested for the model and the results showed that the residuals had a constant variance. The linearity test confirmed that the model was properly specified.

4.7.1 Summary of Findings

The purpose of the study was to explore the effect of monetary and fiscal policies on economic growth in Nigeria from 1986 to 2020, a period of 35 years. The ADF and Phillips-perron unit root results allowed for the use of the ARDL Auto Regressive Distributed Lag to obtain numerical values of the models' parameters. The bounds co-integration test confirmed that long-run co-integration did exist since the F-statistics value fell above the upper bound values. Monetary policy proxied by broad money supply and interest had a significant effect on economic growth and was statistically significant in the short run. The coefficients of the fiscal policy variables showed that government revenue has a negative impact on economic growth in the short run. However, government expenditure and external debts positively affect economic growth in the short run. These results hold profound implications for the Nigerian economy.

These findings conformed with Okedina *et al.* (2020) and Sibel (2023) who found that government expenditure has a positive effect on economic growth. Akinjare *et al.* (2016) and Shittu *et al.* (2023) also found a short run positive relationship between interest rate and economic growth. Adegoriola (2018) and Okonkwo *et al.* (2023) who had earlier employed the Error Correction Model (ECM) also found that government expenditure significant impacts growth in Nigeria. Also, Titiloye and Ishola (2020) found that interest rate has positive effect on the economy and that government spending has the tendency to boost the economy.

Ashogbon *et al.* (2023) also argued that external public debt has a long run negative effect on economic growth in Nigeria which is in agreement with the findings of this study.

5. CONCLUSIONS

This study aimed to examine the effect of monetary and fiscal policies on Nigeria's economic growth by analyzing time series data spanning from 1986 to 2020. In Nigeria, the importance of these policies in stimulating economic growth cannot be overemphasized, but their success depends on the implementation of effective policy instruments and actionable metrics. Although the findings were strongly significant and contributed to the existing literature and theory.

The study suggests that Nigeria's monetary authorities and federal government should adjust their policies to ensure that the country achieves rapid and sustainable economic growth, thereby positioning Nigeria as a significant competitor in the global market.

6. RECOMMENDATIONS

Based on the findings of the study, some recommendations are presented. First, in order to improve the effectiveness of government spending in boosting economic growth, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) should tackle the issue of multiple taxation and other impediments that slow the growth of small and medium-sized enterprises (SMEs). This is because government revenue which arises majorly from taxation largely slow down the economy as observed in the results of this study.

Second, to boost growth and economic welfare, the Budget Office of the Federation (BOF) and the Ministry of Finance should ensure that funds directed towards capital projects and social infrastructure such as reliable electricity and well-maintained road networks. As a corollary, to combat corruption in monetary and fiscal policies, the government needs to strengthen its anti-corruption measures and improve the transparency and accountability of its institutions.

Lastly, to lessen the impact of external factors on monetary and fiscal policies, the government should diversify the economy away from oil and invest in other sectors, such as agriculture and manufacturing. This will decrease the country's dependence on oil exports and make it more resilient to external shocks. Additionally, the government should check its debt management strategies. Already, external debts slow down the economy as observed in the results of this study. The Debt Management Office (DMO) should explore sustainable debt management strategies that will drive the implication that the extra funds used to service unnecessary debts are used for more productive economic activities.

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