FISCAL POLICY AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT
Regardless of the nature of government and disparities in time several administration that has governed Nigeria since independence has introduced different fiscal policies geared towards enhancing the country its economic growth. Nevertheless, the country is still confronted with varieties of economic trajectories such as multi-dimensional poverty, persistence inflation, stunt growth of gross domestic and national product, high rate of unemployment, among others. Between 1986 and 2023, the research evaluated the effects of fiscal and monetary policies on growth in Nigeria's economic. In order to ascertain whether a long-term link existed among the factors, the ARDL Bounds co-integration test was used because the variables showed a mixed order of integration. For monetary and fiscal policy, the Auto Regressive Distributed Lag (ARDL) method was employed to estimate the models. The findings revealed a brief correlation between Nigeria's economic growth and variables related to monetary and fiscal policy. Economic growth was negatively correlated with interest rates and government revenue, but positively correlated with the broad money supply and government spending. No statistically significant difference in interest rates, government revenue, or government expenditure. Nonetheless, at the five percent significance level, the broad money supply was noteworthy. According to the report, the federal government and the Central Bank of Nigeria (CBN) ought to work together more closely and coordinate their policy goals. In order to coordinate monetary and fiscal policy, the government should also think about forming a committee with members from the Ministry of Finance and the CBN.

Keywords: **interest rates, government revenue, government expenditure, economic growth, money supply,**

JEL Classification: E43, E42, E42, E51.

1. INTRODUCTION

The fundamental and core functions of any national government, whether developed or developing, are to ensure the self-preservation of its citizens through the provision of essential services, maintaining its territorial integrity against internal and external threats, and maintaining diplomatic relations with other sovereign nations within the global system. However, there is a certain degree of consensus among several political-economic schools of thought, such as liberal, social democratic, realist, green politics, Marxist, keynesian, neoclassical, institutional, and development, that the realization of national objectives without a viable economic system is not possible (Mensah & Ricart, 2019; Nkalu, Edeme, & Agu, 2016; Simon Vaut, Dahm, & Gombert, 2011). Based on this premise, national governments have always strived to attain or maintain economic growth in their respective countries amidst conflicting global economic matters, which may restrain their tendencies towards achieving their core national economic objectives. Dwivedi (2004), as cited in Adetunji, Mustapha, Duru, Saheed, and Alfa (2023) conceived economic growth as consistent rise in the net national product or national production per capita over a long period of time. This implies that the rate of increase in total production must outpace the rate of population growth. The idea that a country's output should be made up of goods and services that efficiently satisfy the greatest degree of demand among the greatest number of people is another way to measure economic growth. Four major factors affect economic growth: capital formation, natural resources, human resources, and technological innovation.

As such, fiscal policies have always been used as a mechanism for regulating and facilitating long-term economic growth. Fiscal policies in this context connote all forms of methods and strategies through which the government generates revenue through taxes and other sources, as well as the amount and makeup of its spending (Aliyu, Ndagwakwa, Zirra, Salam, & Muhammed). Fiscal policy includes taxing and other sources of income, borrowing by the government from both domestic and international sources, and spending that is directed towards achieving macroeconomic goals and national objectives. Fiscal policy, according to Yusuf and Mohd (2021), is the method through which the government implements tax and expenditure laws to affect macroeconomic variables, including employment, inflation, and the overall demand for goods and services. Adegoriola (2018) succinctly maintained that fiscal and monetary policies include things like the money supply, lending rates, reserve requirements, currency exchange rates, taxation and other revenue-generating measures, and setting spending levels to influence economic activity. These tactics are powerful tools that can be utilized to achieve equilibrium, price stability, full employment, and ongoing economic growth. Nigeria uses both fiscal and monetary policies to reduce economic instability and promote steady economic growth. While fiscal policy is used to manage general demand and supply and finance government spending through tax revenue, monetary policy is used to regulate the flow of money throughout the economy.

To this effect, it beholds every national government through its central bank to regulate the money supply and support price stability through fiscal policies. The government uses monetary policy, usually through the central bank, as an economic tool to promote stability and economic growth, goals that are shared by all nations (Sulaiman & Migiro, 2014). Government involvement aimed at regulating the quantity, direction, and flow of the economy's financial flow is known as monetary policy while taking the current state of affairs into consideration (Miftahu, 2019). According to Morakinyo et al. (2018), there are three main ways to implement

monetary policy: controlling the money supply, changing the benchmark interest rate, and maintaining a stable credit market and banking infrastructure. Nigeria has employed monetary policy since the passage of the Central Bank of Nigeria Act in 1958. Between 1970 and 2023, several administrations that have steered the affairs of the country have initiated several fiscal policies; reputable among them are the stabilization policies (1970–1988), structural adjustment programs (SAPs) introduced in 1986, expansionary fiscal policies in the late 2000s, fiscal consolidation policies, the National Economic Empowerment and Development Strategy, as well as the Economic Recovery and Growth Plan (ERGP) (2017 and 2020). Despite the disparities associated with the administration, nature of government, political affiliation, and time when the aforementioned fiscal policies were initiated, they were all geared towards promoting economic growth by reducing inflation rates, increasing interest rates, controlling the money supply, decreasing and increasing public spending, reducing poverty, ensuring social safety, facilitating revenue mobilization, ensuring effective expenditure management, and developing debt management strategies, among other things (Abimbola, Benjamin, Ignatius, Abdul, & Afamefuna, 2024).

As of 2022, the Nigerian Gross Domestic Product was reported at $472.62 billion, the Gross National Product was 459.752, with an inflation rate of 21.47%, while the county's multidimensional poverty rate is estimated to have reached 63%, with an estimated 88.4 million Nigerians living below the poverty line (National Bureau of Statistics, 2022; The World Bank, 2022). However, the influence of monetary and fiscal policies on Nigeria's economic growth has been the subject of numerous studies; yet, further research in this area is still required. Adofu, Alfa, and Egwaikhide (2019), for instance, looked at how monetary policy affected Nigeria's economic growth but ignored the influence of fiscal policy. Ogunbiyi, Malaolu, and Egwaikhide (2020) ignored the influence of monetary policy in favor of concentrating on the influence of fiscal policy on Nigerian economic growth. Based on this premise, the authors attempt to bridge this gap in the literature by investigating the combined influence of monetary and fiscal policy on Nigeria's economic growth. The purpose of this study is to present a comprehensive examination of the relationship between monetary and fiscal policy and Nigeria's economic growth, pinpoint the obstacles to their efficacy, and recommend ways to improve their application. The study aims to address these inquiries. Does Nigeria's economic growth depend on the amount of money in circulation and interest rates? Is there a relationship between government revenue and expenditure and Nigeria's economic growth? Does Nigeria's broad money supply, interest rate, government revenue, government spending, and economic development have a link, both in the short and long terms?

2. LITERATURE REVIEW

Beginning in the mid-1970s, Kugler and Reynard (2022) investigated the connection among ,inflation, monetary aggregates and economic activity in Switzerland. Among the factors examined in the study were the nominal interest rate, the production gap, the rate of exchange, inflation, and the large currency in circulation. The Granger causality test, Dynamic Ordinary Least Squares (DOLS) and Fully Modified Ordinary Least Squares (FMOLS), were among the estimate methods used. The results suggested that notable variations in money and exchange rates could account for variations in Switzerland's inflation rate. From 1980: Q1 to 2017: Q1, Tan et al. (2020) looked into how monetary policies and fiscal affected growth in the economies of Malaysia, Singapore, and Thailand. The money supply, government expenditure, and real GDP were some of the factors used in the study. The long-run association and robustness were evaluated using a variety of econometric method, which include the dynamic ordinary least

squared method (DOLS), autoregressive distributed lag (ARDL) approach, fully modified least squares method (FMOLS), and canonical co-integration regression (CCR), and findings indicated that rate of interest had a adversely affected eac of the three nation's rates of growth in the economy that were chosen, highlighting the necessity of taking both policies into account at the same time rather than separately.

Okedina et al. (2020) employed annual time series data spanning from 1980 to 2017 that were collected from World Bank, and the CBN Statistical Bulletins to evaluate the link between Nigeria's economic growth and fiscal policy. The research used the NARDL and Philip-Perron estimate co-integration paradigm to evaluate the influence of fiscal policy, both contractionary and expansionary, on economic growth. Research's conclusions indicated that a long-run correlation exist between Nigeria's economic growth and fiscal policy, with expansionary fiscal policies encouraging growth and contractionary policies impeding it. A research by Kim *et al*. (2021) looked at how fiscal policy affects economic growth in China. The research used empirical evidence and employed various statistical techniques such as stationarity test, Wald tests, Granger Causality, and structural vector autoregressive (SVAR) for the analyses. Understanding how China's fiscal framework affects economic growth was the main goal. As compared to central spending growth, the results indicated that the growth of local expenditures had a stronger effect on output growth. The study also revealed that liquidity constraints production growth's ability to react to expected tax increases. Furthermore, the data suggested a long-run debt significantly affected China's fiscal structure, especially public revenue.

The influence of trade, monetary, and fiscal measures on Nigeria's economic development from 1985 and 2020 was examined by Adegboyo et al. in 2021. The study included factors including money supply, inflation, government expenditures, trade openness. For estimate, the Autoregressive Distributed Lag Model (ARDL) was utilised. Results suggested that government expenditure contributed favourably to GDP growth, with a 1% increase in public spending translating into a 21% increase in growth in the economy in Nigeria. Results also showed that a 1% increase in interest rates significantly increases GDP per capita by 0.03%, underscoring the importance that interest rates play in short-term economic growth stimulation in Nigeria. An examination of how monetary and fiscal policy affect economic growth in Nigeria during a time period spanning 1989 to 2018 was carried out by Timothy and Ishola (2020). Examined were a number of factors, which include rate of interest, inflation, government expenditure, government income, rate of unemployment, GDP, and broad money supply. We used secondary data from World Development Indicators. For estimate, the Autoregressive Distributed Lag Model was utilised. Findings showed that the supply of money, government expenditure, and government income all had a substantial effect on Nigeria's economic growth.

2.1 Gap in Literature

Upon reviewing prior research, it was noted that numerous scholars have delved into the ramifications of fiscal and monetary policies on macroeconomic indicators and economic endeavors in both advanced and emerging economies. Nonetheless, consensus remains elusive regarding the efficacy of these policies in fostering economic growth. For instance, Ubi-Abai and Ekere (2018) discovered that fiscal policy exerted a more pronounced influence on economic activity than monetary policy in Sub-Saharan Africa. Similarly, Tadesse and Melaku (2019) revealed that solely fiscal policy proved effective in invigorating economic growth in Ethiopia. In advanced economies, Senbet (2011) contended that endogeneity between policies and economic activity, along with model misspecification, could result in the erroneous utilization of nominal economic growth instead of real economic growth. Senbet's findings

substantiated the assertion that monetary policy wields greater efficacy than fiscal policy in impacting real output.

The literature gap in this research concerns the scant attention devoted to the collective influence of monetary and fiscal measures on the expansion of the Nigerian economy. While numerous studies have explored the repercussions of each policy in isolation, few have delved into their combined influence. Consequently, empirical evidence on how monetary and fiscal measures relate to driven GDP growth in Nigeria is limited, alongside the potential leverage of their joint impact to foster sustainable economic development. This literature void underscores the necessity for this study, which endeavours to probe this research question and furnish invaluable insights for policymakers, investors, and researchers striving to enhance policy formulation and execution in Nigeria.

Furthermore, the matter of the appropriate policy mix, as advocated by several scholars, remains inadequately addressed. This study aims to bridge this lacuna by examining the requisite policy mix essential for sustainable Nigeria's economic growth. Additionally, this study aims to enrich existing literature by scrutinizing available data on monetary and fiscal measures and their ramifications on Nigeria's GDP growth. Specifically, the research will assess how expansionary and contractionary monetary and fiscal policies impact economic growth amid periods of recession and inflation in Nigeria.

3. METHODOLOGY

3.1 Theoretical Framework

The paper adopted the Endogenous Growth of Paul Romer and the Keynesian Theory of John Maynard Keynes as an explanatory framework to to explain the nexus between fiscal policies and economic growth. The Endogenous growth theory holds that economic growth of any country are influenced by internal processes such as human capital, innovation**,** and investment capital, rather than external, uncontrollable forces, as espoused by the neo-classical economists. Therefore, the theory lay emphasise on the indispensable role of government policy decisions in shaping product and process innovation by creating more intense competition in markets (Srinivasan, 1998). Romer(as cited in Jones, 2019), argued that technological change is not just an exogenous byproduct of independent scientific developments. He sought to prove that government policies, including investment in R&D and intellectual property laws, helped foster endogenous innovation and fuel persistent economic growth Despite the fact that the theory emphasises how government policies could enhance openness, competition, change, and innovation, among other factors that will promote long-term economic growth (Sachs & Warner). It undermines the instruments of public finances such as taxation, budget and budget process, government revenue, and subsidies, which fall within the purview of governmental statutory power and functions and are capable of enhancing economic growth. The notion that government decision shape innovation, without any succinct specification subject government fiscal policies to the disposition of public office holders and government bureaucrats process, which may lack the empirical yardstick for measuring its success.

3.2 Model Specification

The specific functional form of the model utilized in this study is as follows:
***RGDP= f (M3, IR*)** …… **(1) MP**
RGDP= f (GR, GE) …… **(1') FP**

The model is further expressed as an econometric model.

$RGDP = \beta_0 + \beta_1 M3_t + \beta_2 IR_t + \mu_t$ …… **(2) MP**

$RGDP = \beta_0 + \beta_1 GR_t + \beta_2 GE_t + \mu_t$ …… **(2') FP**

Where; **RGDP** (Real Gross Domestic Product), **M3** (Broad Money Supply), **IR** (Interest Rate), **GR (**Government Revenue), **GE** (Government Expenditure), μ_t **(**Stochastic term)

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

$LRGDP_t = \beta_0 + \beta_1 M3_t + \beta_2 IR_t + \mu_t$ …… ***(3) MP***

$LRGDP_t = \beta_0 + \beta_1 LGR_t + \beta_2 LGE_t + \mu_t$ …….. ***(3') FP***

The study employed Auto-- Regressive Distribution Lag (ARDL) for developing reliable models that capture the relationship between monetary and fiscal policy variables and economic growth. Therefore, the equations below are expressed in its dynamic form to capture the short run estimates of ARDL model as:

$\Delta LRGDP_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta LRGDP_{t-i} + \sum_{i=1}^{q} \beta_{2i} \Delta M3_{t-i} + \sum_{i=1}^{q} \beta_{3i} \Delta IR_{t-i} + \mu_t$ …… **(4) MP**

$\Delta LRGDP_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta LRGDP_{t-i} + \sum_{i=1}^{q} \beta_{2i} \Delta LGR_{t-i} + \sum_{i=1}^{q} \beta_{3i} \Delta LGE_{t-i} + \mu_t$ … **(4') FP**

4.0 RESULT AND DISCUSSION OF FINDINGS

4.1 Descriptive Statistics

The significant differences between the highest and lowest values of all variables in table 4.1 indicate that the investigation discovered significant variability in the data series. Broad Money Supply (M3) had the lowest average of 16.28171 and Real GDP had the highest average of 38574.96. Throughout the study period, the highest and lowest values for every variable were documented as well. As an illustration, the real GDP peaked in 2019 at N71387.83 billion and peaked in 1986 at N15237.99 billion. In a similar vein, the highest and lowest numbers for the Broad Money Supply (M3) were 8.46 in 1996 and 24.9 in 2017.

Interest rate (IR) rates ranged from 10.5 in 1986 to 29.8 in 1992, the highest and lowest, respectively. While government spending reached its lowest point of N16.2 billion in 1986 and its maximum point of N10231.7 billion in 2020, government revenue reached its highest point of N11116.8 billion in 2011 and its lowest point of N12.6 billion in 1986. A statistical metric called skewness is used to assess how much asymmetry is present in a set of data. This study examined the skewness of the following variables: real GDP, interest rate, broad money supply, government revenue, and government spending. The variables exhibit a rightward skew, as demonstrated by the positive skewness values of 0.44, 0.89, 0.19, 0.42, and 1.13, correspondingly.

The flatness of the variable distribution across time is indicated by kurtosis. The distribution could be leptokurtic, mesokurtic, or platykurtic. The kurtosis value indicates that whilst real GDP, broad money supply, and public revenue are leptokurtic, only interest rates and government expenditures are platykurtic. A statistic for a normal distribution is the Jacque-Bera. We determine that the data set has a normal distribution as the probability values of every variable are all greater than 0.05. Since all of the chosen variables are normally distributed, additional diagnostic testing is necessary before conducting any further analysis, as shown by the Jarque-Bera statistics.

Table 4.1: Results of Descriptive Statistics

	RGDP	IR	M3	GR	GE
Mean	38574.96	18.52572	16.28171	4117.520	2572.757
Maximum	71387.83	29.80000	24.90000	11116.80	10231.70
Minimum	15237.99	10.50000	8.460000	12.60000	16.20000
Skewness	0.438825	0.888448	0.192864	0.416643	1.133519
Kurtosis	1.576324	4.544839	1.431702	1.640572	3.406349
Jarque-Bera	4.079138	8.084838	3.803834	3.707684	7.735842
Probability	0.130085	0.017555	0.149282	0.156634	0.020902

Source: Researchers' Computation, 2023

4.2 Stationarity Test

The findings of the ADF and Phillip Perron stationarity tests are presents in Table 4.2, which shows that the variables' integration orders are mixed. In the monetary policy model, the wide money supply was stationary at first difference 1(1), whereas the interest rate and the log of the real GDP were stationary at level 1(0). In the fiscal policy model, the real GDP and the log of government spending were stationary at level 1(0), but the log of government revenue was stationary at first difference 1(1). With the exception of the log of government revenue and the wide money supply, which were stationary at first differences, or 1(1), the probabilities were significant because they were less than 0.05.

As a result, both models' integration orders are displayed in the ADF results. Since the integration orders are mixed, co-integration was tested using the ARDL bounds test. The findings of the Phillip Perron test showed that the integration orders for the two models were the same, which was consistent with the ADF results. The bounds test is utilised to verify co-integration because the integration orders are mixed.

Table 4.2: Results of ADF Unit Root Test

	ADF		PP	
	Level		Level	
LRGDP	-3.5818*	-2.8370	-11.8094***	-2.8370
IR	-3.6362*	-5.7523***	5.7298***	-10.2457***
M3	-2.7919	-5.5299***	-2.5895	-6.2343***
LGR	-1.5026	-6.2025***	-1.2354	-14.1613***
LGE	-1.5512	-10.2030***	-1.5041	-10.7662***

Source: Researchers' Computation, 2023

4.3 Lag Length Criteria Results

The lag length criterion and selected lag length for the Monetary Policy model are shown in the table below. The ideal lag length was 2, which was selected using the Akaike Information Criterion, Schwarz Information Criterion, and Hannan-Quinn Information criterion. On the other hand, the criteria used in the Fiscal Policy model varied when it came to selecting the lag duration; however, the Akaike Information Criterion was the only one that was suitable. This criterion indicated that the optimal lag length for annual data was 3. Since the Akaike Information Criterion had the smallest value, we used it instead.

Table 4.3: Lag Length Criteria

	Log	**LogL**	**LR**	**FPE**	**AIC**	**SC**	**HQ**
Monetary Policy	0	-168.2470	NA	8.929539	10.70293	10.84035	10.74848
	1	-74.64064	163.8110	0.045291	5.415040	5.964691	5.597234
	2	-58.23653	25.63144*	0.029019*	4.952283*	5.914172*	5.271122*
	3	-52.20219	8.297219	0.036476	5.137637	6.511764	5.593121
	Log	**LogL**	**LR**	**FPE**	**AIC**	**SC**	**HQ**
Fiscal Policy	0	-61.06181	NA	0.011002	4.003863	4.141276	4.049411
	1	76.88855	241.4131	3.49e-06	-4.055534	-3.505883*	-3.873341*
	2	87.74806	16.96799*	3.16e-06	-4.171754	-3.209865	-3.852915
	3	98.76786	15.15222	2.91e-06*	-4.297991*	-2.923864	-3.842507

Source: Researchers' Computation, 2023.

4.4.1 ARDL Bounds Co-integration Test

The results can be interpreted in the manner shown in the table below. The F-statistic of 0.588726 for the monetary policy variables was less than upper bound critical value at the 1%, 5%, and 10% significance levels. Consequently, we deduced that the absence of co-integration suggested that these variables had no lasting association. The F-statistic of 2.402962 for the fiscal policy variables also fell below the upper bound critical value at the 1%, and 5% critical level. Consequently, we deduced that no relationship between these variables, implying the absence of a long-term association. After that, we estimated the models' short-run coefficients.

Table 4.4.1: Results of ARDL Bounds Test Co-integration

Monetary Policy			Fiscal Policy		
Test-statistics	Value	K	T-stat	Value	K
F-stat	0.588726	2	F-statistics	2.402962	2
Critical Value			Critical Value		
Significance	1(0)	1(1)	Sig.	1(0)	1(1)
10%	3.17	4.14	10%	3.17	4.14
5%	3.79	4.85	5%	3.79	4.85
2.5%	4.41	5.52	2.5%	4.41	5.52
1%	5.15	6.36	1%	5.15	6.36

Source: Researchers' Computation Using E-views 12 (2023)

4.4.2 Short-run estimates (Monetary Policy)

Table 4.6 shows that the interest rate's short-run coefficient was -0.000208, which suggests a adverse effect on the real GDP. It indicates that the real GDP will decline by 0.000208% for every one percent rise in interest rates. Since the p-value for this coefficient was higher than 5%, In terms of statistical significance, it was not significant at the 5% level. Conversely, the broad money supply's short-run coefficient was 0.008502, which showed that it had a favourable impact on the RGDP. This indicates that the RGDP will rise by 0.0085% for every one percent rise in the broad money supply. At the 5% level of significance, this coefficient was statistically significant.

With a coefficient of determination (R2) of 0.734452, the independent factors in the model were able to account for roughly 73.4% of the dependent variable's systematic fluctuation.

Other elements not part of the model but captured by the disturbance term accounted for the remaining 27.6% of the variation. The intercept, or C, stands for the value of the dependent variable, or 0.1828, when all independent variables are zero.

Table 4.4.2: ARDL Short-run estimates (Monetary Policy)

Variable	Coefficient	Std. Error	T-Statistic	Prob.
D(IR)	-0.000208	0.001750	-0.118639	0.9065
D(M3)	0.008502	0.004007	2.121613	0.0444
CointEq(-1)	-0.010805	0.036319	-0.297495	0.7686
C	0.182777	0.341314	0.535509	0.5972
R-squared	0.734452	F-stat	1456.162	
Adjusted R-squared	0.655768	Prob(F-stat)	0.000000	
Durbin-Watson Stat		2.193499		

Source: Researchers' Computation Using E-views 12 (2023)

$$LRGDP_t = 0.1828 - 0.00021IR_t + 0.0085M3_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

4.4.3 ARDL Short-run estimates (Fiscal Policy)

According to table 4.7's research, the government revenue's log's short run coefficient was negative (-0.002665), indicating that a rise in government income causes the RGDP to fall by 0.0027%. Nevertheless, because of its p-value exceeding 0.05, this coefficient is unimportant at the 5% critical level. Conversely, the government expenditure log's short run coefficient was 0.071346, meaning that an increase in public spending results in a 0.071 per cent rise in the real GDP. At the 5% threshold of significance, this coefficient is likewise statistically insignificant.

The explanatory factors account for about 84.6% of the total systematic mean variance of the dependent variable, as indicated by the coefficient of determination (R2) of 0.846278. Other variables that are not part of the model but are reflected by the disturbance term account for the remaining 15.4% of the variation. When all explanatory are zero, the value of the exogenous variable is represented by the intercept (C), which equals 0.5121.

Table 4.4.3: ARDL Short-run estimates (Fiscal Policy)

Dependent Variable: LRGDP

Variable	**Coefficient**	**Std. Error**	**T-Statistic**	**Prob.**
D(LGR)	-0.002665	0.022072	-0.120757	0.9050
D(LGE)	0.071346	0.039840	1.790810	0.0871
C	0.512067	0.315757	1.621714	0.1191
CoinEq(-1)	-0.050571	0.034206	-1.478450	0.1535
R-squared	0.846278	F-statistic	970.9265	
Adjusted R-squared	0.775191	Prob(F-statistic)	0.000000	
Durbin-Watson Stat		1.325378		

Source: Researchers' Computation, 2023

$$LRGDP_t = 0.5121 - 0.0027LGR_t + 0.0713LGE_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots (5')$$

4.5 Diagnostic Test (Monetary Policy)

The Breusch-Godfrey Serial Correlation LM test was utilised to determine whether autocorrelation existed in the models based on table 4.10. A p-value of 0.6834 was found in

the test findings, greater than the critical level of 0.05. Therefore, the null hypothesis that the models had no serial correlation, was accepted. To check for heteroscedasticity—the existence of non-constant variance in the stochastic variable—the Breusch-Pagan Godfrey test was used. Variance is assumed to be constant with a p-value of 0.7593, which is greater than 0.05, the test findings were revealed. As a result, the null hypothesis which predicted constant variance in the error term, was accepted. The existence of a linear connection among the dependent and independent factors was assessed using the Ramsey-Reset test, commonly referred to as the linearity test, along with the models' functional form.

The alternative hypothesis makes the assumption that the functional form is not accurately specified, while the null hypothesis makes the assumption that the functional form is correctly specified. The test findings for the monetary policy model revealed a p-value of 0.0256, which is less than 0.05 and suggests that the functional form of the model was not adequately defined. We fall to reject the alternative hypothesis. The Jarque-Bera test, also known as the Normality, to evaluate the factors normal distribution. The Jarque-Bera test statistic is 1.987379 and the corresponding p-value is 0.370208, which is higher than 0.05. Therefore, we fail to reject the null hypothesis and conclude that the residuals follow a normal distribution.

Table 4.5: Diagnostic Test (Monetary Policy)

Diagnostic test	**F- Stat**	**Prob. Value**
Serial correlation LM test	0.387287	0.6834
Heteroscedasticity Test	0.611579	0.7593
Ramsey-Reset test	5.699589	0.0256
Normality Test	1.987379	0.3702

Source: Researchers' Computation 2023.

4.5.1 Diagnostic Test (Fiscal Policy)

Since there is no serial correlation in the data, the null hypothesis is accepted and draw this conclusion based on Table 4.11, which demonstrates that the serial correlation LM test generated a prob. value of 0.0822 that was greater than 5% critical level. We accept the null hypothesis of constant variance of the error term since the heteroscedasticity test produced an F-statistic p-value of 0.6636, which is greater than the 0.05 level of significance. The functional form of the fiscal policy model was appropriately stated, according to the findings of the Ramsey-Reset test, which yielded a prob. value of 0.5224, which is greater than 5% critical level. Therefore, we accepted the null hypothesis. To verify that the variables' distributions were normal, the Jarque-Bera test was also performed.

Table 4.5.1: Diagnostic Test (Fiscal Policy)

	F- Stat	Prob. Value
Serial correlation LM test	2.838112	0.0822
Heteroscedasticity Test	0.747014	0.6636
Ramsey-Reset test	0.423292	0.5224
Normality Test: (Jarque-Bera)	5.091987	0.078395

Source: Researchers' Computation 2023

4.6 Discussion of Findings

The results of the investigation indicate that the real GDP and the wide money supply have a positive association, indicating that rising broad money supply is associated with rising economic growth. Since data from the Nigerian economy was used in the study, this conclusion also applies to Nigeria. For example, the Central Bank of Nigeria (CBN) raised the money supply in order to stimulate economic activity during Nigeria's economic slump in 2016, which resulted in a steady recovery of the economy.

Additionally, rate of interest have a adverse influence on the real gross domestic output. Put another way, a rise in interest rates will cause the GDP to decline. The findings of the investigation indicated a adverse correlation between economic growth and government revenue. This indicates that economic growth tends to decline as government revenue rises. At the 5% level, this association was not statistically significant, though. This suggests that a rise in government revenue could result in a fall in private investment and spending, which would then have an adverse effect on economic expansion. Additionally, there is a positive correlation between real GDP and government spending. This suggests that higher levels of public expenditure may stimulate economic growth.

In both monetary and fiscal policy models, the adjusted coefficient of determination was used to calculate the percentage of the dependent variable's volatility that the explanatory factors could account for. This outcome is consistent with research by Yakubu et al. (2013), Timothy and Ishola (2020), Aliyu and Mahmood (2019), and Ufoeze et al. (2018). Nevertheless, this discovery runs counter to the current study's findings. The modified coefficient of determination for the monetary policy model, according to the data, was 0.655768, meaning that rate of interest and the size of the money supply explained 65.6% of the changes in economic growth overall. Stated differently, the error term accounted for the remaining portion of the variation in economic growth, leaving 65.6% of the fluctuation explained by the model. Similarly, the adjusted coefficient of determination for the fiscal policy model was 0.775191, meaning that 77.5% of the shift in economic growth could be explained by government revenue and expenditure. This revealed that 77.5% of the modifications in economic growth was addressed by the model, with the error term accounting for the remaining fluctuations that were not explained.

5. CONCLUSIONS AND POLICY RECOMMENDATIONS

This research evaluated the influence of fiscal and monetary policies on Nigeria's economic growth using time series data spanning from 1986 to 2020. It is impossible to overstate the role these policies play in promoting economic growth in Nigeria, but their effectiveness hinges on the use of practical policy tools and quantifiable measures. Despite not being totally noteworthy, the results provide a noteworthy addition to the corpus of current literature. The study's goal of examining how monetary and fiscal policies affect economic growth was accomplished because the findings indicated that both measures boosted growth in the near term. The report concludes by recommending that the federal government and monetary authorities in Nigeria modify their policies in order to facilitate swift and steady economic growth, which will establish Nigeria as a major player in the international arena.

In light of its conclusions, the research suggested that the Central Bank of Nigeria carry out additional research to fully understand the function of the money supply and the fundamental causes of inflation in Nigeria, in order to overcome the difficulty of attaining the intended

outcomes of monetary policy. The bank should also look into alternative policy tools, such reserve requirements and open market operations, in addition to interest rates, in order to control inflation. Furthermore, to be able to enhance the effectiveness of fiscal policy in promoting economic expansion, the government ought to address the matter of dual taxation and other barriers that hinder the growth of medium-sized and small enterprises (SMEs).

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