Monetary Policy Shocks And Economic Growth: Evidence From SVAR Modelling

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ABSTRACT

The study assesses the effect of monetary policy on economic growth in Nigeria. It used quarterly time series data from 1986Q1 to 2017Q4. SVAR analysis was used to assess the effects of monetary policy following the framework of Inflation Targeting (IT) on economic growth in Nigeria. Findings reveal that monetary policy has a positive shock on economic growth. The monetary policy rate (MPR) positively affects growth. Its effect was however minimal only accounting for a maximum of 3 percent. Also, the broad money supply (M2) had a positive shock but only accounting for a maximum of 7 percent. The study concludes that the inflation targeting (IT) framework is a good monetary policy tool but not sufficient. There is need for other supplementary instruments.

Key word: Monetary Policy, Inflation targeting, Economic growth, Shocks, SVAR.
JEL Classification: E02

INTRODUCTION

Monetary policy has always been seen as a fundamental instrument over the years for the attainment of macroeconomic stability, often viewed as prerequisite to achieving sustainable economic growth and development (Chinedu, Magaji & Musa, 2021). Thus, in the pursuit of macroeconomic stability, the monetary authorities would have to set targets on intermediate variables which includes the short-term interest rates, money supply and exchange rate (Magaji, Michael & Ayo, 2018). The intermediate variables include the exchange rate which is said to have greater influence on economy through it effects on the value of domestic currency, external sector, domestic inflation, macroeconomic credibility, capital floss and financial stability. Exchange rate directly affects the prices of imported goods and services (Akponunu & Orajaka, 2021).

In order to propel monetary policy in the proper direction and with the desired force, policy makers need to have a clear understanding of the transmission mechanism of monetary policy shocks and the relative importance of the various channels in affecting the real sectors of the economy. The effects of

monetary stratagem on the different sectors of the economy do differ. Haug (2021) considers two monetary policy regimes: tight and loose. The deployment of either type depends on the need to achieve prices stability and the maintenance of balance of payment equilibrium. The essence of monetary policy is the achievement of external and internal balance of the value of money in addition to the enhancement of the real sector of the economy, and the promotion of long run growth of the economy (Ozuzu & Isukul, 2021).

In Nigeria, monetary authorities employ different instrument to achieve stability and long-term growth (Michael, 2012). A sustainable high growth rate of output and a low inflation rate are the two main goals of macroeconomic policies. In addition, price stability is a key factor in determining the growth rate of an economy.

Throughout Nigeria's existence, the CBN has been tasked with the responsibility of implementing monetary policy in accordance with the macroeconomic policy objectives of the federal government of Nigeria (CBN, 2006). These objectives, as contained in the various Acts of the CBN, are broadly defined as the maintenance of internal and external balance. Consequently, monetary policy has been designed, over the years, with a view to attaining price, interest rate and exchange rate stability, maintaining a viable balance of payments position, and achieving accelerated growth of the economy (Nnanna, 2001). The policy framework in Nigeria has evolved over time, depending on political regimes and/or international best practices.

The essence of government control of an economy is to achieve a desired stability for sustainable development. The Nigeria government has made concerted efforts at diversifying its economy. The efforts were directed at policies that could enhance growth of the different sectors of the Nigerian economy (Magaji, Ayo, Musa & Ali, 2019). Monetary policy is one of the economic strategies of the government undertaken through the apex bank in the country to foster macroeconomic stability in order to promote growth (Efangen, 2021).

The economic growth-rates of countries are commonly compared using the ratio of the Gross Domestic Product to population that is the per-capita income (Mathew, 2021)

Growth over the years in Nigeria has been largely unstable and low. Per capita GDP was only USD 2,360 in 2021, The GDP per Capita in Nigeria is equivalent to 19 percent of the world's average (World Bank, 2021). In 2021, The Nigerian economy has experienced modest growth and annual nominal growth stood at 13.92%. The Nigerian economy has been classified broadly into the oil and non-oil sectors. The rebasing of its GDP in April 2021 by the National Bureau of Statistics to better reflect the size and structure of the economy, saw surge past south Africa to become Africa's largest economy with a rebased GDP estimate of USD448.12 billion in 2019 and USD400 billion in 2020. However, given the country's high population, per capita GDP was only USD2,097.7 in 2020, It is ranked as the 27th-largest economy in the world in terms of nominal GDP, and the 24th-largest in terms of purchasing power parity. Nigeria has the largest economy in Africa according to the World Development Indicators (World Bank, 2021). In 2015, the Nigerian economy was adversely affected by external shocks, in particular a fall in the global price of crude oil. Growth slowed sharply from 6.2% in 2014 to an estimated 3.0% in 2015. Inflation increased from 7.8% to an estimated 9% (African Economic Outlook, 2016). The problem of interest for this research is that what is the effect of monetary shock on economic growth of a developing country like Nigeria? Therefore, the objective of this research is to investigate the impact of monetary policy shocks on economic growth in Nigeria, using evidence from SVAR Modelling.

CONCEPTUAL LITERATURE
Monetary Policy

Monetary policy is the well-considered procedural efforts of the relevant authority (Central Bank) of a country. Monetary policy is aimed at price stability and increasing or decreasing the amount of money in circulation by targeting a desirable interest rate or a rate of inflation. These policies as explained by Chugunov, Pasichnyi, Koroviy, Kaneva, &Nikitishin (2021) are usually deployed to influence economic activities. The real objective was to accomplish the desired macroeconomic stability by using the variations in the money supply, the direction of credit, the cost of credit, and the size of

credit availability. Monetary policy prefers to the combination of measures designed to regulate the value, supply and cost of money in an economy, to match with the level of economic activities (Yekeen & Magaji, 2016). It can also be described as the act of controlling the direction and movement of monetary policy and credit facilities in pursuance of stable price and economic growth in an economy (Obi, 2021).

Concept of Economic Growth
Economic growth has long been considered an important goal of economic policy with a substantial body of research dedicated to explaining how this goal can be achieved (Fadare, 2010). Economic growth represents the expansion of a country's potential GDP or output. For instance, if the social rate of return on investment exceeds the private return, then tax policies can encourage growth rate and levels of utility. Growth models that incorporate public services, the optimal tax policy lingers on the characteristic of services (Olopade & Olopade, 2010). Moreover economic growth has provided insight into why states grow at different rates over time; and this influence government monetary stance, her choice of tax rates and expenditure levels that will engender the growth rates.

Economic growth is the increase in the market value of goods and services produced by an economy over time. (African Economic Outlook, 2016) It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP of more importance is the growth ratio of GDP to population (GDP per capita), which is also called per capita income. An increase in per capita income is referred to as intensive growth. GDP growth caused only by increases in population or territory is called extensive growth (Gordon, 1999).

Theoretical Literature
The New Consensus Macroeconomic (NCM)
An amalgamation of some of the key assumptions of the new-Classical (rational expectations) and the new-Keynesians (short-run rigidities and long-run flexibility) constitutes the bedrock of the NCM model, the policy conclusion of which is that price-stability is the main objective of monetary policy. According to Setterfield (2006), the key elements of the NCM model are the assumption of real wage bargaining, monetary neutrality, supply-driven equilibrium and demand-determined inflation. Following Clarida, Galí and Gertler (1999) and Meyer (2001), these elements are typically summarized by three equations – IS-type AD, PC, and monetary rule (MR) – with micro-foundations in agents' optimisation procedure (Gali, 2008; Walsh, 2003;Woodford, 2003). The views of the NCM are parallel to those of the new-Keynesians and new-Classical in arguing that a Central bank cannot engage in real output stabilisation in the long-run, since the combination of rational expectation and continuous market clearing ensures the emergence of inflationary pressures without output gains. The central bank should thus concentrate on long-run price-stability and short-run output stabilisation (Fontana & Palacio-Vera, 2007).

Empirical Literature
Shafiu, Kamal &Shuaibu (2021) measure the influence of monetary variables on economics growth in Nigeria using Generalized Method of Moment (GMM) and Autoregressive Distributed Lack Model (ARDL) for analysis using annual data from 1989 to 20219. The result shows that money supply is an important variable explaining economic growth in Nigeria but foreign external policy affects economic growth negatively. However, income is the most important variable that explains monetary demand in Nigeria. The study recommends change in Nigeria foreign exchange policies.

Olufemi, Sunday & Oluwadamilola (2021) reveal that there is mixed level of stationary in the variables from the unit root test and the bound test result shows that the variables are co-integrated. The ARDL shows that in the long run government spending continues to drive economic growth in Nigeria. The result of the monetary policies shows that interest rate influences growth of the economy

while money supply deters growth in the Nigerian economy. Sequel to the findings, the study recommends that policy makers should make use of interest rate as it stimulates growth of the economy in the short run.

Mathew (2021) using Ordinary Least Square (OLS) Method, shows that the long run relationship exists among key explanatory variables of monetary policy rate as especially interest rate but real exchange rate has a negative effect on economic growth in Nigeria. The study recommends that government and relevant monetary authorities should make financial sector less volatile and ensure the effective monitoring of money supply levels, among others.

Victor, Chinyelu, Chibueze, Chukwubuzo&Adewale (2021) examine the adjustment of retail and money market interest rates to changes in discount corridor of the monetary policy in Nigeria. A vector error correction model was adopted for this study, using monthly data from 2007:06 to 2019:12. They further account for structural breaks in the dataset to improve its policy reliability. The adjustment parameters were found to be significant but with slow speed of adjustment. This finding provides evidence of the weakness of the discount corridor in monetary policy transmission in Nigeria. Furthermore, the results show no asymmetric adjustment of retail rates to long run equilibria. Lastly, the study found that the deposit rates respond inversely to changes in the standing lending facility. The results imply that the transmission of policy signals through the standing facility rates is not strong, and that raising the standing lending facility will not induce a rise in banks' deposit rates.

Although different approaches were made by various authors to discuss monetary policy, there is a need to have evidence from SVAR modelling.

METHOD

Type and Sources of Data
Secondary data is employed for this study using time series particularly quarterly data spanning 1986:Q1 to 2017:Q4. The data on Gross Domestic product (GDP), the monetary policy rate (MPR), inflation rate (INF), and the broad money supply (M_2) were sourced from the CBN annual statistical bulletin 2017 edition.

Model Specification

This study adopted the empirical work of Michael (2012) and as such the variables included in the SVAR model for this study are the Gross Domestic product (GDP), the monetary policy rate (MPR), inflation rate (INF), and the broad money supply (M_2).

$$GDP = f(MPR, INF, M_2) \qquad\qquad 3.1$$

$$LGDP = \alpha_0 + \alpha_1 LMPR + \alpha_2 LINF + \alpha_3 LM_2 + \varepsilon \qquad\qquad 3.2$$

where ε is the error term and assumed to be a white-noise process where $\varepsilon \approx ii(0, \delta^2 \varepsilon)$ since the mean is equal to zero and variance is constant. Meanwhile, α is the coefficient of the respective estimated variables, LGDP is the natural log of real GDP, LMPR is the natural log monetary policy rate, INF is inflation rate (proxied by the consumer price index), while LM_2 is the natural log of broad money supply.

Technique of Data Analysis

i. Unit Root Test

Since most of the macroeconomic time series are non-stationary (Nelson & Plosser, 1982) and thus conducive to spurious regression, stationary is first tested. For this purpose, the Augmented Dickey-Fuller (ADF) test is done by carrying out a unit root test based on the following structure;

$$\Delta X_t = k + \emptyset t + \Theta X_{t-1} + \sum_{i=0}^{n} \varphi i \Delta X_{t-1} + \varepsilon_t \qquad 3.3$$

SVAR

Here a VAR reduced form specification was presented to enable specification of the SVAR; the SVAR model exhibits the features of a reduced-form statistical model of the data generating process. The starting point of SVAR analysis is the reduced form of VAR (Gottschhalk, 2001).

Reduced VAR

$$\begin{bmatrix} LGDP \\ LINF \\ LMPR \\ LM_2 \end{bmatrix} = \begin{bmatrix} \Psi_1 \\ \Psi_2 \\ \Psi_3 \\ \Psi_4 \end{bmatrix} = \sum_{i=1}^{k} \begin{bmatrix} \alpha_{11} & \alpha_{12} & \alpha_{13} & \alpha_{14} \\ \alpha_{21} & \alpha_{22} & \alpha_{23} & \alpha_{24} \\ \alpha_{31} & \alpha_{32} & \alpha_{33} & \alpha_{34} \\ \alpha_{41} & \alpha_{42} & \alpha_{43} & \alpha_{44} \end{bmatrix} \begin{bmatrix} LGDP_{t-1} \\ LINF_{t-1} \\ LMPR_{t-1} \\ LM_{2_{t-1}} \end{bmatrix} + \begin{bmatrix} v_{1t} \\ v_{2t} \\ v_{3t} \\ v_{4t} \end{bmatrix}$$

The variables LGDP, LINF, LMPR, and LM_2 represents economic growth (growth of gross domestic output), inflation rate (proxied by consumer price index), the monetary policy rate, and the broad money supply, respectively. Where the column vector on the left hand side of each equations denotes the vector of policy and non-policy variables, the optimal lag order of the VAR specification is k, the intercept is $\Psi's$, that is, vectors of constants, $\alpha's$ are the coefficients of the variables of the model that is, the matrix of coefficients on the variables lagged j periods, $v's$ are the VAR errors, that is, vectors of serially uncorrelated disturbances that have zero mean, unit-variance and zero-co-variance matrix.

There are basically two tools of analysis under the SVAR model as outlined above and as asserted by Enders (2014), they are:

i.   **Impulse Response Function (IRF)**: This is a tool which allows the tracing out of the time path of various shocks on the variables contained in the VAR system. It shows the time path response of variable to shock in itself and shock to other variables in the model.

ii. **Forecast Error Variance Decomposition (FEVD)**: This shows the proportion of movement in a sequence that occurs due to its own shocks versus shocks to other variables in the model. In other words, it shows the apportionment of forecasting errors of a variable to itself and other variables in the system.

RESULT AND DISCUSSION

Table 4.1: Augmented Dickey-Fuller Unit Root Test Result

Variable	Order	ADF Calculated	ADF Critical value	Order of integration	Remark
LGDP	At levels	-2.485375	-3.445590		.
	1st difference	-12.59508	-3.445877	1(1)	Stationary
LINF	At levels	-3.207928	-3.445590		.
	1st difference	-11.93759	-3.445877	1(1)	Stationary
LMPR	At levels	-2.672659	-3.445590		.
	1st difference	-11.18130	-3.445877	1(1)	Stationary
LM2	At levels	-0.060158	-3.445590		.
	1st difference	-11.87261	-3.445877	1(1)	Stationary

Source: Author's Computation using E-views.

The result of the ADF unit root test on Table 4.1 shows that the variables of LGDP,LINF, LMPR, and LM2were all non-stationary at levels, but at 1st difference they were all found to be stationary because their computed ADF absolute values were greater than their critical values at the 5% level. From this test, all the variables were thus found to be stationary at 1st difference, meeting the stationarity condition.

Table 4.2 :VAR Lag Order Selection Criteria Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-340.0987	NA	0.003023	5.549980	5.640956	5.586936
1	381.9405	1385.849	3.43E-08	-5.837750	-5.382866*	-5.652965*
2	402.9306	38.93329	3.16E-08*	-5.918235*	-5.099444	-5.585623
3	406.3477	6.117734	3.88E-08	-5.715286	-4.532587	-5.234846
4	423.9319	30.34683*	3.80E-08	-5.740836	-4.194230	-5.112569

* indicates lag order selected by the criterion
Source: Author's Computation using E-views.

Where LR: sequential modified LR test statistic (each test at 5% level), FPE: Final prediction error, AIC: Akaike information criterion, SIC: Schwarz information criterion, HQ: Hannan-Quinn information criterion the VAR lag order selection test result on Table 4.2 shows that the SIC selected 1 lag. As such, this study used 1 lag to carry out the VAR estimation.

i.   Impulse Response Test

The IRFs are very useful in analyzing the interactions among variables in a VAR model. The impulses represent the reactions of the variables to shocks hitting the system. The interpretation for the IRFs is split into 10 periods to effectively trace the effect of shocks to variables, it particularly uses period 3 and 10 to represent the short and long-run periods respectively.

Response of GDP (LGDP) to shocks from Inflation (LINF)

Figure 4.1 shows the response of GDP (LRGDP) to shocks from inflation (LINF). From period 1 to 10, the graph shows a steady and consistent negative slope of LGDP to shocks from LINF. The graph shows LINFnegatively affecting LGDP over the 10 periods. This indicates that in both the short-run period and the long-run period LINF negatively affected LGDP.The inflation variable followed apriori expectation, indicating that inflation is detrimental to economic growth necessitating the NCM framework of inflation targeting so as to keep it at manageable levels.

Response of GDP (LGDP) to shocks from Monetary Policy Rate (LMPR)

The Monetary Policy Rate (MPR) in Figure 4.2 for this study represents the variable of interest that basically captures government's monetary policy stance as it relates to inflation targeting and its subsequent transmission to the economy. The LMPR positively affected growth through the 10 periods under investigation. Its effect was however minimal considering that both in the short-run and in the long-run it maintained a value that was a little below 0.02. This result is in conformity with the inflation targeting (IT) that sound inflation targeting at manageable levels ultimately should have a positive impact on economic growth.

Response of GDP (LGDP) to shocks from Money Supply (LM2)

The broad money supply variable (LM2) in Figure 4.3 represents M_1, plus time savings, and foreign currency deposits of resident sectors other than the central government. The M_2 quantifies the amount of money in circulation and it is also used to explain the different economic monetary conditions. Which represents the use of other monetary policy instrument other than the MPR in this study, and this is based on the fact that monetarists' argue that there is stable relationship between the intermediate target M_2 on one hand and output, inflation, unemployment, and other relevant economic variables on the other; and government is able to control M_2. The slope of LGDP responding to shocks from LM2 maintained a steady upward positive relationship all through the 10 periods. With a

value of about 0.02 in the short-run period, it shows LGDP growing as a result of shocks from LM2 to a little below 0.04 in the long-run period. This result points to the fact that broad money supply represents an important monetary policy instrument in monetary policy design in Nigeria. Its complementary role helps to achieve a stable inflation and output level in the economy.

Response of Inflation (LINF) to shocks from Monetary Policy rate (LMPR)

The impulse response function of Inflation (LINF) in Figure 4.4 to shocks from Monetary Policy rate (LMPR)in this study assesses the efficacy of an inflation targeting (IT) type monetary policy in Nigeria which represents the use of short-term interest rate to achieve price-stability. Over the 10 periods, the slope of LINFremained below 0.04. Although the ideal situation was to keep inflation at negative levels (which indicates a reduction in inflation), the MPR however kept inflation at manageable levels at all times represents the core of an IT policy; This study, therefore concluded that although the MPR did not reduce inflation, it however kept the inflation rate below the 0.04 threshold over the 10 period.

Response of Inflation (LINF) to shocks from broad Money supply (M$_2$)

The impulse response function of Inflation (LINF) to shocks from broad money supply (M$_2$) presented in Figure 4.5 indicates that the response of LINFto shocks from M$_2$ kept inflation at much more lower level in comparison with the impulses from MPR. The lower the impulse the better the monetary policy tool, since the target is on keeping inflation at lower levels, as such result points to the fact that the M$_2$ had more efficacy than the MPR at keeping inflation at manageable levels.

Variance Decomposition Test
The Forecast Error Variance Decomposition (FEVD) is used to determine the proportion of movement in a sequence that occurs due to its own shock versus shocks to other variables in the model. In other words, the variance decomposition shows the apportionment of forecasting errors of a variable to itself and other variables in the system. For analysis this study used period 3 and 10 to represent the short and long-run periods respectively. The basis is the conventional way of ordering.

Variance Decomposition of LGDP
Table 4.3: Variance Decomposition of LRGDP

Period	S.E.	LGDP	LINF	LMPR	LM2
1	0.108964	100.0000	0.000000	0.000000	0.000000
2	0.146064	99.32391	0.143389	0.274207	0.258492
3	0.170964	98.09383	0.383032	0.745128	0.778010
4	0.189829	96.57609	0.650617	1.288757	1.484541
5	0.205033	94.94316	0.906336	1.830164	2.320338
6	0.217758	93.29760	1.130231	2.329224	3.242944
7	0.228683	91.69506	1.314764	2.768064	4.222108
8	0.238237	90.16201	1.459507	3.141930	5.236557
9	0.246715	88.70779	1.567691	3.453181	6.271334
10	0.254326	87.33245	1.644128	3.707598	7.315824

Source: Author's Computation using E-views.

The variance decomposition of GDP (LGDP) for the SVAR estimation is presented in Table 4.3 The test result shows that own shock constituted the most source of fluctuation in the model followed by shocks from broad Money supply (LM2) and then Monetary Policy Rate (LMPR). The variance decomposition of LGDP indicates that a one standard deviation positive shock or innovation to LM2 caused LGDP to change by about 1 per cent in the short-run, in the long-run however, it caused LGDPto change by 7 per cent. Shocks from LMPR caused 1 per cent and 4 per cent of fluctuations in LGDP in the short and long-run respectively. While shocks from LINF caused 0.4 per cent and 2 per cent fluctuations in LGDP in both the short and long-run, respectively. The variance decomposition of LGDP showed that the broad supply had more effect on LGDP than the MPR for the period under analysis.

Granger Causality Test

The Granger causality test was employed to determine the nature of causation between monetary policy and economic growth in Nigeria. The result of the Granger causality test is presented on Table 4.3

Table 4.4: Granger Causality Test Result

Null Hypothesis:	Obs	F-Statistic	Probability
LINF does not Granger Cause LGDP	127	0.13002	0.71902
LGDP does not Granger Cause LINF		5.09500	0.02574
LMPR does not Granger Cause LGDP	127	1.87056	0.06499
LGDP does not Granger Cause LMPR		1.98955	0.16089
LM2 does not Granger Cause LGDP	127	5.88644	0.01670
LGDP does not Granger Cause LM2		1.59998	0.20828
LMPR does not Granger Cause LINF	127	0.01296	0.90955
LINF does not Granger Cause LMPR		1.64785	0.20165
LM2 does not Granger Cause LINF	127	5.73509	0.01813
LINF does not Granger Cause LM2		0.15774	0.69193
LM2 does not Granger Cause LMPR	127	2.65080	0.10604
LMPR does not Granger Cause LM2		0.14533	0.70369

Source: Author's Computation using E-views. 2010

The result of the Granger causality test shows that there was a one-way causation running from LGDP to LINF at the 5% level. The LMPR variable granger caused LGDP at the 10% level. Also, LM2 granger caused LGDP at the 5% level. And lastly, there was a one-way causation running from LMPR to LINF at the 5% level.

The causality test result supports the findings from the impulse response function and the variance decomposition test that the monetary policy rate and the broad money supply positively affected growth for the period under analysis. That these monetary policy instruments had significant effects on the economy and also the inflation targeting monetary policy objective of the CBN had the desired effect of stimulating growth.

Variance Decomposition of LINF
Table 4.5: Variance Decomposition of LINF

Period	S.E.	LGDP	LINF	LMPR	LM2
1	0.198056	0.926981	99.07302	0.000000	0.000000
2	0.261096	1.275051	98.37229	0.276796	0.075868
3	0.300267	1.577573	97.42639	0.779401	0.216633
4	0.327462	1.819562	96.38920	1.396900	0.394337
5	0.347409	1.999515	95.35644	2.054127	0.589918
6	0.362529	2.123401	94.38171	2.703692	0.791194
7	0.374241	2.200537	93.49063	3.317987	0.990848
8	0.383451	2.241053	92.69146	3.882674	1.184816
9	0.390778	2.254506	91.98250	4.391894	1.371099
10	0.396659	2.249216	91.35685	4.844967	1.548963

Source: Author's Computation using E-views

The result of the variance decomposition of Inflation (LINF) is presented in Table 4.5. The result shows that innovation or shock to LMPR caused more fluctuation to LINFin both the short-run and in the long-run after own shock. Shocks from LMPR caused 2 per cents and 5 per cent fluctuation in LINFin the short and long-run, respectively. A one standard deviation positive shock or innovation to LM2 caused LINFto fluctuate by 0.22 per cent and 2 per cents, respectively in the short and long-run. This result indicated that the MPR remains an important component in the operation of monetary policy in Nigeria, thus supporting the result of the impulse response test on the efficacy of inflation targeting (IT) monetary policy framework.

5.0 Conclusion

The objective of this research is to investigate the impact of monetary policy shocks on economic growth in Nigeria, using evidence from SVAR Modelling. The study used quarterly data between 1986Q1 to 2017Q4, a sample period of thirty-one years. Key finding is that shock to LMPR caused more fluctuation to LINFin both the short-run and in the long-run. Shocks from LMPR caused 2 per cents and 5 per cent fluctuation in LINFin the short and long-run, respectively. A one standard deviation positive shock or innovation to LM2 caused LINFto fluctuate by 0.22 per cent and 2 per cents, respectively in the short and long-run. The broad money supply (M_2) was however a much more effective monetary policy rate (MPR) tool to achieve growth and control inflation target (IT) than the MPR. The study concludes that the MPR was however a good monetary policy tool, but there is a need for other instruments which the central bank can control effectively. Although the result showed that the Nigerian economy responded positively to the IT framework and the use of M_2, their effects were minimal, pointing to the weak institutional features and fiscal dominance; these, jointly debilitate the conduct of monetary policy, and diminishes its reliability.

The Central Bank of Nigeria (CBN) should adopt monetary policy instrument, which combines quantity-based and price-based nominal anchors, to improve policy targets. However, there is still need for the CBN to embark on a comprehensive monitoring of monetary instruments and aggregates. In particular, effective monetary policy implementation should focus on controlling and manipulating instruments such as the lending rates (with more emphasis on the maximum lending rate because it reflects the true cost of borrowing in the economy), as major tool for transmitting monetary impulses for economic performance.

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