Navigating Tinubu's Reforms: Monetary Policy And Economic Growth Dynamics In Nigeria

Author

Abstract

This study explored the dynamic relationship between monetary policy and economic growth in Nigeria highlighting the changes President Tinubu's monetary reforms introduced. The ex-post facto research design was adopted in the study. Longitudinal quarterly data covering 2006 Q1 to 2024 Q4 was considered in the study. Data gathered was estimated using the ARDL approach to co-integration, granger causality test and trend analysis. Discoveries from the study indicated that monetary policy rate (MPR) associates negatively with economic growth both in the short and long run; treasury bill rate affects economic growth negatively in the short run, and positively in the long run; loan-to-deposit ratio exerts negative significant impact on economic growth both in the short and long run and savings deposit rate affects economic growth positively and noticeably both in the long and short run. Premised on these findings, the study amongst others suggested that the regulatory bodies applies interest rate with caution and that policies must aim to maintain a neutral or slightly accommodative interest rate structure that encourages lending to the private sector; prudential guidelines that mandate optimal loan-to-deposit ratios, while safeguarding financial stability, must be enforced and Central Bank of Nigeria (CBN) should also consider introducing counter-cyclical capital buffers.

Keywords: *Economic Growth, Monetary Policy, Money Supply, Exchange Rate, Credit to Private Sector, Treasury Bill Rate, Savings Deposit Rate, Nigeria.*

I.   Introduction

The potential of monetary policy to command optimal economic output and prices especially in the short term have over time been demonstrated in economic theories and robust time series researches of monetary policy. Monetary policy has been increasingly significant following its role of stabilizing the economic system with its record of tackling imbalances that grossly influences economic productivity and pace of growth in the country. Although Dakasku, Jelilov, Isik and Akyuz (2020) assert that the capability of monetary policy in controlling imbalances might be constrained by the pursuit of basic related goals of monetary policy, the conditions of monetary policy transmission approach and numerous other factors such as uncertainties faced by policy makers and the position of economic policies. Instruments of monetary policy are employed by the apex bank in every economy to direct liquidity position and the make-up of interest rate adopted by banking institutions as required by the apex bank in sustaining the financial services sector and consequently improving economic growth (Miftahu, 2019).

However, continued long run growth is a function of reduced-price levels; therefore, increasing inflation holds a destructive effect that might impedes long-term economic growth (Dakasku *et al.,* 2020; Amassoma, Nwosa & Olaiya, 2011). Instruments of monetary policy maintain an all-important effect on the numerous financial circumstances faced in the economy; this has over the years explained the increasing use of monetary policy instruments to cause an effectual moderation of amount of money supply aimed at guaranteeing short and long run price stability in Nigeria. More importantly, it also controls anticipations about the position of economic activities and inflation in the future with its noticeable effect on exchange rates, investment level, consumption, prices of assets and goods (Miftahu, 2019). Since the aim of every monetary policy tool is to attain full employment, fixed prices and controlled long-term interest rates; the implementation of effective monetary policy by the CBN can occasion stable prices thereby satisfying conditions for sustainable economic growth. Accordingly, monetary policy proffering relatively reduced interest rate might occasion increasing rate of investment and acquisition of durable consumer goods. Again, the forecast of increasing economic activities will cause financial institutions to make borrowing policies more favorable so as to encourage spending amongst business entities and households which ultimately triggers positive reaction of economic growth (Dakasku, *et al.,* 2020).

The Nigerian economy has suffered massive downturn as a result of numerous pandemics including COVID-19; and in the bid to recover from the economic shock, the country has accumulated high level of debts stemming from increased borrowings during the period. Hence, its growth rate has been relatively weak and

discouraging, increasing prices of goods and services, highly volatile exchange rate and heightening level of unemployment. Amidst global economies, Nigeria maintains weak pace of economic growth which is well demonstrated in its dismal wage growth, high inflation, substandard productivity level, reduced business investment, increasing poverty rate and reduced terms of trade. Notwithstanding the introduction of the COVID-19 economic sustainability plan, the economy of Nigeria still suffers serious macroeconomic instability and dwindling economic growth. This therefore suggests that the attainment of macroeconomic stability cannot be caused by employing crude approach to nation's management; rather the growth of any economy is highly sensitive to the structure as well as composition of economic actors. Hence, to support macroeconomic stability, it has become urgent to introduce structural reform programmes and aggregate policies which may bolster market conditions, guarantees spillover of growth in other sectors and by implication create an environment suitable for long term investment, speedy and continuous growth and above all presents an economy capable of acclimatizing to the increasing global economic crises over time.

And recently in Nigeria, the sweeping policy shifts under the Tinubu administration, notably the removal of fuel subsidies and the liberalization of the exchange rate, have unleashed an unprecedented wave of economic instability across Nigeria (NESG, 2024). This has manifested in crippling inflation, a rapidly depreciating currency, and a dramatic escalation of economic hardship for most citizens (Uche, 2025). The severity of these challenges is underscored by the immediate and profound impact on livelihoods, purchasing power, and overall economic predictability. While established economies like the United States benefit from a Federal Reserve operating with a clear dual mandate of maximum employment and price stability, utilizing sophisticated tools and an independent central bank to navigate economic fluctuations, Nigeria's current monetary policy framework appears ill-equipped to effectively mitigate the adverse consequences of these recent reforms. The stark divergence in economic outcomes and policy efficacy between Nigeria and more stable economies highlights a critical void in understanding how Nigeria's monetary policy can be strategically adapted and fortified to address the acute challenges posed by these new realities.

Numerous research has been carried out on monetary policy and economic growth in Nigeria. However, an insignificant number of empirical researches represented practically all the direct monetary policy proxies in their models towards tracking their direct effect on economic growth (Bashir & Sam-Siso, 2020; Okoroafor, 2020; Amechi, Osabohien, Okoh & Ibidapo, 2020; Efanga, Hanson, Ekanem & Umoh, 2020; Dakasku, Jelilov, Isik & Akyuz, 2020; Onwuteaka, Okoye & Molokwu, 2019; Miftahu, 2019; Ufoeze, Odimgbe, Ezeabalisi & Alajekwu, 2018; Adigwe, Echekoba, Justus, 2015). In the bid to capture the effect of the recent disrupt in the Nigerian economy and its implication on monetary policies and its attendant effect on her economic growth, quarterly data up to the fourth quarter of 2024 for proxies used in the study will be gleaned. Also, the researcher observed that a few studies adopted error correction model to assess the impact of monetary policy on economic growth (Ogohi & Inim, 2020; Efanga, Hanson, Ekanem & Umoh, 2020). The basic gap of the ECM approach is that it can only evaluate the contemporaneous relationship between monetary policy and economic growth; the long-lasting impact is usually ignored. It is based on this premise that this study will assess the long and short run sensitivity of economic growth to monetary policy exploring most recent data gleaned from the statistical bulletin of the CBN.

II. Theoretical Framework And Hypotheses Development

Monetary policy has been described as the provision of policies towards regulating money supply as well as interest rates in an attempt to achieve goals set by the government (Gul, Mughal & Rahim, 2012). These goals are essentially attained by the management of money supply which is subdivided into broad and narrow money; although broad money is relatively more accepted a measure of the amount of money existing in the economy since it represents the amount of deposit such flow from time deposits, savings and foreign-dominated deposits. So as money supply shoots up, much more money is made available, hence interest rate declines; this in effect enhances domestic investment and ultimately bolsters economic growth. This aligns with the monetarist theory which suggests that the supply of money encourages the initiation of new investment and expansion of existing investments which necessitates economic prosperity (Olweny & Chiluwe, 2012).

Although the apex bank (Central Bank of Nigeria- CBN) also go about achieving the same ultimate monetary policy goal with the manipulation of monetary policy rate also referred to as minimum rediscount rate (MRR), savings deposit rate and prime lending rate (Amaegberi & Wisdom, 2025). These are rates at which CBN borrows funds to financial institutions in the bid to enhance their financial stability since that will enhance credit supply, stimulate investment which consequently affects gross domestic product (GDP) in a positive way – this simply suggests that all forms of interest rate in the economy adjusts towards achieving economic growth when changes are made to MPR.

This study is premised on the general theory introduced by Keynes in 1936 in his published book named "the general theory of employment, money and interest rate". The writer intends to further analyze the level of interest rate as it associates with two important factors such as supply of money and interest on savings with the

bank in cash and cash equivalent. Keynes further defined the theory as the reward for not storing money but rather the return on providing funds to individuals and businesses in the deficit unit for urgent use at a specific period of time. Again, Keynes (1936) maintained that the control of interest rate is engineered by the money market and the supply of money is controlled exogenously. This simply suggest that the interest rate and money supply management is critical for spurring economic prosperity, particularly when the economy is shrinking.

Based on this position, we hypothesize that:
H_1: economic growth in Nigeria exhibits significant sensitivity to monetary policy adjustments.

III. Methodology

Model Specification

This study adapted the model used by Dakasku, Jelilov, Isik and Akyuz (2020) in examining the realities of monetary policy instruments and economic growth in Nigeria. The authors captured economic growth using gross domestic product (GDP) and used money supply (MS), exchange rate (EXR) and interest rate (INT) as explanatory variables of monetary policy. The functional and linearized form of the adapted model is demonstrated below:

$$GDP = f(MS, EXR, \& INT)...(1)$$
$$GDP_t = \beta_0 + \beta_1 MS_t + \beta_2 EXR_t + \beta_3 INT_t + \mu...(2)$$

This study modified the above model capturing monetary policies with monetary policy rate (MPR), savings deposit rate (SDR), treasury bills rate (TBR), broad money supply (MSS), prime lending rate (LDR), exchange rate (EXR); credit to private sector (CPS) was used as control variable while gross domestic product was retained for economic growth. The linear and econometric form of the model is specified below:

$$GDP = f(MP, CPS)... (3)$$
Where MP = monetary policy variable is further decomposed into
$$MP = MPR, SDR, TBR, MSS, LDR, EXR .... (4)$$

Econometric Form:
$$GDP_t = \beta_0 + \beta_1 MPR_t + \beta_2 SDR_t + \beta_3 TBR_t + \beta_4 MSS_t + \beta_5 LDR_t + \beta_6 EXR_t + \beta_7 CPS_t + \mu............ (5)$$
Where:

GDP	=	Gross Domestic Product
MPR	=	Monetary Policy Rate
SDR	=	Savings Deposit Rate
TBR	=	Treasury Bills Rate
MSS	=	Broad Money Supply
LDR	=	Loan-to-Deposit Ratio
EXR	=	Exchange Rate
CPS	=	Credit to Private Sector (*control variable*)
μ	=	Stochastic Error Term
β_0	=	Constant Term
β_1-β_7	=	Variables Coefficient
t	=	Period (Quarter)

Pre-Estimation Tests

Pre-estimation tests employed in the study are descriptive statistics which determines the normality in the distribution as well as the skewness and kurtosis of variables used in the study. Furthermore, the correlation matrix is used to ascertain if multicollineraity exists among the explanatory variables. The Augmented Dickey Fuller (ADF) unit root test was carried out to establish the order of stationarity of all variables. Lastly, the Johansen co-integration test was carried out, towards ascertaining the association between the dependent and independent variables.

ARDL Co-integration
$$\Delta GDP_t = \beta_0 + \beta_1 MPR_{t-1} + \beta_2 SDR_{t-1} + \beta_3 TBR_{t-1} + \beta_4 MSS_{t-1} + \beta_5 LDR_{t-1} + \beta_6 EXR_{t-1} + \beta_7 CPS_{t-1} + \beta_8 \Delta MPR_{t-i} + \beta_9 \Delta SDR_{t-i} + \beta_{10} \Delta TBR_{t-i} + \beta_{11} \Delta MSS_{t-i} + \beta_{12} \Delta LDR_{t-i} + \beta_{13} \Delta EXR_{t-i} + \beta_{14} \Delta CPS_{t-i} + \mu_t.. ....(6)$$

Here, the Δ is the first-difference operator, and β's shows the long and short run coefficients. Hence, the null hypothesis (H0) of no cointegration states that, H0: β1= β2= β3= β4= β5= β6= β7= β8= β9 = β10 = β11 =

β12 = β13 = β14 = 0 and the alternative hypothesis of existence of cointegration state that; β1≠ β2≠ β3≠ β4≠ β5≠ β6≠ β7≠ β8≠ β9 ≠ β10 ≠ β11 ≠ β12 ≠ β13 ≠ β14 ≠0.

Error Correction Model$\Delta y_t = \alpha_o$
$+\beta_1 \Delta X_1 - \pi \hat{U}_{t-1} + \varepsilon t$…………….…………………….…………..………......(7)
        Here, β_1 represents the short run effect multiplier that quantifies the short term impact that the change in X_1 will exert on any change in y_t. While π is the feedback effect, and the extent of disequilibrium that will be corrected.

Granger Causality Test
$Y_t = \alpha_o + \alpha_{1\Sigma} y_t + ... + \alpha_{2\Sigma} y_{it} + \beta_{1,\Sigma} x_{i,t} + ... \beta_{2,\Sigma} x_t + \varepsilon_{i,t}$...(8)

Data and Estimation Procedure
        This study considered a time series dataset exploring both the long run and short run dynamics. There were few missing gaps in the earlier years in the dataset but I adopted the interpolation approach to fill them. I used quarterly data spanning from 2006 Q1 to 2024 Q4. Quarterly data is considered because the frequency of such data improves statistical power, precision and model stability during my estimation which is considered relatively more important in exploring short and long run relationship of variables (Iwedi & Edeh, 2023). Data gathered were obtained from the Central Bank of Nigeria (CBN) money market indicators and GDP data was obtained from the Nigeria Bureau of Statistics. In analyzing the dynamic relationship between monetary policy and economic growth, we adopted ADF Unit Root Test and ARDL Co-integration Bound Test to determine the preliminary association between variables, I went ahead to estimate the ARDL mode. However, given that the ARDL model is typically estimated using the ordinary least squares, heteroscedasticity issue becomes inevitable. Towards getting around the likely problem of heteroscedasticity in my data, I employed the Breusch-Pagan-Godfrey test as one of the post-estimation tests.

IV.   Data Analysis And Discussion
Table 1: Descriptive Statistics of Variables

	GDP	MPR	SDR	TBR	MSS	CPS	LDR	EXR
Mean	16319684	12.09868	3.237368	8.039211	27079234	18955076	15.94776	314.8075
Median	16384636	12.00000	3.255000	8.365000	21695819	15941753	16.52000	196.9950
Maximum	27550404	27.50000	7.510000	18.00000	1.130708	78022459	19.55000	1616.123
Minimum	9998876.	0.000000	1.250000	0.000000	0.000000	31437.05	11.13000	0.000000
Std. Dev.	3891996.	4.996345	1.352994	4.503450	25386184	18223867	1.964948	307.5112
Skewness	0.550021	0.660566	0.727325	0.081781	1.522461	1.774745	-0.881000	2.768696
Kurtosis	3.473932	5.554385	3.789432	2.159747	5.591212	5.951591	3.392300	10.62291
Jarque-Bera	4.543230	26.18921	8.674170	2.320462	50.62209	67.48408	10.31873	281.1097
Probability	0.103145	0.000002	0.013075	0.313414	0.000000	0.000000	0.005745	0.000000
Sum	1.241109	919.5000	246.0400	610.9800	2.065409	1.443909	1212.030	23925.37
Sum Sq. Dev.	1.142115	1872.260	137.2945	1521.079	4.835716	2.493616	289.5765	7092236.
Observations	76	76	76	76	76	76	76	76

Note: *GDP = Gross Domestic Product (In Billion Naira); MPR = Monetary Policy Rate (In %); SDR = Savings Deposit Rate (In %); TBR =   Treasury Bills Rate (In %); MSS = Broad Money Supply (In Billion Naira); LDR = Prime Lending Rate (In %); EXR = Exchange Rate (In %); CPS = Credit to Private Sector (In Billion Naira).*
Source: *Authors' computation (2025).*

        Table 1 above presents the descriptive statistics of variables based on observation collected over the period spanning from 2006 to 2024. As reported in the table, average gross domestic product for the period under study stood at 16319684 billion naira, with minimum and maximum values of 9998876 billion and 27550404 billion naira respectively. Monetary policy rate on average stood at 12.09868, while minimum and maximum value stood at 0.000000 and 27.50000 respectively. Moreover, savings deposit rate on average stood at 3.237368, minimum and maximum values stood at 1.250000 and 7.510000 respectively. Furthermore, average value of treasury bills stood at 8.039211, while 0.000000 and 18.00000 figures stood for minimum and maximum values respectively. Also, prime lending rate on average stood at 15.94776, at the same time, minimum and maximum value for the same variable stood at 11.13000 and 16.52000. Meanwhile, the average value for exchange rate stood at 314.8075 percent, as the minimum and maximum value reflected 0.000000 and 196.9950 percent respectively. Additionally, broad money supply on average for the period observed stood at 27079234, even as

minimum and maximum value for the same variable stood at 0.000000 and 21695819 respectively. However, the average value of credit to private sector as presented in the table stood at 18955076 billion naira, just as the minimum and maximum value stood at 31437.05 and 15941753 respectively.

Besides, Skewness statistics reported in the table showed that variables employed in the study have a mixed Skewness. Evidently, result revealed that while the statistics values for some of the variables are normally skewed, others are positively and negatively skewed. As shown in the result, gross domestic product, monetary policy rate, savings deposit rate and treasury bills are normally skewed with statistic values which stood at 0.550021, 0.660566, 0.727325, and 0.081781 respectively. Broad money supply or M2, credit to private sector and exchange rate displayed a positive skewness with statistics value which stood at 1.522461, 1.774745, and 2.768696 respectively. Notwithstanding, prime lending rate exhibits a negative skewness with a statistics value which stood at -0.881000, indicating that data were normally distributed as values of majority of the variables are almost zero.

Also, reported kurtosis statistics revealed that all the variables in the study are kurtosis. As shown the table, gross domestic product, savings deposit rate and prime lending rate are mesokurtic by the distribution peakedness, given that their statistics values are 3.473932, 3.789432, and 3.392300, hence, the variables have a normal kurtosis. Similarly, variables such as monetary policy rate which stood at 5.554385, broad money supply or M2 with a statistics value of 5.591212, credit to private sector and exchange rate with statistics value of 5.951591 and 10.62291 respectively, suggested that these variables are leptokurtic by the distribution of peakedness, given that they have more higher value, hence positive. Lastly on kurtosis, treasury bills maintained a negative kurtosis with a statistics value which stood at 2.159747, hence, indicating that the variable is platykurtic by the distribution peakedness.

On top of that, the Jarque Bera statistics for each one of the variables stood at a value of 4.543230, 26.18921, 8.674170, 2.320462, 50.62209, 67.48408, 10.31873 and 281.1097 with an associate probability of 0.103145, 0.000002, 0.013075, 0.313414, 0.000000, 0.000000, 0.005745 and 0.000000 respectively for gross domestic product, monetary policy rate, savings deposit rate, treasury bills, broad money supply, credit to private sector, prime lending rate and exchange rate, thus, confirming that the variables are normally distributed when measure at critical level.

Table 2: Correlation Matrix

	GDP	MPR	SDR	TBR	MSS	CPS	LDR	EXR
GDP	1.000000							
MPR	0.578206	1.000000						
SDR	0.294842	0.705589	1.000000					
TBR	-0.140279	0.387563	0.340638	1.000000				
MSS	0.656049	0.881560	0.646970	0.211374	1.000000			
CPS	0.495746	0.812309	0.780157	0.394753	0.808845	1.000000		
LDR	-0.479413	-0.156992	0.199917	0.391999	-0.347165	0.053758	1.000000	
EXR	0.475715	0.828196	0.715416	0.292568	0.943202	0.849916	-0.189609	1.000000

Source: *Authors' computation (2025)*

Table 2 above presents the correlation estimation results. Evidently, the table displays the existence of mixed correlation between variables used in the study. As shown in the table, gross domestic product, monetary policy rate, savings deposit rate, broad money supply, credit to private sector, and exchange rate moved in the same direction, while treasury bills and prime lending rate moved inversely. In specific, correlation estimates stood at 0.578206 for gross domestic product and monetary policy rate, 0.294842 for gross domestic product and savings deposit rate, 0.656049 for gross domestic product and broad money supply, 0.495746 for gross domestic product and credit to private sector, 0.475715 for gross domestic product and exchange rate, -0.140279 for gross domestic product and treasury bills, and -0.479413 for gross domestic product and prime lending rate.

Table 3: ADF Unit root test

Variables	Level			First Difference			Level of Integration
	ADF Statistics	1% Critical Value	5% Critical Value	ADF statistics	1% Critical Value	5% Critical Value	I(D)
GDP	-2.004200	-3.857386	-3.040391	-5.812586	-3.886751	-3.052169	I(1)
MPR	-1.071254	-3.920350	-3.065585	-3.972524	-3.920350	-3.065585	I(1)
SDR	0.140870	-2.699769	-1.961409	-3.015687	-2.717511	-1.964418	I(1)
TBR	-2.110960	-3.857386	-3.040391	-3.581744	-3.886751	-3.052169	I(1)
MSS	-33.45330	-3.959148	-3.081002	-2.456322	-3.549823	-3.569324	I(0)

LDR	-1.963253	-3.886751	-3.052169	-3.371149	-3.886751	-3.052169	I(1)
EXR	3.457414	-3.857386	-3.040391	-0.472602	-3.886751	-3.052169	I(0)
CPS	-3.894972	-3.886751	-3.052169	-3.245879	-2.487923	-2.495389	I(0)

Source: *Authors' computation (2025)*

The table above presented the result of the unit root test conducted in the study to determine whether data garnered for the study is stationary or non-stationary. Result of the test revealed that gross domestic product, monetary policy rate, savings deposit rate, treasury bills, and prime lending rate were stationary at level, suggesting that they are integrated of order zero I(0). The result is a reflection that these variables did not retain innovative shock passed on it more the same period. However, broad money supply, exchange rate, and credit to private sector become stationary after first differencing, i.e these series are integrated of order one I(1). Hence summary of unit root test conducted in the study showed that series included in the models for the study are integrated of mixed order i.e I(0) and I(1). Therefore, the ARDL co-integration is employed to achieve relevance objectives of the study.

Table 4: ARDL Co-integration Bound Test

F-Statistic	Lower Bound Critical Value	Upper Bound Critical Value
22.56151	2.17	3.21

Note: critical values are valued at 5% significant level.
Source: *Author's computation, (2025)*

Table above reported lower and upper bound critical values, as well as the F-statistics for the wald test carried out to test the joint null hypothesis that the coefficients of the lagged level variables are zero i.e no long run relationship exist between the variables. The result showed an f-statistics value of 22.56151 and bound critical values of 2.17 and 3.21 for lower and upper bounds respectively. Comparing the f-statistic to the critical values, it was observed that the f-statistics is greater than the upper bound critical value (a condition for the rejection of the null hypothesis of no long run relationship). Thus, the study rejects the null hypothesis in favour of the alternative hypothesis of presence of long run relationship between the variables.

Table 5: ARDL Short run and Long run form Estimation Result

Short run Coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(LMPR)	-0.461605	0.017689	-26.096222	0.0001
D(LSDR)	0.118678	0.014660	8.095264	0.0039
D(LTRB)	-0.059927	0.004722	-12.691656	0.0011
D(LMSS)	0.017730	0.000860	20.627843	0.0002
D(LLDR)	-0.810363	0.038847	-20.860196	0.0002
D(LEXR)	0.168614	0.014215	11.861780	0.0013
D(LCPS)	0.010528	0.001808	5.822246	0.0101
CointEq(-1)	-1.500299	0.048531	-30.914478	0.0001
Cointeq = LGDP - (-0.2689*LMPR + 0.1331*LSDR + 0.0542*LTRB + 0.0238				
*LMSS -0.9918*LLDR + 0.1144*LEXR + 0.0203*LCPS + 8.0260)				
Long Run Coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
LMPR	-0.268882	0.120368	-2.233839	0.1116
LSDR	0.133095	0.026585	5.006359	0.0153
LTRB	0.054171	0.057222	0.946686	0.4136
LMSS	0.023754	0.001364	17.414594	0.0004
LLDR	-0.991821	0.127027	-7.807937	0.0044
LEXR	0.114356	0.064856	1.763220	0.1761
LCPS	0.020300	0.008609	2.357985	0.0996
C	8.026001	0.168384	47.664966	0.0000

Source: *Authors' computation (2025)*

Table above presents ARDL short run and long run estimation result for the study under review. The short-run estimation result indicates coefficients and probability value which stood at -0.461605 and 0.0001 (P<0.05) for D(LMPR), which by interpretation suggests that gross domestic product reduces significantly by 0.41% with every 1% increase on monetary policy rate. Therefore, monetary policy rate as observed via the result exerts negative and significant effect on gross domestic product during the year investigated. Besides, the table shows the coefficients value of 0.118678 with an associate probability value of 0.0039 (P<0.05) for D(LSDR), suggesting that the gross domestic product of Nigeria increases by 0.11% with every 1% increase savings deposit rate for the period investigated, meaning that savings deposit rate exerts positive and significant effects on gross domestic product of Nigeria during this period. Furthermore, D(LMSS), D(LEXR), and D(LCPS) respectively

present coefficient values which stood at 0.017730, 0.168614, and 0.010528, accompanied with probability values of 0.0002, 0.0013, and 0.0101, all less than 0.05. This implies that gross domestic product increases by 0.01%, 0.16%, and 0.01% with every 1% increase in broad money supply, exchange rate and credit to private sector during the period investigated. All these variables, as observed exert positive and significant effect on gross domestic product during the period. Also, the table presents the coefficient and probability value which stood at -0.059927 and 0.0011 (P<0.05) and -0.810363 and 0.0002 (P<0.05) for D(LTRB) and D(LLDR) respectively, indicating that gross domestic product of Nigeria decreases by 0.05% and 0.81% with every 1% increase in treasury bills and prime lending rate. This means that both treasury bills and prime lending rate exert negative, however, significant effects on gross domestic product during the period investigated. Meanwhile, the CointEq(-1) which exhibit a coefficient value of -1.500299 with associate probability value of 0.0001 (P<0.05), shows that only about 50% of the short run inconsistencies is corrected and incorporated into the long run dynamic per annum in Nigeria.

Furthermore, the table yet presents the result of the long-run estimation for each one of the variables. Evidently, LSDR, LTRB, LMSS, LEXR, and LCPS all exhibit coefficient and probability value which each stood at 0.133095 and 0.0153 (P<0.05), 0.054171 and 0.4136 (P>0.05), 0.023754 and 0.0004 (P<0.05), 0.114356 and 0.1761 (P>0.05), and 0.020300 and 0.0996 (P>0.05), indicating that gross domestic product rises by 0.13%, 0.05%, 0.02%, 0.11%, and 0.02% with every 1% increase in savings deposit rate, treasury bills, broad money supply, exchange rate, and credit to private sector respectively, thus, it is concluded that all these variables respectively exert positive effect on gross domestic product during these periods. Although, LMPR with coefficient and probability value of -0.268882 and 0.1116 (P>0.05) and LLDR with -0.991821 and 0.0044 (P<0.05) indicate that gross domestic product in the long run was negatively impacted and got decrease by almost 0.26% and 0.99% respectively with every 1% increase in monetary policy rate and prime lending rate during the period.

Granger Causality Test

Table 6: Pairwise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
LCPS does not Granger Cause LGDP	74	0.00350	0.9965
LGDP does not Granger Cause LCPS		0.31012	0.7344
LEXR does not Granger Cause LGDP	74	1.12732	0.3301
LGDP does not Granger Cause LEXR		0.06510	0.9370
LLDR does not Granger Cause LGDP	74	0.35031	0.7057
LGDP does not Granger Cause LLDR		1.43235	0.2458
LMPR does not Granger Cause LGDP	74	1.77033	0.1779
LGDP does not Granger Cause LMPR		1.61450	0.2064
LMSS does not Granger Cause LGDP	74	3.57059	0.0335
LGDP does not Granger Cause LMSS		0.44989	0.6396
LSDR does not Granger Cause LGDP		0.37126	0.6912
LGDP does not Granger Cause LSDR	74	0.05464	0.9469
LTRB does not Granger Cause LGDP		1.66409	0.1969
LGDP does not Granger Cause LTRB	74	0.88117	0.4189

Source: *Authors' computation (2025)*

Table above presents the Granger Causality Test results conducted in the study in the quest to observe whether each one of the variables can forecast the other. Clearly, almost all the variables does not granger cause one another, given the probability values which are higher than 5% or 0.05 significant level, except broad money supply and gross domestic product. Evidently, broad money supply does granger cause gross domestic product with a probability value which stood at 0.0335 (P<0.05), thus, the study reject the null hypothesis that LMSS does not granger cause LGDP in favour of the alternative hypothesis that LMSS does granger cause LGDP. Therefore, there is only one way causality between broad money supply and gross domestic product.

Table 7: Post Estimation Test

Normality Test		
Statistics	*Values*	*Probability*
Jarque-Bera Stat	1.561279	0.458113
Serial Correlation LM Test		
Statistics	*Values*	*Probability*

F-statistic	1.301215	0.3189
Heteroscedasticity Test		
Statistics	*Values*	*Probability*
Breusch-Pagan-Godfrey	2.880332	0.0570
Ramsey Reset Test		
Statistics	*Values*	*Probability*
t-statistic	1.896870	0.0871
F-statistic	3.598117	0.0871
Likelihood ratio	5.839578	0.0157

Source: *Authors' computation (2025)*

The table above presents the post estimation results for the study. Clearly, the table revealed that the Jarque-bera statistics value for error term of the estimated models stood at 1.561279 (p= 0.458113>0.05), suggesting that there is no enough evidence to reject the null hypothesis that the error term of the estimated model is not normally distributed, owing to the probability value which is greater than the significant value of 0.05 or 5%, thus confirming that the error term is not normally distributed.

Moreover, Breusch-Godfrey serial correlation LM test result presented in table revealed f-statistics and probability value of 1.301215 and 0.3189 respectively. The statistics showed that there is no evidence to reject the null hypothesis of no serial correlation between successive values of error terms of the estimated models. Hence there is no strong evidence of heteroscedasticity in the estimated models.

The table also presents f-statistics and probability value of 2.880332 and 0.0570 which reflect that there is no evidence to reject the null hypothesis of constant variance of the error term (homoscedasticity). Hence the test confirmed that there is no problem of heteroscedasticity in the error term of the estimated models.

Result of Ramsey test presented in table above report three statistics including t-statistics and f-statistics, alongside their respective probability values. Specifically, the table reported t-statistics of 1.896870 (p=0.0871>0.05), f-statistics of 3.598117 (p= 0.0871>0.05) and likelihood ratio of 5.839578 (p=0.0157<0.05) thus reflecting that there is not enough evidence to reject the null hypothesis that the model is correctly specified.
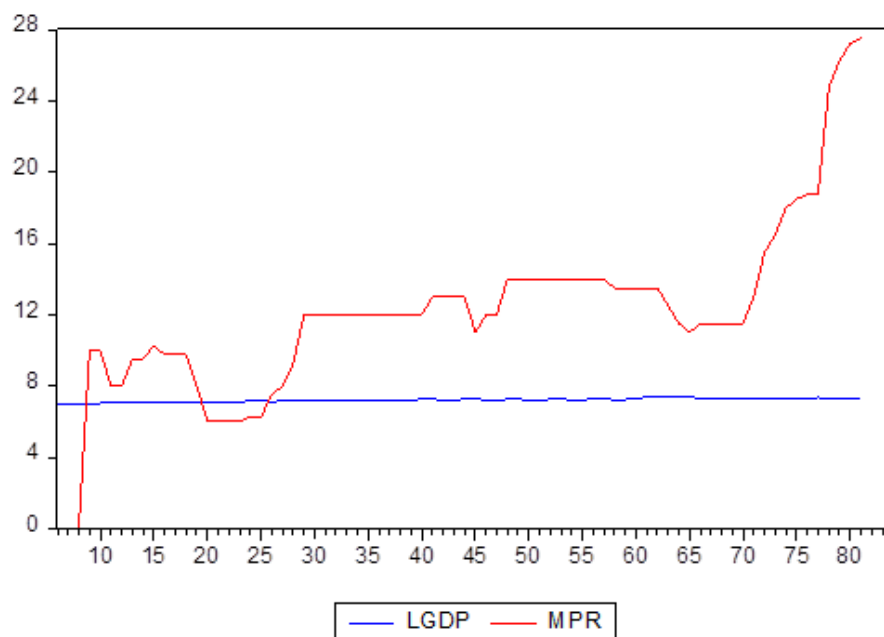

Figure 1: GDP and Monetary Policy Rate (MPR) Trends

Figure 1 illustrates the relationship between GDP and the Monetary Policy Rate (MPR). Over the observed period, GDP, demonstrates a relatively stable trend, hovering within a narrow band. This suggests a slow economic growth trajectory. However, the Monetary Policy Rate (MPR)exhibits significant fluctuations. Initially, the MPR shows some volatility, then stabilizes for a period, followed by a notable increase. This upward movement in the MPR indicates a tightening monetary policy stance, where the central bank is likely aiming to curb inflation or manage liquidity in the economy. The sharp rise in the MPR towards the end of the observed period is particularly striking, suggesting a strong policy response to prevailing economic conditions. This recent aggressive stance in monetary policy can be inferred to relate to the current administration's efforts to stabilize the economy and address inflationary pressures.
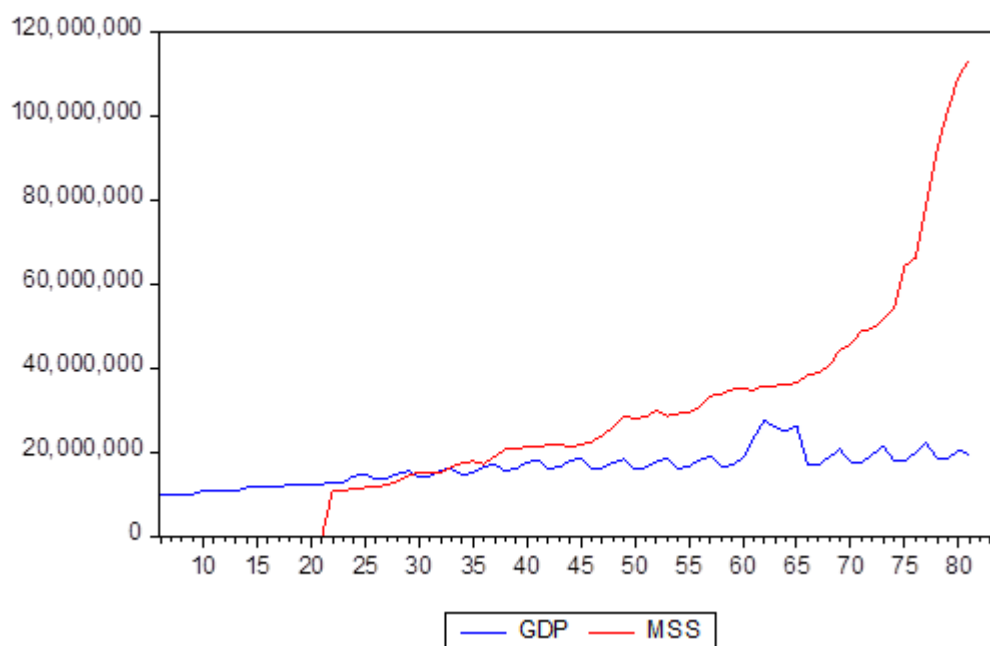
Figure 2: GDP and Money Supply (MSS) Trends

The graph in Figure 2 presents the trends of GDP and Money Supply (MSS). Similar to the first graph, GDP maintains a relatively slow growth still, although the raw GDP data was used in this case relatively to the data in Figure 1 which was log-linearized. Money Supply (MSS), shows a distinct and continuous upward trend throughout the period. This indicates a consistent expansion of the money supply in the economy. While there are some periods where the growth in MSS appears more gradual, the overall trajectory is one of significant increase. This expansion in money supply can be attributed to various factors, including credit creation by banks, government spending, and central bank policies aimed at stimulating economic activity. The accelerating growth in MSS towards the latter part of the period suggests a more expansive monetary environment, which could be a response to economic stimulus needs or a reflection of increased financial activity.

The observed trends highlight the dynamic interplay between economic growth, interest rates, and money supply. The relatively stable GDP trend, despite fluctuations in MPR and a continuous increase in MSS, suggests that the economy has been resilient to some extent. However, the recent sharp increase in MPR, coupled with the sustained growth in MSS, indicates a complex policy environment. A rising MPR typically aims to reduce money supply and control inflation, yet the MSS continues to expand. This could imply that other factors are driving money supply growth, or that the impact of the MPR on MSS has a lag, or that the central bank is attempting to balance inflation control with the need for liquidity in the system.

Collectively, these patterns reinforce the argument that, although the current administration's policies have altered the trajectory of core monetary variables - most visibly through stepped-up rate hikes and continued liquidity growth. These moves are yet to generate the robust economic revival that might have been anticipated. Instead, growth remains subdued, while monetary indicators reflect both tightening and persistent expansion.

V.   Discussion Of Findings

In this section, I consider the empirical findings obtained on as I explored how economic growth reacts to monetary policy changes in Nigeria which is exhaustively measured using the most important monetary indicators while capturing other macroeconomic variables that spurs economic growth (these includes exchange rate and credit to private sector); at the time when the current administration attempted to eliminate the increased demands for foreign currency particularly dollar in the Nigerian economy. This study improves on existing literature with new evidence in three areas. First, it explores the effect of monetary policy on economy growth using varied measures of monetary policy and also highlighting causal relationships. Second, it reveals the interplay of the current administration's policy on exchange rate and credit flow to the private sector as it affects economic growth. Lastly, it shows the trend of monetary policy and other macroeconomic variables highlighting the recent changes in the trend after 2023; and given that the study considered quarterly data, the changes from one quarter to the other would be easily tracked thus enhancing comparison.

First, we discovered that monetary policy rate (MPR) associates negatively with economic growth both in the short and long run thus suggesting that as monetary policy rate falls, economic growth heightens; this aligns with the findings of Oladejo et al (2025), and such finding is very substantial in literature. The real fact is that

MPR is one of the prime drivers of the macroeconomy particularly the growth of the economy since the apex bank uses such rate to influence the cost of lending. The interest rate that is considered by banks usually resulting from the amount these banks pay to obtain the funds from the central bank is often a determinant for spending and investment; and in a nation where MPR maintains a relatively low amount, money supply becomes adequate and credit flow to private sector becomes increased which in effect boosts the nation's national output. Similarly, loan-to-deposit ratio exerts negative significant impact on economic growth both in the short and long run thus implying that as loan-to-deposit ratio heightens, economic growth falls. Although the business model of banks encourages great conservatism with the management of its liquid assets, so banks prefer to hold on to its existing cash particularly at the time when MPR is high. This indicates that the decision to hold onto cash instead of lending may threaten the banks profitability. However, as findings in this study suggest, increased borrowing excessively may expose banks to liquidity risk, this undoubtedly impacts on the financial stability of the banking sector and ultimately frustrates economic growth.

Second, it can be observed from the findings that treasury bill rate affects economic growth negatively in the short run, and positively in the long run. Since treasury bill rate is a significant driver of short-term interest rate, so expectedly when treasury bill rates are relatively reduced, loan becomes typically cheaper for business owners and individuals thus encouraging high business investment as well as consumer spending which can attract economic boom. However, in the long run, as businesses flourish through expansion, investment and labour increase, there becomes a need for more capital; this may cause some upward movement in interest rate, particularly treasury bills. Apparently, treasury bill rate and exchange rate don't operate in isolation, they work together to jointly drive economic growth; that backs our findings which reveal that exchange rate positively influences economic growth both in the long and short run suggesting that economic growth heightens as exchange rate improves. So based on our results, the argument about high treasury bill rate attracts investors seeking higher yield, thus causing naira to gain relatively higher value is considered valid. But in Nigeria's policy environment is very unstable, this which is a function of inconsistent monetary policies discourages capital inflow which explains the life-long issue of foreign exchange scarcity to a large extent stiffens economic growth.

Third, findings revealed that savings deposit rate affects economic growth positively and noticeably both in the long and short run thus implying that all things being equal higher savings deposit rate should provoke economic prosperity. Although the literature is replete of studies that investigates money supply or interest rate's impact on economic growth; but there is a handful that decomposes interest rate into specific interest rates. However, Adama (2024) established that deposit interest rate impacts economic growth positively thus affirming my finding; account holders would more likely tend towards saving when the interest rate on their savings account seems attractive. Such deposit in effect contributes to money supply as postulated by the money multiplier effect; this which boosts the lending capacity of banks fuels investment which then translates to steady economic growth. Although the finding of Ise et al (2024) and Oseni and Oyelade (2023) supports the position of my paper, but Amadei, Ewubare and Georgewill (2025) and Gini and Obode (2025) findings differs since their study established a negative association between money supply and economic growth especially in the short run and with their argument being that excessive money in the economy may in the short run trigger inflation which may hinder economic growth. This paper's argument about the role of deposits and the money multiplier effect in economic growth in this paper is supported by the granger causality result which shows that the only statistically significant causality detected between money supply and GDP, but there is no evidence of feedback or reverse causality from GDP.

VI. Conclusion And Policy Implication

This study provides robust empirical evidence on the short-run and long-run dynamics between monetary policy instruments and economic growth in Nigeria. This study arrives at an especially critical juncture for Nigeria's economic policy landscape. Recent sweeping reforms under the Tinubu administration, most notably the liberalization of the exchange rate and the removal of fuel subsidies have unleashed a new wave of macroeconomic instability. This which manifests in the swiftly depreciating naira, surging interest rate, and heightened economic hardship for citizens and businesses alike. These urgent realities underscore monetary policy as one of the direst issues facing Nigeria today, making empirical studies such as this not only timely, but vital for steering informed policy responses.

This study concludes that monetary policy rate and lending rate noticeably causes the dampening economic growth whenever they spike since such situation discourages credit expansions and curbing private sector investment. This raises urgent questions about Nigeria's current monetary policy framework and its suitability for managing an economy seeking to recover from both external shocks and internal fragilities. Hence, it is suggested that interest rate policies must be applied with caution - too high a rate can suppress growth, too low can overheat the economy. In view of the negative impact of both the monetary policy rate and prime lending rate on economic growth, policies must aim to maintain a neutral or slightly accommodative interest rate structure that encourages lending to the private sector, particularly to productive sectors like manufacturing and agriculture.

A strategic downward revision of monetary policy rate may be warranted, especially during economic downturns, to stimulate borrowing and investment. Similarly, prudential guidelines that mandate optimal loan-to-deposit ratios, while safeguarding financial stability, must be enforced to strike a balance between risk management and productivity-enhancing credit creation. The Central Bank of Nigeria (CBN) should also consider introducing counter-cyclical capital buffers, such that during economic expansion, banks build greater reserves for potential downturns, rather than holding back lending altogether when support is most needed by the economy.

Additionally, the study concludes that savings deposit rate, broad money supply, and exchange rate all impact economic growth positively suggesting a convergence of liquidity access and financial inclusion as a credible path to resilient economic development. Policy actions should therefore strengthen financial intermediation through higher real return on savings, deepening the money market, expanding access to financial instruments in rural areas, and operationalizing targeted financial literacy programs. Governments should sustain and incentivize money supply growth responsibly ensuring that liquidity sustains output without triggering inflationary spirals. As the liberalized exchange rate regime persists, stabilizing the naira through non-conventional tools such as macro-prudential surveillance, boosting non-oil exports, and incentivizing diaspora remittances becomes a necessity. Lastly, the study concludes that treasury bills hinder growth in the short term but support it in the long term, policymakers should structure them not merely as liquidity management tools, but as instruments strategically aligned with productive infrastructure financing and capital market development. A harmonized interplay between these macro-financial levers remains vital for Nigeria's transition to a more diversified, resilient, and high-growth economy.

Although this study contributes significantly to the existing literature, there still exist opportunities to explore for future research. Indeed, this paper considered very recent quarterly data that dives into the period when very noticeable policy changes were introduced, and more importantly the consideration of various monetary policy measures including very specific interest rate variables giving our study some distinctiveness; maintaining the same robust monetary policy model, other studies can examine how monetary policy interacts with capital flows. Also, upcoming studies could also adopt panel analysis approach to explore the relationship between monetary policies and economic in Africa.

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