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Influence of Monetary Policy on Nigerian Economic Growth: A Comprehensive Study

Surajudeen Tiamiyu
Department of banking and Finance, Osun State University, Osogbo, Nigeria.
isholasurajudeen26@gmail.com,

Julius Agwu Ogar
Department of banking and Finance, Osun State University, Osogbo, Nigeria.
ogarjully@yahoo.co

Israel Adebowale Agunbiade
Department of banking and Finance, Osun State University, Osogbo, Nigeria.
agunbiadeadebowale98@gmail.com

Aderemi Adetunji Abdulazeez
Department of Accounting, Osun State University, Osogbo, Nigeria.
azeezgoodness@gmail.com

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Abstract
This research investigated the influence of monetary policy on Nigerian economic growth within the period of 2000-2023. To attain the objective of the study, multiple linear regression model was specified for study from data obtained through Central Bank of Nigeria (CBN) Statistical bulletin of 2023. The finding shows that money supply (t-stat 16.86 p-value= 0.00 < 0.05) and exchange rate (t-stat = 2.25, p-value = 0.04 < 0.05) level of significant has positive significant influence on economic growth in Nigeria and inflation rate (t-stat = -3.67, p-value = 0.00 < 0.05) level of significant has negative influence on economic growth in Nigeria under the study period. But revealed that interest rate (t-stat = 1.26, p-value = 0.22 > 0.05) and monetary policy rate (t-stat = -1.70, p-value = .0-11> 0.05) level of significant have an insignificant impact on economic growth positively and negatively. There was existence of a long run relationship between monetary policy and Nigerian economic growth at trace test Engen value and maximum Engen value. Inflation, monetary policy rate, and the exchange rate bi-directionally caused economic growth, while the money supply and interest rate unidirectional caused economic growth. The study recommended that maintaining strategic monetary expansion, closely observing the expansion of the money supply, and using monetary policy as a primary tool for economic growth were all advised.

Keywords: Money Supply, Interest Rates, Inflation Rates, Monetary Policy Rates, GDP, and Exchange Rates

I. Introduction

Monetary policy as a technique of economic management conveys sustainable economic growth and development of nations and formal articulation of effective economic aggregates (David & Obiaje, 2023). Thus, monetary policy instability has manifested itself in several forms starting from money supply to inflation, interest rate, monetary policy rate, exchange rate and many more over three decades ago (Mehar, 2018). Reducing this wreck has therefore given birth to the formulation of various policies to address the problems; amongst these policies is the monetary policy which its conditions sometimes degenerate into economic recession all over the world (David & Obiaje, 2023). Its objectives are adjudged to be paramount in the achievement of both internal and external balances with the promotion of the economic growth of a nation (Musa & Idris, 2022). Nevertheless, it should be noted that both the monetary policy and macroeconomic policies of governments all over the world, developed and developing ones can be diverse in terms of the measures employed (Oseni & Oyelade, 2023).

Economic growth (EG) is a key policy objective of any government that is essential in reducing the poverty level, creating employment opportunities, bridging the inequality gap, plus raising the general standard of living populace and making income distribution easier to achieve (Salami &Toriola, 2021). EG is highly important in the present changing world as it based on a country's economic health and status which relates to an increase in a country's capacity to create

products and services from one period to the next (Idan& Badan, 2022). GDP, which quantifies the value of all final products and services produced inside the local country in one year, is a growth indicator (Gumbau-Albert & Maudos, 2022). The EG of any country decides the future of the country as different countries adopt different measures to bring prosperity to their economies (Dima, 2021), but there are certain limitations that act as a hurdle to EG such as inequalities: economic development that does not alleviate relative poverty because of reliance on income distribution (Bogoviz, et al., 2022). The economic expansion can result in negative externalities like pollution, increased crime rates, and traffic congestion, all of which lower living standards.

Generally, the prevailing economic situation of a nation (whether in a recession or a boom) dictates the monetary policy to be used in an economy to achieve the stated monetary objectives in the country, either expansionary or contractionary (Salami &Toriola, 2021). Nigeria, as Africa's largest economy, has experienced significant economic fluctuations over the past few decades and is characterized by its heavy dependence on oil exports, a large agricultural sector, and a growing services industry (Musa & Idris, 2022). This unique economic composition presents both opportunities and challenges for policymakers, particularly in the realm of monetary policy. The country's monetary policy, primarily implemented by the Central Bank of Nigeria (CBN), plays a crucial role in shaping the economic landscape (Oseni & Oyelade, 2023). Meanwhile, the effectiveness of these policies in promoting sustainable economic growth has been a subject of ongoing debate among economists, policymakers, and researchers (Temitope & Magaji, 2023). The situation still remains the same despite Nigeria having the strongest economy in Africa as it abruptly entering a recession, a situation that has negatively impacted the growth and development of the economy through rising unemployment rates, skyrocketing poverty levels, and enormous external debt (Magaji, et al., 2019). Aside the different monetary regimes of the Central Bank of Nigeria used over the years, inflation still constitutes a significant threat to Nigeria's economic growth. Consequently, it becomes sacrosanct to examine the effectiveness of the Central Bank of Nigeria's monetary policies over the years as it faces numerous challenges, including high inflation rates, exchange rate volatility, money supply, interest rate, monetary policy rate and inconsistent GDP growth with the specific objective of assessing the influence of this monetary policy instruments on the economic growth of Nigeria between 2000 and 2023.

Objectives of the Study

Following the research questions these objectives were formulated to analyze the relationship between monetary policy rate and Nigerian economic growth; examine the impact of broad money supply on the Nigerian economic growth; assess the extent to which change in inflation rate affected the Nigerian economic growth; determine the effectiveness of interest rate stimulating Nigerian economic growth; and evaluate the effect of exchange rate on the Nigerian economic growth?

Research Hypotheses

The research hypotheses are stated in null form below;

H1: There is no significant relationship between monetary policy rate and Nigerian economic growth.

H2: Broad Money supply has no significant impact on Nigerian economic growth;

H3: Change in inflation rate do not significantly affect Nigerian economic growth;

H4: The effectiveness of interest rate does not stimulate Nigerian economic growth;

H5: Exchange rate does not have significant effect on Nigerian economic growth.

II. Literature Review

Conceptual Review

Monetary Policy

El-Yakub et al (2024) sees monetary policy (MP) as a guiding idea or procedure for developing, controlling, and upholding monetary factors in an economy that support growth. In a similar study, David and Obiaje (2023) viewed MP as the combination of measures designed to regulate the value, supply, and cost of money in an economy in consonance with the level of economic activities. As corroborated by Adegbile (2019) MP is the macroeconomic policy laid down and carried out by the central bank of a nation with set of tools aimed at influencing the various

macroeconomic indicators through the monetary system of the state. MP improvement plays an important role in ensuring macroeconomic and financial stability growth of any nation (Tursunkulovich, 2024).

Monetary Policy Rate

According to Ovat et al (2022) monetary policy rate is systematically identified as a policy rate that ensures price stability and impact economic growth without necessarily affecting other macroeconomic variables adversely, likewise it is a practical signaling device that permits banks to borrow and lend around this rate. This rate controls the amount of money in circulation at any given time, though to avoid adverse implications of induced cycles of economic bubble arising from lowering interest rates, the current trend by monetary authorities worldwide has moved policy rates towards the level of inflation because is of great significance to the economy as it impacts growth, credit and price developments, as well as money market interbank interest rate. (David & Obiaje 2023).

Money Supply

Money supply according to David and Obiaje (2023) comprises of narrow money which includes currency in circulation with non-bank public and current account balances with banks and broad money that covers narrow money plus savings and time deposits as well as foreign-denominated account balances. Ovat et al., (2023) opined that money supply represents the total amount of money available in an economy at a particular point of time and its significance can hardly be over emphasized, particularly for those countries that attach their monetary policy to monetary aggregates.

Exchange Rate

An exchange rate is the rate at which one currency will be exchanged for another likewise one country's currency in relation to another currency (Adegbile, 2019). As reported in Ibrahim & Daud, (2022) exchange rates are determined in the foreign exchange market which is open to a wide range of different types of buyers and sellers, and where currency trading is continuous. According to Mehar, (2022) depreciation of the domestic currency would push up inflation through exchange rate, but would have little effect on domestic output by traditional trade channels, at least in the near term.

Inflation Rate

Inflation occurs when there is an increase in the price of goods and services and it is seen persistent when above the specified benchmark. For instance, an increase in the money supply can gravitate to a higher price level in a matter of time (Anochiwa & Maduka, 2015). Inflation is another important variable taken to the model. As stressed by Adaramola & Dada, (2020) inflation refers to a general increase in price levels due to an increase in the quantity of money; the growth of the money stock grows more quickly than the economy's level of production. It is because; inflation has two-way relationships with both GDP and Monetary policy.

Interest Rate

It is the rate charged by suppliers of money and credit. Those borrowers for investment and consumption spending pay interest for the use of credit, as such increase in interest rates discourages borrowers from borrowing from banks and a reduction in interest rates encourages borrowing from banks. Interest rate is a very important tool in monetary policy, it is a bank rate in which the bank gives loan to other commercial bank likewise, the deposit rates an investor or depositor earns in the savings and also, the call money rate that bank lends from another bank (David & Obiaje, 2023). Adekunle, et al, (2018) refers to interest rate as the primary instrument of price stability target of monetary policy as the interest rate channel is recognized by most economists as the most effective channel of monetary policy transmission.

Economic Growth

Economic growth implies raising the standard of living of the people and reducing inequalities in income distribution (Ufoeze, 2018). Timothy (2022) describes gross domestic growth (economic growth) as the monetary worth of all commodities and services generated in an economy

during a given period, usually a year. Ovat, et al, (2023) discourse 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. It is the process whereby the real per capita income of a country increases over a long period of time (Adegbile, 2019). The success of economy is discerned through sustained and stable growth (Elisa et al, 2024). In this study GDP growth is the dependent variable which is the value of all goods and services produced within the geographic territory of an economy in a given interval.

Theoretical Review

The theory underpinning this study is based on quantity theory of money and classical view of monetary policy theory.

Quantity Theory of Money

The quantity theory of money, proposed by Milton Friedman in 1963 focused on long-term supply-side dynamics of the economy rather than short-term fluctuations. According to this theory, Inflation results from increased money supply and circulation velocity exceeding the economy's growth rate. Friedman emphasized that changes in the money supply significantly impact the general price level, especially when the demand for money remains stable (Ghatak, 2017). Notably, Friedman and Schwartz's influential work in 'Monetary History of the United States 1867–1960' (1963) underscored that Inflation is consistently and universally tied to monetary factors, emphasizing the pivotal role of money in economic dynamics. Inflation targeting, a Monetary Policy approach, relies on interest rates as its primary short-term tool. Central banks adjust interest rates to achieve the desired inflation level, aiming to regulate economic activity effectively. Conventional wisdom suggests that raising interest rates tends to cool the economy, curbing Inflation.

Conversely, lowering interest rates stimulates economic activity, potentially leading to higher inflation. Central banks can influence the money supply in the context of inflation targeting, where the monetary policy rate serves as the policy instrument (Taylor, 2019). On the other hand, when the Monetary Policy rate is reduced, it lowers the cost of capital, leading to increased demand for money and potentially expanding the money supply. Inflation targeting, which relies on the Monetary Policy rate, aims to regulate the currency in circulation. This approach draws insights from the Quality Theory of Money to manage inflation levels effectively. Some studies suggest that interest rate rules work optimally within specific ranges, and the theory remains relevant within certain parameters (Adaletey et al., 2022).

The Classical View of Monetary Policy

Quantity theory of money is the foundation of classical economics' monetary policy philosophy. The theory is usually discussed in term of Fisherian equation of exchange, which is given by the expression MV = PY. In the expression, M denotes the supply of money over which the Federal Government has some control; V denotes the velocity of circulation which is the average number of times a currency is spent on final goods and services over the course of a year; P denotes the price level GDP. Hence PY represents current nominal GDP. According to the equation of exchange, the quantity of money multiplied by the present market value of all finished products and services (nominal GDP) must equal by the average number of times a currency is used in transaction in a given year. The classical economist believes that the economy is always at or near the natural level of real GDP. Thus, they assume that in the short run, the Y in the equation of exchange is fixed. They further argue that the velocity of circulation of money tends remain constant in order for V to be considered Fixed as well. Given that both Y and V are fixed, it follows that if the Bangladesh Bank (BB) were to engage in expansionary (or contractionary) monetary policy, it will lead to an increase (or) in money supply (M), the only effect would be to increase (or decrease) the price level P, in direct proportion for the change in money supply (M). Stated differently, the price level can only deflate as a result of contractionary monetary policy and only inflate as a result of monetary expansion.

Empirical Review

In the study of Elisha et al, (2024) on the causal relationships among exchange rates, economic growth, and inflation in Indonesia for the period 2000 to 2019. There was a bidirectional causal relationship between economic growth and the exchange rate in the short term, likewise inflation and the exchange rate. But the relationship between inflation and economic growth showed a uni-direction causal effect. The study concluded that the Indonesian government needs to prioritize efforts to control inflation to support sustainable economic growth. Therefore, it was recommended that it is necessary to implement appropriate monetary and fiscal policies to maintain price stability and encourage balanced economic growth in Indonesia. Dauda, and Abdulkareem, (2023) investigated the impact of monetary policy on economic growth in Nigeria from 1990-2020 using ARDL bond test. Findings from the study showed that Nigeria's economic growth was significantly impacted by Money Growth Rate (M2) and the Monetary Policy Rate (MPR). The study concluded that monetary policy significantly affects economic growth in Nigeria and recommended that policymakers in Nigeria should improve the monetary policy in such a way as to increase the economic growth in Nigeria.

Similarly, Musa and Idris (2023) observed that the MS had a beneficial impact on RGDP and demonstrated statistical significance in the near term. As well, INTR and EXR were both statistically adversely significant with RGDP.in their study of empirical analysis of monetary policy and economic growth in Nigeria from 1910 to 2022 using the autoregressive distributed lag (ARDL). The study suggested implementing monetary policy to cultivate conducive investment climate. Also, David and Obiaje, (2023) examined the impact of monetary policy on economic growth in Nigeria from 1985 to 2022 using Autoregressive-Distributed Lag (ARDL) approach. The study found that interest rate, inflation rate exchange rate, money supply, and interest rate had a negative/positive connection with economic growth in Nigeria.

In the same vein Ovat, et al., (2022) empirically evaluated the effect of monetary policy rate (MPR) on Nigeria’s economic growth using annual data spanning 2006-2020 employed simultaneous equation model of two Stage Least Squares (2SLS). The findings revealed that MPR had a negative but significant effect on economic growth, Real Exchange Rate (REXR) had an inverse relationship and significant effect on economic growth while inflation (INFL) had a negative and insignificant impact on economic growth. The study recommended that the Central bank of Nigeria should ensure that the fixing of the monetary policy rate allowed the flow of credit in the desired direction to boost investment and economic activities in the economy. Similarly, Salami &Toriola, (2021) examined monetary policy shocks and economic growth in Nigeria using a vector Auto regression model for the data obtained from 1986-2018. The result showed that money supply exerted a significant positive effect on economic growth in Nigeria while inflation and interest rate exerted an insignificant positive effect on economic growth in Nigeria. It was recommended that the CBN should ensure the downward review of the Monetary Policy Rate so as to enhance more financial accessibility.

Gaps in the Literature

Numerous studies have examined the relationship between monetary policy and economic growth in Nigeria, several gaps in the existing literature are identified like insufficient exploration of policy transmission mechanism which necessitate for more in-depth research on how monetary policy decision are transmitted through various channels in the Nigerian economy, considering its unique characteristics. Also, many studies focus on short-term effects, neglecting the long-term implications of monetary policy decisions on economic growth. This study aims to address these gaps by providing a comprehensive, long-term analysis of monetary policy effectiveness in Nigeria, taking into account structural changes, transmission mechanisms, external factors, and sectoral impacts. By doing so, it seeks to contribute valuable insights to policymakers and researchers in the field of monetary economics and development studies.

III. Methodology

The study consists of information and records of events which occurred prior to this research work. As a result, the study adopted Ex-post facto research design. The study population comprises of all the monetary policy variables and the economic growth variable from 2000 to 2023 obtained from Central Bank Statistical Bulletin as at 31st December, 2023. The sample size was purposefully chosen

from the population of all the variables. The variables are monetary policy rate, broad money supply, interest rate, inflation rate and exchange rate. This study adopted the ADF unit root test, Regression analysis, Co-integration test and Granger causality test.

Model Specification

The study adapted the work of Ayodeji & Oluwole, (2018) who examined the influence of monetary policy on Nigerian economic growth. The baseline model is expressed as:

GDP = f (MS, IR, ER, LR) ----------1

Nevertheless, this study enhanced the model by removing liquidity rate and extends the variable by adding interest rate and monetary policy rate due to its widespread application. Consequently, the functional model form is;

The model is now expressed as;

GDP=f (MS, INFR, INR, EXR, MPR). …….……..……..…… 2

Estimation Model

$GDP=\beta o+\beta 1\ (MS)j+\beta 2(INFR)j+\beta 3(INR)j + \beta 4(EXR)j +\beta 4(MPR)j +\varepsilon j$...……...…. 3

Where;

Gross Domestic Product (GDP), Money Supply (MS), EXR stands for exchange rate, MPR for monetary policy rate, INFR for inflation rate, and INR for interest rate. $\beta 0$= Constant term, $\beta 1 - \beta 5$ = Coefficients of independent variables, t = time series indication, εt = error term.

All explanatory variable (Money Supply (MS), Monetary Policy Rate (MPR), Inflation Rate (INFR), Interest Rate (INR) and Exchange Rate (EXR) are expected to have direct positive relationship with Gross Domestic Product.

Thus$\beta 0>0$, $\beta 1>0$, $\beta 2>0\beta 3>0$, $\beta 4>0$, $\beta 5>0$

IV. Results and Discussion of Findings

Descriptive Statistics

Table 1 Descriptive Statistics of all the Variables of Monetary Policy Influence on Nigerian Economic Growth

Variables	Mean	Standard deviation	Minimum	Maximum	Jarque-Bera	Prob	Obs
LGDP	4.724378	0.452343	3.838690	5.370006	1.706896	0.425944	24
LMS	1.015426	0.546096	0.017033	1.896526	1.650441	0.438138	24
INF	13.98000	5.361395	6.560000	28.92000	4.953357	0.084022	24
INT	17.44542	2.771801	11.50000	24.85000	3.037830	0.218949	24
MPR	17.02750	3.090083	11.35000	25.98000	4.330263	0.114735	24
LEXR	2.299494	0.233027	2.049877	2.962071	5.991663	0.049995	24

Source: Authur's Compilation, 2025

The descriptive results presented in Table 1 indicated that the Gross Domestic Product (GDP) in Nigeria during the period of 24 years (2000-2023) has minimum and maximum values 3.84 and 5.37 respectively. GDP averaged 4.72 during the period with a std dev of 0.45 recording data deviation of 4.83 relatively dispersed, that is fluctuations in the growth of GDP output remained poor over the years as well as inconsistent policy changes that characterized different administrations in Nigeria. Thus, Table 1 further showed that INTR, MS, INFR, MPR and EXR during the period has min and max values of (11.50, 24.85) (0.017, 1.90), (6.56, 28.92), (11.35, 25.98), and (2.06, 2,96) respectively. The average value during the period is 17.44, 1.015, 13.98, 17.027 and 2.30 with std dev of 2.77, 0.55, 5.36, 3.09 and 0.23 implying that the data also deviate from both sides of the mean. The results of Jarque-Bera statistic reject the null hypothesis and accept that all the variables are all normally distributed as the probabilities are greater than 0.05 level of significant.

Unit Root Tests

Table 2 Unit root tests of all the variables on monetary policy influence on Nigerian economic growth

Variable	ADF t-Stat	Critical t-Value 5%	Prob	Order of Integration	Remark
LGDP	-4.462307	-3.632289	0.0096	I (2)	2nd difference
LMS	-5.345827	-3.012363	0.0003	I (2)	2nd difference

INF	-6.328665	-3.004861	0.0000	I (1)	1st difference
INT	-5.465284	-3.004861	0.0002	I (1)	1stdifference
MPR	-7.726107	-3.004861	0.0000	I (1)	1stdifference
LEXR	-5.236982	-3.065585	0.0008	I (2)	2nd difference

Source: Author's Compilation, 2025

The results of the unit root tests reported in Table 2 show inflation rate, interest rate and monetary policy rate variables are stationary at the first difference level (I (1)), but log of gross domestic product, log of money supply and log of exchange rate are stationary at the second difference level I (2). This suggests that the Johanson co-integration test, Least Squares regression (OLS) and granger causality test are appropriate for the characteristics of this data. Thus, the series are stationary and integrated of order one I (1) and order two, I(2).

Correlation Matrix

Table 3: Correlation matrix summary of all variables influencing monetary policy's impact on Nigeria's economic growth

	LGDP	LMS	INF	INT	MPR	LEXR
LGDP	1					
LMS	0.012360	1				
INF	-0.093209	0.443281	1			
INT	-0.067825	-0.164454	0.546364	1		
MPR	-0.226932	-0.247598	0.331539	0.843750	1	
LEXR	0.002133	0.632588	0.672768	0.233591	0.182097	1

Source: Author's Compilation, 2025

In Table 3 there was statistical evidence that money supply and exchange rate have a positive association with economic growth while inflation rate, interest rate and monetary policy rate have a negative association with economic growth in Nigeria. The result also showed that the association among the variables is not very strong indicating the absence of the problem of multi-correlation among the independent variables. More so, in checking for multi-colinearity, it was noticed that none of the explanatory variables were perfectly correlated indicating no problem of multi-colinearity between the explanatory variables.

Johanson Co-Integration Test

Table 4 Summary of the Johansen Cointegration Test

Hypothesized	Trace	0.05		Max-Eigen	0.05	
No. of CE(s)	Statistic	Critical Value	Prob.**	Statistic	Critical Value	Prob.**
None *	152.9187	95.75366	0.0000	53.79204	40.07757	0.0008
At most 1 *	99.12669	69.81889	0.0000	34.87825	33.87687	0.0379
At most 2 *	64.24844	47.85613	0.0007	27.72431	27.58434	0.0480
At most 3 *	36.52413	29.79707	0.0072	16.90238	21.13162	0.1767
At most 4 *	19.62175	15.49471	0.0113	11.72191	14.26460	0.1215
At most 5 *	7.899837	3.841465	0.0049	7.899837	3.841465	0.0049

Source: Author's Computation 2025

Table 4 above summarizes the Trace and Max-eigen statistics for the Johansen co-integration test. Both statistics show that at least one co-integrating equation existed at 5% level. The criteria for decision here is that there must be at least one co-integrating equation to reject the null hypothesis of no co-integration. Therefore, the Trace test indicated 6 co-integrating equations while the Max-Eigen statistics showed 4 co-integrating equations. This surpasses the decision criteria and so the study rejects the null hypothesis and concludes that there is long run relationship between money supply, monetary policy rate, interest rate, Nigerian gross domestic output, exchange rate, and rate of inflation. The practical implications suggest multiple significant co-integrating relationships with

complex long-term interactions between variables. There is a potential economic or financial interdependency with the need for careful multivariate analysis.

Granger Causality Test

Table 5 Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
LMS does not Granger Cause LGDP	22	0.09145	0.9131
LGDP does not Granger Cause LMS		5.39564	0.0153
INF does not Granger Cause LGDP	22	7.37432	0.0049
LGDP does not Granger Cause INF		1.89219	0.1812
INT does not Granger Cause LGDP	22	0.56406	0.5792
LGDP does not Granger Cause INT		4.10384	0.0351
MPR does not Granger Cause LGDP	22	3.10530	0.0709
LGDP does not Granger Cause MPR		1.08483	0.3602
LEXR does not Granger Cause LGDP	22	7.11254	0.0057
LGDP does not Granger Cause LEXR		0.13494	0.8747
LEXR does not Granger Cause LMS	22	9.56975	0.0016
LMS does not Granger Cause LEXR		0.38821	0.6841
INT does not Granger Cause INF	22	5.02972	0.0192
INF does not Granger Cause INT		1.60719	0.2295
MPR does not Granger Cause INT	22	7.38636	0.0049
INT does not Granger Cause MPR		0.13440	0.8752
LEXR does not Granger Cause INT	22	3.28512	0.0622
INT does not Granger Cause LEXR		2.26013	0.1348
LEXR does not Granger Cause MPR	22	5.44757	0.0149
MPR does not Granger Cause LEXR		0.58613	0.5673

Source: Author's Computation, 2025

Table 5 showed that, when every variable's coefficient is statistically significant, there is causality between the variables i.e. all monetary policy factors and Nigeria's economic growth. There is unidirectional causality relationship between LGDP and inflation rate (INF), monetary policy rate (MPR), and log of exchange rate (LEXR). Likewise, LMS and interest rate granger cause LGDP. In addition, all other explanatory variables granger causes each other as shown in the table above.

Regression Results

Least Squares Estimation

Dependent Variable: LGDP

Table 6 Summary of least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LMS	0.721499	0.042791	16.86105	0.0000
INF	-0.009230	0.002516	-3.668848	0.0018
INT	0.005409	0.004301	1.257766	0.2245
MPR	-0.009723	0.005704	-1.704492	0.1055
LEXR	0.240301	0.106633	2.253522	0.0369
C	3.639403	0.223934	16.25214	0.0000
R-squared	0.993109	Durbin-Watson stat	1.669188	

Adjusted R-squared	0.991195
F-statistic	518.8439
Prob(F-statistic)	0.000000

Source: Author's Computation, 2025

From Table 6 above, the R2 value of 99%, with the adjusted coefficient of determination (Adj R2) shows that about 99% of the changes in economic growth can be explained by monetary policy and it's a good fit for the variation. This suggests that monetary policy is a useful tool for managing the Nigerian economy. Additionally, the F-statistics (518.8439) has probability less than 5%, demonstrating the combined substantial impact of the model's monetary policy variables on Nigeria's economic growth. This supports the result of the AdjR2 and further confirms that monetary policy is a veritable tool for improving price stability and improved output. The value of 1.669188 approximately to 2 for the Durbin-Watson statistic confirms that the data are appropriate and not auto correlated.

Discussion of Findings

The regression analysis's results in table 6 shows that monetary policy rate (t-stat-1.7044; P-value 0.105>0.05) was found statistically negative insignificant on gross domestic product (LGDP). This result depicts acceptance of the null hypothesis one (H01) which states that there is no significant effect of monetary policy rate on the Nigerian economic growth. That is 1% increase in MPR will lead to 0.97% (coefficient) decrease in GDP. In addition, interest rate (t-stat 0.000541; P-value 0.22>0.05) has insignificant negative statistical influence on GDP. The study agrees with the null hypothesis, which states that interest rates have no discernible impact on economic growth. That is 1% increase in interest rate would lead to 0.54% increase in economic growth. These studies are in line with the work of Elisha et al, (2023) and Salami & Toriola (2021) but in contrary to the studies of Dauda & Abdulkareem (2023) and Ovat et al, (2022).

As shown in Table 6 broad money supply (LMS) (t-stat 16.86; p-value 0.00<0.05) was found to have a positive significant impact on GDP statistically. The outcome supports the alternative (H02) of MS's influence on GDP and points to the rejection of the null hypothesis. Therefore, a 1% increase in MS would lead to 72.15% of GDP. This result is supported by the finding of David & Obiaje, (2023), Idan & Badan, (2022), and against the report of Dauda & Abdulkareem, (2023).

Moreover, the inflation rate (t-stat-3.67; p-value 0.00<0.05) was found to have a statistically significant negative influence on GDP. The study result accepts the alternative hypothesis of significant effect of inflation rate on the Nigerian economic growth. The coefficient -0.009 of inflation rate indicates that 1% rise in inflation rate led to 0.92 % fall in GDP. This result is in line with the work of Musa & Idris, (2023) but in contrary to the works of Idan & Badan, (2022). Likewise, exchange rate (t-value 2.25; p-value 0.04<0.05) have positive statistically significant effect on GDP. The result also accepts the alternative (Ho5) that there is significant impact of exchange rate on the Nigerian economic growth. The coefficient exchange rate (0.240301) indicated 1% increase in exchange rate led to 24.03% rise in GDP. This implies that rise in the exchange rate has improved the economy through the increase level of external reserves. This result is in line with the work of Musa & Idris, (2023) and Idan & Badan, (2022) but in contrary with the works of Ovat et al, (2022).

V. Conclusions and Recommendations

Conclusions

The study has looked at how monetary policy affects the growth of the Nigerian economy. Monetary policy is a real weapon for price control since it has been shown to have a long-term relationship with economic growth and can be utilized to effectively govern the Nigerian economy. In addition, the core finding of this study showed that money supply and exchange rate have significant positive influence on economic growth, while inflation has negative influence on Nigerian economic growth. Nigeria's economic growth is negligibly impacted negatively by the monetary policy rate. Interest rate has insignificant positive effect on economic growth in Nigeria. Furthermore, Johanson co-integration test was done and showed the existence of a long run relationship between monetary policy and Nigerian economic growth at trace test Engen value and maximum Engen value. Finally, granger causality test was done on the study variables and the results showed the existence of a uni-

directional causality between money supply and economic growth, interest rate and economic growth, economic growth granger causing inflation, monetary policy rate and exchange rate, money supply and exchange rate, inflation and interest rate, interest rate and monetary policy rate, interest rate and exchange rate, monetary policy rate and exchange rate. On the overall, monetary policy explains 99% of the changes in economic growth in Nigeria.

Recommendations

Based on the regression results, the study recommendations that:

Government should prioritize the proper monitoring and management of money supply as it maintains strategic monetary expansion with the use of monetary policy as a key lever for economic growth. Exchange rate dynamics should be considered in economic planning of the country as well as monitoring its fluctuations cum stability. The government should also develop and target inflation control strategies by implementation of robust anti-inflationary measures, controlling inflation through monetary and fiscal policies and aim for stable, low-inflation environment.

However, further research should be conducted to understand interest rate economic influence and considered other intervening factors. Likewise, monetary policy rate mechanism should deeply be analyzed.

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