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MONETARY POLICY INSTRUMENTS AND ECONOMIC GROWTH: THE NIGERIAN PERSPECTIVE

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Abstract

This study focuses on the effect of monetary policy instruments on the growth of the Nigerian economy. The specific objectives were to: determine the effect of lending rate, money supply and monetary policy rate on the growth of the Nigerian economy. Ex-post facto research design was applied and data were analyzed using the Ordinary Least Square (OLS) method. From the results, it was revealed that there was an insignificant relationship between lending rate and gross domestic product in Nigeria. It was further discovered that there was a significant relationship between money supply and gross domestic product in Nigeria. Monetary policy rate was also found to have an insignificant effect on gross domestic product in Nigeria. Based on the findings, the study recommended that monetary policy rate as well as lending rate should be environment and business-friendly, and predictable in line with prevailing economic dictates and conditions. Also, money supply should be efficiently and effectively regulated, so as to avoid inflationary pressure on the economy.

Keywords: Moratorium, economic growth, development stock, monetary policy rate

Introduction

Monetary management is often an integral part of macroeconomic management, which is usually within the purview of the Monetary Authority. Monetary policy is therefore a tool for monetary management of a country, which involves the use of some combinations of instruments by the Central Bank to influence the availability and cost of credit

This conceptualization delineates two sets of variables “target variables” and “instrumental

and/or money in the domestic economy with a view to achieving macroeconomic balance/stability via economic growth. On the other hand, macroeconomics policy refers to actions taken by government agencies responsible for the conduct of economic policy to achieve some desired objective of policy through the manipulation of a set of instrumental variables (Jhingan, 2010).

variables”. Target variables are ones for which the government seeks desirable values

and are immediate goals of macroeconomic policy. The major target variables or goods are full employment, price stability and satisfactory rate of economic growth, an equitable distribution of income and balance of payments equilibrium. Instrumental variables, on the other hand, are those variables that the government can manipulate to achieve its economic objectives. They are necessarily exogenous variables as the government must be able to determine the values independently of the other variables in the system (John, Orok & Udoka, 2020).

In Nigeria, the key macroeconomic policies are monetary policy, fiscal, exchange rate and Income policies. More importantly is that the effective management of the monetary policy is a fundamental pre-requisite in ensuring adequate liquidation in the banking system (Obim, John & Orok, 2018). These sectors of the economy are power, agricultural, aviation, SMEs, etc.

The above therefore, shows that monetary policy management goes beyond price stability, particularly amongst developing countries, but with a dual mandate: price stability and sustainability of economic growth. Monetary policy influences the level of money stock and/or interest rate, i.e., availability, value and cost of credit in consonance with the level of economic activity (Anyanwu, 2002).

Macroeconomic aggregates such as output, employment and prices are, in turn, affected by the stance of monetary policy through a number of ways including interest rate or money; credit, wealth or portfolio and exchange rate channels. This aptly means that monetary authority applies discretionary power to influence the money stock and interest rate to make money either more expensive or cheaper depending on the prevailing economic conditions and policy stance geared towards achieving price

stability. Blinder (1991) succinctly puts it thus; monetary policy is nothing more than deliberate attempt to control the money supply and credit conditions for the purpose of achieving certain broad economic objectives.

In general, most monetary authorities or central banks have been saddled with controlling inflation, maintaining a healthy balance of payments position to safeguard the external value of the domestic currency and promoting economic growth, but in Nigeria, the Central Bank of Nigeria (CBN) is the sole monetary authority with core mandate of promoting monetary and price stability, with an efficient and reliable financial system through the application of appropriate monetary policy instruments and systemic surveillance (Takon, John, Ononiwu & Mgbado, 2020).

From the foregoing, monetary policy is often confronted with the problem of managing excess liquidity, rapid expansion in credit as well as excess foreign exchange and capital inflows, uneven distribution as well as inflationary pressures arising from overheating the polity; uncertainty about the transmission mechanism, and fiscal policy outlook, etc. The conduct of monetary policy in Nigeria has undergone several phases, thus, the era of application of market instruments or indirect controls, era of intense reform of strategy and institutions and the era of application of direct controls (Anyanwu, 2002).

As earlier noted, monetary policy is usually a complex process involving objectives and targets setting, monetary programming, choice of nominal anchor, policy instruments and institutional framework aimed at monetary policy implementation as well as communication and evaluation of outcomes. The major objectives of the policy are the attainment of price stability and sustainable

economic growth, with full employment and stable long-term interest and real exchange rates. In doing this, Central Bank of Nigeria (CBN) often recognizes the existence of conflicts of objectives, hence, necessitating at some point, some sort of trade-offs (Takou, John, Mbaze-Ebock, Akpan, Asukwo, Awah & Nkamare, 2020).

According to Jelilov (2016), Central Bank of Nigeria (CBN) organizes monetary policy targets into three (3) stages thus: firstly, operational target, i.e., manipulation of reserve money over which it has substantial direct control. Secondly, the level of broad money supply (M2) which in turn impacts on the ultimate target, which has to do with inflation and output.

More so, in carrying out these functions, Central Bank of Nigeria (CBN) combines amongst others, the use of nominal anchor in executing her monetary policy. It is often a device used by the apex bank to pin down expectations of private agents about nominal price level or its path or about what the bank might do with respect to achieving the target path. Basically, this nominal anchor is of two types: quality based nominal anchor, where quality of money is the target, and price-based nominal anchor, which targets exchange or interest rates. However, the Central Bank of Nigeria (CBN) has been noted to be using broad money supply (M2) as its nominal anchor for monetary policy. Other management processes include, but not limited to the choice of policy strategies like: exchange rate targeting, monetary targeting, price-level targeting, etc. The choice of each or combination of strategies enumerated above essentially depends on strong conviction, via research that the choice strategy would deliver better monetary policy outcomes, hence, taking into cognizance the country's economic peculiarities.

However, it was until 1993 that Open Market Operation (OMO) was introduced, hence, Central Bank of Nigeria (CBN) relied exclusively on varying combination of direct instruments of monetary control from time-to-time which include: credit ceilings, sectorial credit allocation, interest rate control, imposition of special deposits, moral suasion, withdrawal of government deposits, stabilization of securities and exchange controls, etc. Thus, as a result of 1980s economy-wide macroeconomic reforms, an offshoot of financial markets deepening, the Central Bank of Nigeria (CBN) engaged in a more of market-based instruments for control. This new direction came in the form of open-market operation (OMO) and reserve requirements in June, 1993. Similarly, central bank performs the role of lender of last resort to the deposit money banks (Jelilov, 2016). Hence, complementary these market-based instruments include: moral suasion, discount window operations. Foreign exchange sales/swaps and standing debit and credit facility introduced in December, 2006.

In practice, the manipulation of monetary policy in the economy influences the level and structure of interest rates, and thus, the cost of funds in the market, depending on the prevailing economic conditions. Moreover, it also affects the non-bank public's holdings of real and financial assets, hence, changes in interest rates and the relative quantities of financial assets in the system. It can thus sustain a divergence between the non-bank public's desired portfolio of assets and its actual portfolio holding.

However, for a developing country like Nigeria, economic growth is necessary to ensure improvements in the standard of living of the citizenry, as well as a sustainable basis for poverty alleviation. With the constant increase in poverty level within the Nigerian economy, it then becomes necessary to seek for measures to alleviate paucity and

motivate growth within the economy. Thus, it is in light of this, that this study is conducted to examine how monetary policy instruments can be used to address the problem of inadequate economic growth and also realizing a satisfactory growth rate in Nigeria. The specific objectives of this study are:

- i) To assess the effect of lending rate on gross domestic product in Nigeria;
- ii) To investigate the effect of money supply on gross domestic product in Nigeria;
- iii) To examine the effect of monetary policy rate on gross domestic product in Nigeria.

Research questions

To what extent does lending rate affect gross domestic product in Nigeria?

To what extent does money supply affect gross domestic product in Nigeria?

To what extent does monetary policy rate affect gross domestic product in Nigeria?

Research hypotheses

The following hypotheses are tested in null form:

1. There is no significant effect of lending rate on gross domestic product in Nigeria;
2. There is no significant effect of money supply on gross domestic product in Nigeria;
3. There is no significant effect of monetary policy rate on gross domestic product in Nigeria.

Conceptual Review

Instruments of monetary policy

Instruments of monetary policy are tools available to the CBN, which they can use to influence the supply of money in the economy. Instruments of monetary policy are classified into two categories.

1. Quantitative, general or indirect.
2. Qualitative, selective or direct.

Quantitative, general or indirect include; Bank rate policy, Open market operations, and Reserve requirements. Bank rate policy can be defined as the minimum-lending rate of the CBN at which it rediscounts first class bills of exchange and government securities held by the commercial bank. Open Market Operations refer to sale and purchase of securities in the money market by the CBN. When prices are rising and there is need to control them, the central bank sells securities. The reserves of commercial banks are reduced and they are not in the position to lend more to the business community (Ezeduji, 1994).

Open market operation

Open Market Operation expands monetary base, thereby raising the money supply. In 2002, the Central Bank of Nigeria introduced another monetary instrument known as the Central Bank of Nigeria to compliment the use of government security for conduction open market operation. The certificate is different from other instrument in the sense that, it cannot be discounted for this is to enhance the efficiency of monetary policy actions, given the instability of the only available treasury. In terms of impact, the sales and purchase of the certificate has the same impact as the sales and purchase of other government securities.

Reserve requirement

Reserve requirement is the fraction of total deposit liabilities which commercial banks are required to maintain in the form of cash reserve with the Central Bank of Nigeria. It is the minimum amount of reserve (or eligible liquid asset) that commercial banks must hold in proportion to total deposit liabilities. For each category of the deposit liabilities, a rise in the cash ratio or liquidity ratio reduces the amount of deposit that can be supported by a given level of monetary base and will lead to contraction of the money supply. Fractional

reserve limits the amount of money banks can loan to the domestic economy and thus limit the supply of money in circulation.

Qualitative, selective or direct controls are used to influence specific types of credit for particular purposes. They include; direct credit control, moral suasion and prudential guidelines.

Direct credit control

The Central Bank directs Deposit Money Banks on the maximum percentage or amount of loans it can loan out to different economic sectors or activities, interest rate caps, liquid asset ratio and issue credit guarantee to preferred loans. In this way the available savings is allocated and investment directed in particular directions.

Moral suasion

The Central Bank issues licenses or operating permit to Deposit Money Banks and also regulates the operation of the banking system. It can, from this advantage, persuade banks to follow certain paths such as credit restraint or expansion, increased savings mobilization and promotion of exports through financial support, which otherwise they may not do, on the basis of their risk/return assessment.

Prudential guidelines

The Central Bank may in writing require the Deposit Money Banks to exercise particular care in their operations in order that specified outcomes are realized. Key elements of prudential guidelines remove some discretion from bank management and replace it with rules in decision making.

Monetary policy formulations

According to Jhingan (2010), monetary policy formulations under the direct control system of monetary policy is different from

the policy formulation under the indirect control system.

Under the direct control of money, monetary policy formulation has four stages; definition of objectives, policy formulation, policy implementation and review evaluation stages. These stages are distinct, although closely interrelated. The definition of policy objectives is an important aspect of the formulation process. This assists in proper articulation of the policy focus and the adoption of correct instruments for the achievement of the goals. The next stage is the formulation of policy thrusts. This entails appraising the recent past and present policy targets as a basis for making projections of the future trends, in the absence of policy changes.

The next stage is the implementation of the policy framework. The implementation is usually affected through the structures provided by the financial intermediaries, especially the banks. There is conscious attempt to evaluate the results from the implementation stages and the level of effectiveness of instruments in use. If the objectives are not being achieved, further adjustments are made and tailored to the needs of policy. However, in the implementation of monetary policy, the Central bank issues to the banks and other financial intermediaries the broad targets to be achieved and the monetary and banking policy thrusts to be pursued. These are in the form of guidelines which prescribed what the banks are expected to do, to ensure sound banking structure. It also prescribes penalties in the event of default. To enhance the level of compliance with the monetary policy, the central bank ensures:

- Analysis of regular and occasional returns from banks;

- Conduct periodic and special examinations of the books of all licensed banks.

Monetary policy formulation under the indirect system of monetary management is slightly different from the process described above. According to Bernanke and Kuttner (2015), the steps for policy formulation under the indirect method are as follows:

- i. The central bank estimates the level of money supply compatible with economic growth at stable prices.
- ii. They forecast the money supply based on specified changes in the balance sheet of the central bank. This forecast provides the target for monetary policy. Also, the estimates will yield a monetary growth path, indicating an excess of money supply over demand as against the desired zero excess supply of money.
- iii. The central bank derives the level of primary or base money associated with the projected excess money supply.
- iv. They determine the level of bank reserves that needs to be injected or drained from the system to keep money supply growth along the desired path. The process of policy implementation and review are the same as in the direct system of monetary management.
- v. Finally, they set appropriate ranges for short-term interest rates, which are pivotal to the entire structure of rates.

Theoretical Review

There are various theories that governed the activities of monetary policy and economic growth. These approaches include

Keynesian theory

The Keynesian theory is rooted on the notion of price rigidity and possibility of an economy setting at a less than full employment level of output, income and employment. This model assumes a close

economy and a perfect competitive market with fairly price- interest aggregate supply function. From the Keynesian mechanism, monetary policy works by influencing interest rate, which influences investment decisions and consequently, output and income and the multiples process (Jayi, 1991).

In the Keynesian theory, monetary policy plays a crucial role in affecting economic activity, it contends that the change in the supply of money can permanently change such variables as the rate of interest, the aggregate demand and the level of employment, output and income. Keynes believe in the existence of unemployment equilibrium, this implies that an increase in money supply can bring about permanent increases in the level of output and as well the ultimate influence of money supply on the price level depends upon its influence on aggregate demand and the elasticity of the supply of aggregate output (Jhingan, 2010). This study is anchored on Keynesian theory

The classical monetary theory

The classical school evolved through concerted efforts and contribution of economists like Jean Baptist Say, Adam Smith, David Richardo Pigu and others who shared the same beliefs. The classical model attempts to explain the determination, savings and investment with respect to money. According to the classicists, money is a veil and a neutral in its effect on the economy (Jhingan, 2010). In the classical system, the main function of money is to act as medium of exchange. It determined the general level of prices in which goods and services will be exchanged. This relationship between money and the price level is explained in terms of the quantity theory of money.

The classical quantity theory of money states that the price level is a function of the supply of money, where:

$$MV=PT$$

Where;

M, V, P, and T are the supply of money, velocity of money, price level and the volume of transactions (Jhingan, 2010). The classical economists believe that the economy automatically tends towards full employment level by laying emphasis on price level and on how best to eliminate inflation.

The monetarist quantity theory

The monetary theory (a restatement of the quantity theory of money) is associated with Milton Friedman. Friedman asserts that the quantity theory of money is a theory of demand for money, and not a theory of output, or of money income, or of the price level (Jhingan, 2010). Monetarists emphasized money supply as the key factor affecting the wellbeing of the economy. According to Jelilov (2016), the monetarists argue that money has significant effect on price level or inflation in the economy in the long run, and have real effects on output and employment in the short run. Monetarists believe that “money matters”, therefore there is a direct link between monetary sector and the real sector of the economy. Friedman equally argued that changes in money supply will therefore have both direct and indirect effect on spending and investment respectively.

The modern approach

The modern economists reject the Keynesian view that the link between the supply of money and output is the rate of interest. This theory considered only two types of assets; bonds and speculative cash balances, and the allocation depends on the rate of interest, which in turn results in changes in output (Jhingan, 2010). This theory is a restatement of the quantity theory in the modern terms. This theory view velocity of circulation as a stable function of a limited number of key

variables, the velocity bears a stable and predictable relationship to a limited number of other variables, and determines how much money people will hold rather than motive for holding more and sees money as the main type of asset which yields a flow of services to its holders, according to the functions it performs (Oti, 1982).

The quantity theory

The quantity theory was first developed by Irving Fisher in the inter-war years, and is a basic theoretical explanation for the link between money and the general price level. Irving Fisher, in his quantity theory of money, opined that like other classical writers, the short-run monetary control was dictated by interest rates, which were sticky, but in the long-run, the demand of influence was real cash balance. Fisher further assumed that the rise in commodity prices would precedes the increase in interest rate, which was regarded as main channel of the firm’s operation cost (Jelilov, 2016).

Active-passive money view theory

According to active-passive money view, the quantity of money is subject to the independent influence of the central bank (Jelilov, 2016). This influence, among other things can lead to a real quantity of money holdings that is larger (smaller) than desired. In contrast to the passive money view, the attempt to eliminate these excess balances is considered to have an important role in the transmission of monetary policy. The interpretation of a nominal “monetary shock” highlights the distinction between the two views. According to the passive-money view, a monetary shock is the consequence of a change in the demand for money caused by an output shock. In contrast, the active-money view interprets a monetary shock as the consequence of a change in the supply of money induced by the central bank that is unanticipated by agents. Over time,

individuals perceive that the nominal quantity of money they hold corresponds to a real quantity that is larger than desired at current prices, and that this is not a temporary condition. That is, individuals are “off” their long-run demand for money function. However, all individuals cannot collectively dispose of the aggregate excess nominal balances. Nonetheless, the attempt to do so has economic effects, as the increase in expenditure leads to an increase in nominal spending, an increase in economic activity, and ultimately an increase in prices.

Empirical review

Jimoh (2015) examined the impact of monetary policy on the Nigeria economy using Ordinary Least Squares (OLS) method. The result showed that monetary policy represented by money supply exerts a positive impact on GDP growth and balance of payment but negative impact on rate of inflation and he concluded that CBN monetary policy is effective in regulating the liquidity of the economy which affects some macroeconomic variables such as output, employment and prices. Jelilov (2016) examined the impact of monetary policy on industrial growth in Nigerian economy using multiple regression analysis. They analyzed the relationship between manufacturing output, treasury bills, deposit and lending, and rediscount rate and industrial growth, and found that the variables had significant effects on the industrial growth.

Folawewo and Osinubi (2016) also investigated fiscal - monetary policy and economic growth in Nigeria by employing Johansen Maximum Likelihood Cointegration procedure. The result shows that there is a long – run relationship between economic growth, degree of openness, government expenditure and broad money supply (M2).

Nkoro (2013) analyzed the effect of monetary policy innovations in Nigeria. The study used a Structural Vector Auto-Regression (SVAR) approach to trace the effects monetary policy shocks on output and prices in Nigeria. The study also analyzed three alternative policy instruments, that is, broad money (M2), minimum rediscount rate (MRR), and the real effective exchange rate (REER). The study found evidence that monetary policy innovations have both real and nominal effect on economic parameter depending on the policy variable selected.

Million (2017) examined the impact of monetary policy on selected macroeconomic variables such as gross domestic product, inflation and balance of payment in Nigeria using OLS regression analysis. The result shows that the provision of investment friendly environment in Nigeria will increase the growth rate of GDP.

Bernanke and Alan (2011) investigated the impact of monetary policy instrument on economic development of Nigeria using multiple regression technique and found that treasury bill, minimum rediscount rate and liquidity rate have significant impact on economic development of Nigeria.

Bernanke and Blinder (2012) examined the effect of monetary policy outcomes on macroeconomic stability in Nigeria. The study analyzed gross domestic product, credit to the private sector, net credit to the government and inflation using OLS technique. None of the variables were significant, which suggested that monetary policy as a policy option may have been inactive in influencing price stability.

Bernanke and Kuttner (2015) examined the channels of monetary transmission mechanism in Nigeria using Granger causality test to estimate the relationship between the various channels and the selected macroeconomic aggregates. The study shows

that three channels of transmission were functional for inflation targeting. They include the interest rate, exchange rate and credit channels.

1. Methodology

This study adopted ex-post facto research design and data were analyzed using the Ordinary Least Square (OLS) method.

Model specification

To assess the effect of monetary policy instruments on Nigeria's economic growth, we formulate model of monetary policy and economic performance based on

Keynesian theory. Thus, the functional as well as the econometric form of this model is given as;

$$GDP = \beta_0 + \beta_1 LR + \beta_2 MS + \beta_3 MPR + U$$

Where;

GDP = Gross Domestic Product

LR = Lending rate

MS = Money supply

MPR = Monetary policy rate

β_0 = Intercept or constant term

$\beta_1, \beta_2,$ and β_3 = Parameters to be estimated

U = Random disturbance/error term

Data Analysis

The regression results of the effect of monetary policy instruments on the growth of the Nigerian economy.

Dependent Variable: LGDP

Variable	Coefficient	Std Error	T-statistic	Probability
C	161190.5	116005.8	1.389504	0.1740
LLR	0.131156	0.067293	1.955008	0.0023
LMS	7.186164	1.738707	4.133050	0.0002
LMPR	6.002535	5.581069	1.075517	0.0027
R-squared	0.979262			
Adj. R-squared	0.966819			
SER	317074.8			
F-stat	78.70179			
DW stat	1.668051			

The goodness of fit of the model is indicated by the adjusted R² value of 0.966819 or 96.6 per cent, indicating that the model fits the data well. The total variation in the observed behavior of the Nigerian economy is jointly predicted by the variation in lending rate, money supply and monetary policy rate up to 96.6 per cent, the remaining 3.4 per cent is accounted for by the stochastic error term.

The overall significance of the model was also tested using the ANOVA or F-Statistic. Here, the high significance of the F-Statistic value of 78.70179 confirms that the high predictability of the model did not occur by chance; it actually confirmed that the model fitted the data well. We also tested for the presence of auto correlation in the residual of the model, since the calculated DW value of 1.668051 does not lie within 4-dw, at 5% level of significance, we conclude that the

model is free from the correlation of its residual.

Discussion of findings

The study empirically examined the effect of monetary policy instruments on the growth of the Nigerian economy. Based on the analysis of the results, the study revealed that insignificant relationship exists between lending rate and economic growth. This by implication means that increase in the interest rate paid on lending will simultaneously discourage the banking populace to borrow, thus, making fewer funds available for investment, which will certainly lead to a corresponding decrease in economic growth. This finding is supported by the findings of Jimoh (2015) which establishes that lending rate has a significant effect in both the short-run and long-run period of economic development in Nigeria.

The study also revealed that money supply has a significant effect on economic growth. This by implication indicates that a favorable increase in money supply will lead to growth in the Nigeria economy. This finding is in line with the view of Jelilov (2016) that efficient increase in money supply contributes positively and significantly to the development and growth of the Nigeria economy.

Another major finding of the study revealed that there is an insignificant relationship between monetary policy rate and economic growth in Nigeria. This finding is in line with the findings obtained by Folawewo and Osinubi (2016) which established that there is an indirect relationship between monetary policy rate and economic growth in Nigeria.

2. Conclusion

The monetary sector is a pivot that accelerates other sectors to achieve economic

growth in Nigeria. This is evident, as the study had examined the effect of monetary policy instruments on the growth of the Nigerian economy, and the result showed that monetary policy variables are sine qua non to economic growth, as measured by gross domestic product. This implies that increase in lending rates by monetary authorities will discourage investors to invest, thus, making fewer funds available for economic productive investment, and hereby reducing economic growth.

3. Recommendations

In view of the above summary of findings, the following are recommended.

- i) The Central Bank of Nigeria should adopt interest rate policy that will always boost the savings culture of the real sector. This can be achieved by increasing the interest rate paid to deposit made by individuals, local and foreign investors.
- ii) Monetary policy rate as well as lending rate should be environment and business-friendly, and predictable in line with prevailing economic dictates and conditions.
- iii) Money supply should be efficiently and effectively regulated, so as to avoid inflationary pressure on the economy.

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