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THE EFFECT OF MONEY SUPPLY AND INTEREST RATE ON NIGERIA'S ECONOMIC GROWTH

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Abstract

The aim of every independent nation is to achieve economic growth as it is a necessity to development. Therefore, the study investigates the impact of money supply and interest rate on economic growth in Nigeria spanning the period of 1991 to 2023 using Autoregressive Distributed Lag (ARDL) Bound Test approach. The dependent variable is real Gross Domestic Product growth rate (RGPR) while, the explanatory variables are monetary policy rate (MPR), Prime lending rate (PLR), and money supply (MS2). The result shows that there is no long run relationship among the variables employed. Also, monetary policy rate, Prime lending rate, and money supply have no significant impact on economic growth in Nigeria. The study therefore recommends among others that, government should not pay all her attention only on monetary instruments as major tools toward the achievement of economic growth, as such government should diversify and encourage capital investments in productive sectors of the economy such as agriculture, education, transport, power, health etc, that can translate to economic growth by increasing economic activities and labour skills.

Keywords: Money Supply, Interest Rate, Real Gross Domestic Product Growth Rate.

Introduction

Over the years, Nigeria has been managing its economy by changing its stock of capital. As a result of the 1981 oil price crash and the balance of payment (BOP) deficit experienced during that time, various stabilization strategies have been used, ranging from fiscal to monetary policy (Oluseyi, Olasehinde & Eweke, 2017). The link between money supply, interest rate and output has been getting increasing attention in recent times for the importance role it plays in economic growth in the emerging and industrialized economies (Hussan & Haque, 2017). Therefore, the fundamental roles of selected instruments of monetary policy (money supply and interest rate) cannot be over-emphasized in any economy, especially in terms of economic growth and management. (Abass & Christensen, 2014 & Abdul, et al., 2003). In every nation, the growth of the economy is a necessity as the monetary worth of all commodities and services generated in an economy during a given period, usually a year (Timothy, 2022) and any country's economic growth reflects its capacity to increase production of goods and services

(Ajayi, et al, 2017). Therefore, economic growth as one of the macroeconomic objectives in both developed and developing economies like Nigeria, can be attained and sustained with the regulation of money supply and interest rate as selected monetary policy measures to influence the economic activities in an economy.

Meanwhile, in an economy, money supply is the total amount of various kinds of money in circulation in a given country at a given period of time (Johnson, 1987; Jhingan, 2005; Abdullahi, 2009 cited in Gatawa, Abdulgafar and Olarinde (2017)) which is the quantity of money in the circulation.

On the other hand, interest rate is seen as bank rate or monetary policy rate (MPR) and it is one of the intermediate monetary policy instruments in the domain of Central Bank to regulate money supply and as well as inflation rate (Anyaele, 2003) in Nigeria. It is the cost of borrowing which is essential element of investment in an economy and it can also be used by apex bank to regulate the money supply in an economy.

If the apex Bank desires to reduce or contrast money supply by reducing the power of commercial banks to lend, it will increase interest rates, while in case of an expansionary monetary policy, the reverse will be the case. Reduced interest rates are essential to instigate economic growth and attain low inflation levels (Corazon, 2014). Therefore, there is need to examined the impact of money supply and interest rate on economic growth in Nigeria.

Economy of Nigeria has been facing a lot of challenges with respect to economic condition, which is a source of threat to the growth prospects and stability. Some of the problems facing the Nigerian economy as a result of low economic growth or instability are low productivity, persistence rise in inflation, low per capita income and exchange rate volatility (Kobi, 2024). These are the sources of rise in unemployment and lack of economic development in Nigeria. To overcome these economic challenges and achieve economic growth and stability in Nigeria, relevant monetary policy instruments such as money supply and interest rate are needed to address both long and short run problems.

However, despite the several research carried out by scholars like Ogwuche and Obiaje, 2023; Gatawa, Abdugar and Olarinde, 2017; Nwoke, Ihemeje and Anumadu (2016), Dinga and Khobai (2017), Matarr and Momodu (2021) and Mohamed (2024), yet, economic growth is still low and unsustainable in Nigeria. Meanwhile, several related studies carried out by different researchers on the impact of money supply and interest rate on economic growth have conflicting conclusions. There are a lot of mixed findings and inconclusive result on the impact of money supply and interest rate on economic growth, for instance, Mohamed (2024), Matarr and Momodu (2021), Gatawa, Abdugar and Olarinde (2017), and Dinga and Khobai (2017) found and believe that there is no significant relationship between interest rate and economic growth which implies that, interest rate as a monetary policy instrument is not effective in achieving economic growth in Nigeria. While, Ogwuche and Obiaje (2023), Nwoke, Ihemeje and Anumadu (2016), and Njimanted, Akume and Mukete (2016) found that there is significant relationship between interest rate and economic growth which implies that, interest rate as a monetary

policy instrument is an effective tool in achieving economic growth in Nigeria.

On the other hand, while, Mohamed (2024), Opata and Obasikene (2020), Dinga and Khobai (2017), Alfa, Ugar and Ayodeji (2020) and Njimanted, Akume and Mukete (2016) found that there is significant relationship between money supply and economic growth which implies that, it is a policy measure tool that is effective in achieving economic growth in Nigeria, also, Ogwuche and Obiaje (2023), Odumor (2019), Gatawa, Abdugar and Olarinde (2017), and Nwoke, Ihemeje and Anumadu (2016), found and opined that there is no significant relationship between money supply and economic growth which implies that, money supply as a monetary policy instrument is not effective in achieving economic growth in Nigeria. On the same issue, while some related studies (Gatawa, Abdugar & Olarinde (2017), Nwoke, Ihemeje and Anumadu (2016) Dinga and Khobai (2017), and Njimanted, Akume and Mukete (2016)) revealed interest rate exacts negative impact on economic growth, others like Ogwuche and Obiaje (2023) founds that interest rate posit positive impact on economic growth. Also, Ogwuche and Obiaje (2023), Gatawa, Abdugar and Olarinde (2017), Dinga and Khobai (2017), and Njimanted, Akume and Mukete (2016) and Opata and Obasikene (2020), shows that money supply exerts positive impact on economic growth while, Alfa, Ugar and Ayodeji (2020) and others claimed that money supply is negatively related to economic growth in Nigeria.

From the empirical evidences, it can be observed, inconclusive and inconsistent results exist on the impact of money supply and interest rate on economic growth in Nigeria. Also, the various researchers have not established a clear-cut direction of the relationship between money supply, interest rate and economic growth. Hence, the impact of selected monetary components on economic growth is still not clear in the previous literature and there is no consensus on the subject matter and it is therefore an importance research issue which is the reason for this study. The general objective of this study is to examine the impact of money supply and interest rate on economic growth in Nigeria. While the specific objectives include to: Investigate the impact of monetary policy rate on economic growth in Nigeria;

determine the impact of prime lending rate on economic growth in Nigeria and examine the impact of money supply on economic growth in Nigeria

2. Literature Review

2.1 Conceptual Review

Economic Growth

Timothy (2022) describes economic growth as measured with gross domestic growth, as the monetary worth of all commodities and services produced in an economy during a given period of time, usually a year. Also, Ogbulu, 2012 sees economic growth as a steady increase in the output of goods, services, and job opportunities with the express purpose of improving citizens' economic and financial wellbeing. However, economic growth is a necessary component of long-term development (Adeagbo, 2019 & Ogwuche & Obiaje, 2023).

Money Supply

The money supply is the sum total of all the currency and other liquid assets in a country's economy in a given period of time. The money supply includes all cash in circulation and all bank deposits that the account holder can easily convert to cash. Governments issue paper currency and coins through the central bank treasuries, or a combination of both. To keep the economy stable, banking regulators increase or reduce the available money supply through policy changes and regulatory decisions (Investopedia, 2024).

Generally, money supply is taken as the total amount of money (e.g. currency and demand deposits) in circulation in a country at any given time. Money supply is classified into narrow money and broad money in Nigeria. In Nigeria, the narrow money supply (M1) is defined as currency outside the banks plus demand deposits of commercial banks plus domestic deposits with the central bank, less federal government deposits at commercial banks. In simple terms, M1 is defined as $M1 = C + D$ Where M1 = narrow money supply C = Currency outside banks D = Demand deposits. Ajayi (1978) contends that M1 is the appropriate definition of money in Nigeria and broad money, on the other hand, includes narrow money assets in addition to those assets which have the quality of liquidity. They can be quickly and readily converted to cash and the conversion is achieved with little or no loss in terms of either

interest penalty or capital loss through force sale. In the Nigerian context, broad money (M2) is defined as M1 plus quasi-money which means M2 includes not only notes and coins and bank current accounts, but also bank deposits and some building society deposits (Ajayi, 1978)

Therefore, quasi- money as used here is defined as the sum of savings and time deposits with the commercial banks. Thus, M2 is symbolically shown as $M2 = C+D+T+S$ Where; M2 = broad money C = Currency in circulation D = Demand Deposits T = Time Deposits S = Savings deposits Time deposits as used here are those obligations of the banks on which interest is paid and which at least potentially or formally, can be made available to the depositors after some delays and notice (Anyanwu, 1993).

Interest Rate

Interest can be defined as the extra payment made by a borrower to the lender for the money borrowed and is shown as a percentage rate per a particular period of time, sometimes in a year (Olaleye, et al, 2020). Interest rate has gained considerable attention from economists, lenders, and borrowers alike, as it has to a large extent played a very important role in the economy. Interest rate facilitates the flow of funds from lenders to borrowers. It is the cost of borrowing and shows what a borrower pays to the lender for the use of money. Interest rate aids the flow of credit in the economy and helps financial entities such as corporate organization, banks, mutual funds and insurance companies carry out their intermediation role (Monnet and Weber, 2001). However, high interest rate discourages borrowing thereby slowing down the economy. Low interest rate, on the other hand, encourage borrowing and economic growth such that the lower the interest rate, the higher the profit expectation (other things being equal) as businesses are expected to pay small portion of their income as interest for fund borrowed (Luca, (1982). On the other hand, the higher the interest rate, the lower the profit margins. (Evans and Honkapohja, 2003)

2.2 Theoretical Review

Keynesian Theory

The Keynesian General Theory of Employment, Interest and Money was first published in 1936. The

publication of this book brought a paradigm shift in economic theory, making Keynesianism to be widely embraced by nation states as the bedrock of macroeconomic policy with interest rate as the cardinal of the Keynesian analysis (Ovat, et al, 2022). According to Keynes (1936), interest rate determines the level of investment, employment, and output in the economy. In this respect, the growth of the economy is closely linked to interest rate as it is used by the monetary authority to influence allocation of resources and production activities Tily, (2015). The theory sees interest rate as the reward for parting with liquid cash for a specific period and noted that interest rate is determined by the willingness to have money in cash form or be ready to part with it which he called, the liquidity preference. Keynes saw liquidity preference as a determining factor of the amount of money that is held by the masses when the prevailing interest rate is known. He thus identified three motives of liquidity preference and opined that the supply of money and the demand for money determine interest rate level (Dosi, et al, 2013). The theory is relevant to this study as an increase in money supply decreases interest rate which creates a positive impact on marginal efficiency of capital and whose multiplier effects are increase in economic activities such as: expansion in investments, increase in aggregate demand for goods and services, increase in employment, income and overall economic growth. On the other hand, the reverse will be the case if there is an increase in interest rate (Ademola, et al, 2023).

2.3 Empirical Review

Mohamed (2024) examines the impact of money supply, interest rate and inflation rate on the economic growth in Morocco from 1990 to 2020 employing a quantitative analysis based on the Vector Autoregression (VAR) model. The explanatory variables as money supply, interest rates, and inflation using gross domestic product (GDP) as the regressand. The findings revealed that money supply significantly boosts economic growth, while interest rates have negative effects. Moreover, inflation positively influences short term economic growth. Based on the findings, the study recommends the emphasizes on the need for evidence-based decision-making and proactive policy measures to steer the economy towards stability and prosperity. By continuing to explore these relationships and refine

economic models, stakeholders can enhance their understanding of the economic landscape and implement strategies that promote long-term growth and development in Morocco.

Ogwuche and Obiaje (2023) carried out study on the impact of monetary policy on economic growth in Nigeria, using annual data spanning the period 1985 to 2022 employing the Autoregressive-Distributed Lag (ARDL) approach using exchange rate, inflation rate, interest rate, and money supply as the independent variables while, real Gross Domestic Product as the dependent variable. The findings of the study revealed that, in the long run only interest rate has significant effects on economic growth while exchange rate, money supply, and interest rate have a positive relationship with economic growth. Also, it was only the inflation rate that has a negative relationship with economic growth in Nigeria. Given the important role of interest rates in promoting economic growth, the study recommends that a significant decrease in interest rates will lead to an increase in the growth of the economy as the reduced interest rate will serve as bait for investors in the Nigerian economy.

Matarr and Momodou (2021) evaluated the effects of interest rate on economic growth in Gambia over the period 1993 to 2017. The Vector Error Correction Model (VECM) is used to analyse the relationships between the dependent variable (Gross Domestic Product) and independent variables (Real Effective Exchange Rate and Real Interest Rate), both in the short-run and long-run. The study found that there is no short-run association between the growth of the Gambian economy and interest rate but that there is a long run connection that runs from real interest rate and real exchange rate to GDP. Based on these findings, the paper recommends that, the government through the Ministry of Finance and Economic Affairs to prudently manage the Gambia's budget by avoiding unnecessary expenditures that could lead to budget deficits as budget deficits are key drivers that cause interest rates to rise, which in turn are inimical to economic growth.

Opata and Obasikene (2020) using Ordinary Least Square (OLS) evaluated the impact of money supply on economic growth in Nigeria, 1986 to 2019. The broad money supply and ratio of private sector credit to GDP were employed as the explanatory variables

and Gross Domestic Product (GDP) as the dependent variable representing economic growth. The study found out that broad money supply and ratio of Private sector credit to GDP has positive and significant impact on economic growth in Nigeria. The study recommended among others that, the CBN should be made more effective in its monetary management by making all financial markets organized so as to accentuate the effects of monetary policy variables like Broad money supply.

Alfa, Ugah, and Ayodeji (2020) examined the impact of monetary policy on economic growth in Nigeria spanning from 1980 to 2019 using Vector Autoregressive (VAR) Model. The independent variables are currency in circulation (CIC), narrow money supply (M1) and broad money supply (M2) while, the dependent variable is real gross domestic product (RGDP). Findings from the study show that CIC has a positive and significant impact on economic growth. M1 is a weak predictor of RGDP, and has a negative and insignificant impact on economic growth (RGDP). While, the M2 has a negative significant impact on economic growth (RGDP) in Nigeria. Based on the findings, the study recommended that the Central Bank of Nigeria (CBN) should encourage economic growth through appropriate control of currency in circulation outside banking system.

Employing over-parameterized and parsimonious error correction models, Odumor (2019) evaluates the impact of money supply on the growth of the Nigerian economy using annual data from 1976-2015. The study uses real Gross Domestic Product as the dependent variable while, money supply, gross fixed capital formation and labour force as the explanatory variables. The findings of the study shows that money supply has no significance on economic growth in the short-run, while in the long-run money supply is negatively related to economic growth. However, labour force impact significantly on economic growth both in the long-run and in short-run. Meanwhile, investment (GFCF) is significant in long-run and not in the short-run, this is expected because capital accumulation takes time to yield returns. Based on the findings, the study recommends that government should not pay so much attention on money supply as a major tool of monetary policy towards the achievement of economic growth and thus,

government should encourage capital investments in productive sectors of the economy such as agriculture, education (which will help to enhance the quality of labour), transport, power, health etc.

Using Vector Error Correction Model (VECM), Gatawa, Abdulgafar and Olarinde (2017) evaluated the impact of money supply, inflation, and interest rate on Economic Growth in Nigeria using time series data from 1973-2013. Gross Domestic Product (GDP) as the dependent variable while the independent variables are money supply, inflation, and interest rate. The results of the VEC model revealed that there a positive impact of broad money supply while inflation and interest rate exhibit a negative impact on economic growth. Based on the findings, the study therefore recommended for an expansionary monetary policy, zero interest based finance capable of attracting investment in the real sector of the economy and arresting the inflationary tendency associated with monetary policy.

Dinga and Khobai (2017) investigates the dynamic impact of broad money supply on economic growth (GDP) per capita in South Africa using time-series data from 1980 to 2016. The study employed the autoregressive distributed lag (ARDL)-bounds testing approach. The regressors of the study are Broad money supply (M3), Interest rate (INT), Inflation rate (INF) and the regressand is Gross Domestic Product (GDP) per capita. The findings reveal that there is statistically significant positive relationship between money supply and economic growth while, Interest rate exerts negative and insignificant impact on economic growth both in short run and long run. The study therefore recommends that government of South Africa should maintain consistency and follow “the Taylor1 rule” to allow money supply to increase at a steady rate keeping pace with the economic growth.

Nwoko, Ihemeje and Anumadu (2016) investigated the impact of monetary policy on the economic growth of Nigeria covering the period of 1990-2011. The influence of money supply, average price, interest rate and labour force were tested on Gross Domestic Product as the dependent variable. Findings from this study indicate that average price and labour force have significant influence on Gross Domestic Product while money supply was not significant. Interest rate was negative and statistically significant.

It is therefore, recommended that Central Bank Monetary Policy could be an effective tool to encourage investment, reduce unemployment, reduce lending rate and stabilize the economy of Nigeria.

Njimanted, Akume and Mukete (2016) examined the impact of key monetary variables on the economic growth of the CEMAC Zone using the Vector Autoregressive (VAR) Model as analytical technique. The study interacts money supply, interest rate, inflation rate, and economic growth. Based on the (VAR) methodology, the study revealed that key monetary policy variables influence economic growth of the CEMAC zone in different ways with inflation rate as the impact factor. The study recommends that, the Central Bank of CEMAC should be given complete instrumental autonomy to operate depending on a set of in-built targets by the individual countries of the zone. Effective monetary targeting and accommodating monetary policies should be designed and implemented as the need arises with little or no political motives.

In summary, from the review empirical evidences, the author discovered that there are limited empirical evidence on the combine impact of money supply and interest rate policies measures (Mohamed, (2024); Gatawa, Abdulgafar and Olarinde (2017), in addressing the issue of economic growth, hence, this study added to literature on the impact of money supply and interest rate on economic growth in Nigeria.

3. Methodology

The research design employed in this study is expo facto research design which do not allow the manipulation of data by the researcher. The study employed time series annual data sourced from secondary sources and the data were sourced from the Central Bank of Nigeria statistical bulletin of various volumes for the country from 1991 to 2023. This study is anchored on the Keynesian General Theory of Employment, Interest and Money, which relates to the principle of effective demand, and the functional and econometric model for this study is given as follows; $RGPG = f(MPR, PLR, MS2,)$ (1)

$$RGPG = \rho + \pi_1 MPR + \pi_2 PLR + \pi_3 MS2 + \mu \quad (2)$$

Where,

RGPG = Real Gross Domestic Product Growth Rate

MPR = Monetary Policy Rate

PLR = Prime Lending Rate

MS2 = Broad Money Supply, while

μ = Random term.

The analysis begins with descriptive statistics and the stationarity test using the Phillip Perron (PP) Test was carried out and showed that the variables are stationary at mixed order of zero and one. Therefore, from the result of the unit root test, the appropriate method of analysis for this study was the Autoregressive Distributed Lag bound test and the diagnostic test such as autocorrelation test, normality test, and CUSUM and CUSUM squared test were carried out in the study.

4. Result and Discussion

Table 1: Phillip Perron (PP) Unit Root Result

Variable	Test of Equation	Level Stat	PV	First Difference		Order of Integration
				Stat	PV	
RGPG	I	-3.6257	0.0107			
	I & T	-4.1667	0.0038			I(0)
	N	0.6513	0.4269			
MPR	I	-2.5092	0.1228	-6.6239	0.0000	I(1)
	I & T	-2.3866	0.3790	-6.6605	0.0000	
	N	-0.1207	0.6344	-6.7364	0.0000	
MS2	I	-2.1860	0.2153	-4.0577	0.0040	I(1)
	I & T	-1.2930	0.8716	-4.8286	0.0029	
	N	6.5513	1.0000	-0.8876	0.3225	
PLR	I	-2.8952	0.0570			I(0)
	I & T	-4.5402	0.0052			
	N	-0.5119	0.4868			

Source: Author's Computation

From the result of the unit above in table 1, it shows that there is a mixed order of integration. The Real Gross Domestic Product Growth Rate (RGPG) and Prime Lending Rate (PLR) are stationary at level as their respective probability value in the PV column of the unit root at level is less than 5%, mostly at their intercept and trend. Meanwhile, the MPR and MS2 variables are stationary at first difference as their respective probability value in the PV column of the unit root at first difference is less than 5%. Hence, the

variables are integrated at order 0 and 1 which is a valid reason to employ ARDL Bound test method of analysis.

4.1 Bound Test

Based on the result of the unit root test, the ARDL Bound test is carried out to test for the existence of long run or equilibrium relationship in the model. Below is the result of the bound test carried out.

Table 2: Bounds Test for the Existence of Cointegration

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
		10%	-3.13	-3.84
F-statistic	2.998248	5%	-3.41	-4.16
K	3	2.5%	-3.65	-4.42
		1%	-3.96	-4.73

Source: Author's Computation

From the bound test result in table 2 above, test of cointegration revealed there is no long run relationship among the variables employed in the study (RGPG, MS2, PLR, and MPR) as the computed F-statistic value (2.998) is less than both the lower and the upper bounds at 5 percent significance level. Using Pesaran *et al* (2001), thus, the null hypothesis

of no cointegration is accepted, indicating none existence of long run relationship among the variables and this necessitated the estimation of first difference model using the Ordinary Least Square (OLS) to determine the impact of explanatory variables on the dependent variable.

Table 3: First Difference Model Using OLS

Dependent Variable: DLRGPG				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.066915	0.224502	-0.298058	0.7680
DLRGPG(-1)	-0.372208	0.170769	-2.179599	0.0385
DLPLR	-0.623631	0.845672	-0.737438	0.4675
DLMS2	0.085736	0.907848	0.094438	0.9255
DLMPR	0.820807	0.562262	1.459830	0.1563
R-squared	0.257413	Mean dependent var		-0.026235
Adjusted R-squared	0.143169	S.D. dependent var		0.825139
S.E. of regression	0.763791	Akaike info criterion		2.445645
Sum squared resid	15.16780	Schwarz criterion		2.676934
Log likelihood	-32.90750	Hannan-Quinn criter.		2.521039
F-statistic	2.253184	Durbin-Watson stat		2.203721
Prob(F-statistic)	0.090749			

Source: Author's Computation

From the result of table 3 above, it was revealed that Prime lending rate (PLR) exerts a negative impact on

economic growth (RGPG) in Nigeria but not statistically significance at 5 percent level. This

indicates that a unit increase in PLR will lead to 0.624 unit decrease in economic growth and vice versa, which means there is inverse relationship between PLR and economic growth in Nigeria. Also, broad money supply (MS2) and monetary policy rate (MPR) exert positive but not statistically significant impact on economic growth at 5 percent significance level. This also shows that a unit change in MS2 and MPR will result to 0.086 and 0.82 unit change in economic growth in Nigeria respectively. The result

shows that none of the explanatory variables employed in the study has significant impact on economic growth because their respective probability value is greater than 0.05 and this implies none of the independent variables is a major determinant of economic growth in Nigeria.

4.2 Post Estimation Diagnostic Tests

The post estimation tests carried out in the study were tests for serial correlation, normality and stability test.

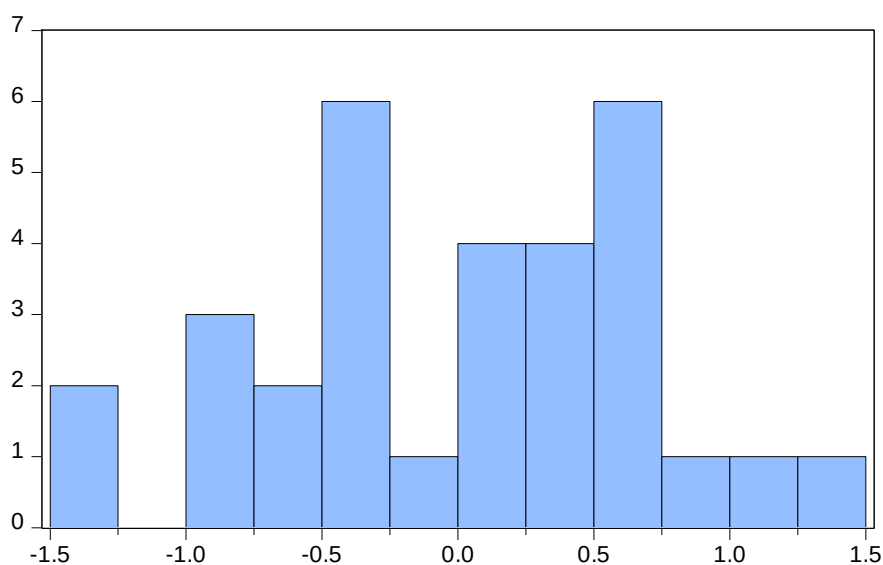
Table 4: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.500717	Prob. F(2,24)	0.2432
Obs*R-squared	3.445908	Prob. Chi-Square(2)	0.1785

Source: Author's Computation

From the Breusch Godfrey serial correlation LM test conducted and presented in table 4 above, it revealed that the model is absence of autocorrelation or serial correlation as the observed R-squared value of 3.45

with prob. Chi-square of 0.18 is greater than 5% level of significance. The study therefore, accepts the null hypothesis that there is no serial correlation in the model.



Series: Residuals	
Sample 1993 2023	
Observations 31	
Mean	5.19e-17
Median	0.133641
Maximum	1.308606
Minimum	-1.461804
Std. Dev.	0.711051
Skewness	-0.192149
Kurtosis	2.317072
Jarque-Bera	0.793180
Probability	0.672610

Fig

1: Normality Test at 5% level of significance

Source: Author's computation

From Fig 1 above, the normality test result revealed that the residuals of the study are normally distributed as the p-value (0.672) of the Jarque-Bera is greater than 5% significance level. The Jarque – Bera normality test is used to test whether or not the residuals are normally distributed.

4.3 Stability Test

The stability tests for the model used in this study to know if it is stable are CUSUM and CUSUM of Squares tests.

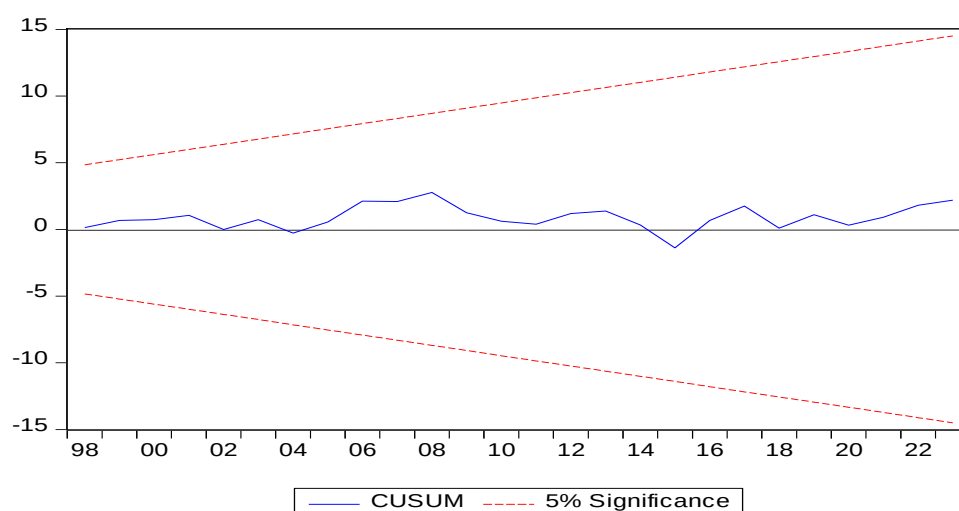


Fig 2: CUSUM Test Result at 5% level of significance

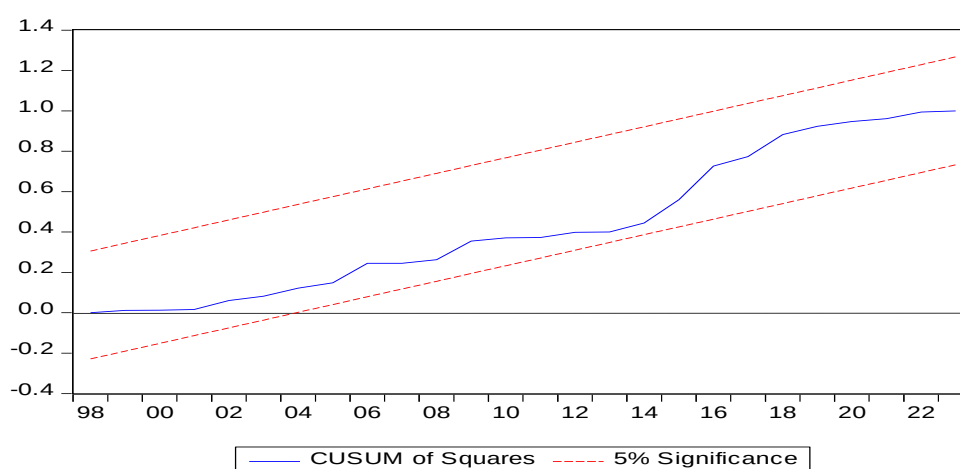


Fig 3: CUSUM of Squares Test Result at 5% level of significance

The fig. 2 and 3 which is the result of CUSUM and CUSUM of squares revealed that the model of the study is stable as the plots of the CUSUM and CUSUMsq is within the five per cent critical bound. These are evidences that the parameters of the model do not suffer from any structural instability over the period of study. In other words, all the coefficients in the error correction model are stable.

4.4 Discussion of Findings

Objective one: To investigate the impact of monetary policy rate on economic growth in Nigeria. Findings from the analyzed data result shown that, monetary policy rate (MPR) is not statistically significant and has positive impact on economic growth in Nigeria. This is in line with the findings of Dinga and Khobai (2017) and contrary to the findings of Gatawa, Abdulgafar and Olarinde (2017), Ogwuche and Obiaje (2023) and Nwoko, Ihomeje and Anumadu (2016). The result of the study implies that interest

rate is not a major determinant of economic growth in Nigeria.

Objective two: To determine the impact of prime lending rate on economic growth in Nigeria

From the findings of the analyzed data, we observed that prime lending rate (PLR) is not statistically significant and has negative impact on economic growth in the short run in Nigeria. This is in line with a priori expectation. This also means that prime lending rate is not economic variable that can influence the level of economic growth but other factors.

Objective three: To investigate the impact of money supply on economic growth in Nigeria

Findings from the estimated result also shows that money supply (MS) is not statistically significant and exerts positive impact on economic growth during the period of study in the short run in Nigeria. This is also in line with the findings of Nwoko, Iemeje and

Anumadu (2016), Gatawa, Abdulgafar and Olarinde (2017), Odumor (2019) and contrary to the findings of Dinga and Khobai (2017), Alfa, Ugah and Ayodeji (2020), Okpata and Obasikene (2020) and Mohamed (2024). It is in line with the a priori expectation.

However, all the variables employed in the study are found not to be among the major determinants of economic growth in Nigeria for the period under review.

5. Conclusion and Recommendations

This study empirically investigated the impact of money supply and interest rate on economic growth in Nigeria from 1991 to 2023. The dependent variable was real Gross Domestic Product growth rate (RGPG) was the dependent variable, while the independent variables were broad money supply (MS2), monetary policy rate (MPR) and prime lending rate (PLR). The study made use of secondary data sourced from Central Bank of Nigeria statistical Bulletin, 2023. The data were analyzed using Autoregressive Distributed Lag Bound Test Technique and the corresponding OLS method as it was found that there is no long run relationship among the variables used. Based on the findings the study concludes that: Broad money supply plays no significant role in the determination of economic growth in Nigeria; monetary policy rate does not play significantly impact on economic growth in Nigeria. This also means that monetary policy rate is not a key determinant variable of economic growth in Nigeria and finally, prime lending rate negatively and insignificantly impacts on economic growth in Nigeria. This also means that, prime lending rate is not so essential in the determination of economic growth in Nigeria.

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Based on the findings of the study, the following recommendations were made:

1. Government should, through monetary authorities reduce interest rate to increase money supply significantly which will increase economic activities, thereby leading to economic growth in Nigeria. This can be achieved by instituting an expansionary monetary policy by low interest rate, which will attract investment in the real sector of the economy which can help to achieve economic growth.
2. Monetary policy rate should be properly administered to make a necessary and significant impact in stimulating economic growth. Government should encourage reduced monetary policy rate which will encourage commercial and industrial banks to direct their lending policy to productive sector thereby creating employment which will trickle down to sustained economic growth.
3. Government should make Central Bank Monetary Policy to be an effective tool to encourage investment, create employment, reduce lending rate and stabilize the economy of Nigeria and instigate economic growth.
4. Government should not pay all her attention only on monetary instruments as major tools toward the achievement of economic growth, as such government should diversify and encourage capital investments in productive sectors of the economy such as agriculture, education, transport, power, health etc, that can translate to economic growth by increasing economic activities and labour skills.

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