Monetary Policy and Economic Growth: Empirical Evidence of Nigeria

Akpovofene Erhinyodavwe J., Kpolode, Oghenevwo P.

Department of Accountancy, Niger Delta University, Amasoma, Bayelsa State, Nigeria

DOI: https://doi.org/10.51244/IJRSI.2023.10714

Received: 24 June 2023; Revised: 05 July 2023; Accepted: 10 July 2023; Published: 09 August 2023

Abstract: The study employed secondary data covering from 2000 to 2022 to analyzed monetary policy and economic growth in Nigeria, our data were collected from Central bank of Nigeria statistical bulletin, while also considering variables such as money supply, inflation rate, interest rate and gross domestic product with the used of ordinary least square regression method, we discovered that all our variables a statistically significant except for interest rate, also there was positive relation among our variables. Therefore we recommended that, monetary regulators should always consider key macro-economic variables such as the ones used in this study before implementing critical policy; the citizen and the economy should also be consider when adopting monetary policy; policies makers should always strive to make policy that will make the economy be at economic advantage in order to strengthen our economic growth.

Keywords: Money supply, inflation rate, Interest Rate and GDP

I. Introduction

The stability of an economy is determined by the type of policy and decisions adopted, Nigeria is an exception to economic policy. Over the year's different administration have adopted different type of policies with the intention to keep the economy running at its optimal level. All over the globe, policy makers/government strive to improve her economy, Boris, Paula and Volker (2015) economic policies determine the level of income individual will earn as well as how predictable their income and jobs are. The level of stability of earnings is very important for the well-being of the citizenry, this is because any wrong economic policy can result to retrenchment of people and cause unemployment problem in the society, while also distorting other economic variables such as inflation and interest rate. Uwazie and Aina (2015) opined that monetary policy decision over the years has been actions taken by the monetary authority to influence indirectly or directly, the amount of money and credit to the economy and the structure of interest rates so as to maintain the rate of economic growth, price stability and balance of payment equilibrium in the country (Nigeria).

Obayori, Nwogwugwu and Mozuawo (2016) it is a generally acknowledged truth among financial experts that money related and monetary strategies are vital devices that are utilized to impact macroeconomic execution as well as calibrate and guide an economy to accomplish the strategy objectives. Notwithstanding, an evaluation of performance in Nigeria as far as soundness in key macroeconomic objectives might be slippery. There is no perfect economy, hence Nigeria is not an exception, study and statistical data over the years has shown that Nigeria has implemented different economic and monetary policy, however there is still no improvement in our economic growth. Tragically, there has been practically no improvement in Nigeria as portrayed by some rising expansion, joblessness, import/export imbalance, wretchedness, hunger, and disintegrating foundation and personal satisfaction for the most part.

Economic policies have played a vital role in the achievements of recent impressive growth experienced by some developing counties, such recent growth patterns have bypassed important segments of the society (Philip, 2016). Despite the different economics policy adopted by different administration for decades now, inflation and interest has being on the surge and it is becoming worrisome. Recently the central bank of Nigeria introduce a policy to tame too much money in circulation with the intention of curbing inflation and other macro-economic variables, however due to the lack of proper implementation it lead to economic panic, hence introducing and adopting economic policy by the regulatory authority and those saddle with responsibility, proper consultation and implementation procedure should be well plan out, order to avoid wrong economic decisions that will not impact on the economy.

Regulatory authorities have increasingly focused on strengthen central bank independence in both developed and developing economies while also implementing policies to ensure price stability. Nonetheless, in emerging nations like Nigeria, monetary policy alone is not sufficient in directing the economy towards achieving macroeconomic objectives of domestic output such as sustainable balance of payments equilibrium, price stability, poverty reduction, reduction of unemployment level and equitable income distribution. Then again, in the space of monetary, market advancement has permitted public obligation chiefs to zero in additional on cost minimization. This 'separate' of money related and obligation the board capabilities requires the requirement for compelling coordination of financial and monetary arrangement if generally financial execution is to be advanced and kept up with in the long haul. Subsequently a fitting blend of money related and monetary arrangement blend is significant for macroeconomic management (Goshit & Landi, 2014).

II. Review of Related Literature

2.1 Theoretical Underpinning

Quantity theory of money

Keynes (1930), asserted that money has indirect impact on other economic variables by influencing the interest rate which affects investment and cash holding of economic variables he place of Keynes is that joblessness emerges from lacking total interest which can be expanded by expansion in cash supply which creates increment spending, increment work and financial development. In any case, he suggests a legitimate mix of financial and financial strategies as at certain events, money related strategy could neglect to accomplish its goal. However Friedman, (1968) caution that in trying to reduce unemployment by making more money available, we should be weary of inflation. Kynes assertion was further seconded by Diamond (2003) the concept of monetary policy got is concept with propounding of the quantity theory of money equation, which asserted that money has no effect on economic aggregates but price.

2.2 Empirical reviewed

Abdullahi (2022) employed the Autoregressive Distributive Lag (ARDL) method with secondary data covering from 1981 to 2021 and examined the monetary policy impact on private sector performance in Nigeria, the output revealed that ARDL bounds test shows that a long-run relationship exists among the variables. The ADF and PP Unit Root tests on the variables show that all the variables are I(1) process, with exception of real exchange rate which is I(0) process. Also broad money supply has a significant positive impact on the private sector performance both in the short run and long run, the real interest rate and real exchange rate have a significant negative impact on private sector performance both in the short run and long run. Based on the findings, they suggested that the government should maintain the expansionary monetary policy that allows for the injection of optimal money supply into the system, the interest rate should be reduced to allow for the flow of more financial resources from the financial sector to the private sector, government should halt its continued devaluation policy and embrace more diversification commitments to bridge the forex scarcity, thereby improving the value of the Naira against the value of other currencies.

Adegboyo, Keji and Fasina (2021) adopts endogenous growth model (AK model) as its theoretical and investigated the impact of government policies on economic growth, the unit root test results reveal that there is mixed level of stationarity in the variables; the bound test result shows that the variables co-integrate; the ARDL long-run result shows that fiscal policies stimulate economic growth, while on the however trade policies deter Nigerian economic growth. While short-run result shows that the fiscal policies has an inconsistent impact on Nigerian economic growth and thus differs from the long-run result; while government spending continues to drive economic growth in Nigeria, government revenues have no effect on the growth of the economy, also interest rate impels growth of the economy while money supply deters growth of Nigeria’s economy; lastly, the trade policies maintain her negative influence on the economy in both the long run and short run. Therefore suggested that more emphasis on using fiscal policy which was found to be stimulating the country’s growth rate and whenever there is a need to use monetary policy to regulate economic growth, policy makers should make use of interest rates as it stimulates the growth of the economy in the short run.

Ebere, Obarafo and Adewole (2020) adopted commercial banks loan and advances as the dependent variable while money supply, interest rate, monetary policy rate, liquidity ratio of commercial banks, inflation rate and exchange rate are the independent variables to analyzed the effect of monetary policy on allocation of loan and advances to small and medium scale enterprises in Nigeria with secondary data covering 1992 to 2017, with the help of ordinary least square regression method, and discovered that monetary policy rate and exchange rate were positively related to commercial bank loans and advances to small and medium scale enterprises. However, money supply, liquidity ratio and inflation rate negatively affect commercial banks loans and advances to SMEs in Nigeria. Based on their findings, suggested that effort should be made by government to reduce monetary policy rate thereby making commercial banks loan and advances accessible by small and medium scale enterprises in Nigeria.

John (2020) theoretical examined the impact of restructuring macroeconomic policy for sustainable development in Nigeria, by looking at the various efforts aimed at restructuring macroeconomics policy in Nigeria from 1986 to 2016, and discovered that; the economy showed signs of growth and development. However, Nigeria is still grappling with economic growth and development issues-unemployment, poverty and rising cost of living therefore suggested that; there should be continuity in programmes and policies of government, also consistency should be maintain with respect to government policies and deliberate and conscious effort on the part of government and policy makers to design programmes and policies that are people oriented, homegrown and have the capacity to promote and sustainable growth and development.

ISSN No. 231-2705 | DOI: 10.51244/IJRSI | Volume X Issue VII July 2023

Philip (2016) employed secondary data ranging from 1980 to 2013 and examined the effect of macroeconomic policies on unemployment and poverty rates in Nigeria, the ordinary least square (OLS) technique was employed, and the findings revealed that exchange rate significantly influenced unemployment rate while only fiscal policy significantly influenced and poverty rate. This implies that present macroeconomic policies in Nigeria do not guarantee the attainment of inclusive growth in Nigeria. Therefore suggested that, in order to achieve inclusive growth that guarantees high employment and reduced poverty rate, there is the need for a reexamination of macroeconomic policy management in Nigeria.

Babatunde and Kehinde (2016) employed variables such as consumer price index (CPI) is used as a proxy for general price level, which is the explained variable, exchange rate and money supply were used as explanatory variables with secondary data covering from 1970 to 2014 to analyzed the impact of monetary policy on price stability in Nigeria with the use of ordinary least square regression (OLS) model, unit root test and Johansen co-integration test and discovered that exchange rate and money supply actually influenced price stability in Nigeria both in the short-run and long-run, their findings was supported with the statistical values 90% coefficient of determination and F-Statistics of 168.30 which is higher than the tabulated F-Statistics.

Boris, Paula and Volker (2015) examined household-level economic instability is only very loosely related to macroeconomic volatility. It uses several household level databases to document how pro-growth reforms influence household-level economic stability. Movement from less to more productive processes and firms is at the heart of economic growth, which suggests a trade-off between growth and micro-level stability. Certain policy changes boost growth but increase micro-level instability: they include reductions in tax progressivity or social transfers (including unemployment benefits) as well as moves from very to moderately tight restrictions on the flow of goods and services and on the dismissal of regular workers. However, the analysis also uncovers that moving to highly competitive policies generally reduces micro-level instability.

Goshit and Landi (2014) employs theoretical technique to analyze monetary and fiscal policy interactions in Nigeria, they also looked at the limitations of both monetary and fiscal policies in a developing economy, using Nigeria as a case study, and discovered that effective coordination of monetary and fiscal policies without any loss of independence for the policy makers enhances the overall macroeconomic performance of monetary and fiscal policies in the economy.

Charles (2012) employed the ordinary least squares with secondary data covering from 1981 to 2008 to examined the impact of monetary policy on the Nigerian economy, and discovered that monetary policy presented by money supply exerts a positive impact on GDP growth and Balance of Payment but negative impact on rate of inflation, therefore suggested that monetary policy should facilitate a favorable investment climate through appropriate interest rates, exchange rate and liquidity management mechanism and the money market should provide more financial instruments that satisfy the requirement of the ever-growing sophistication of operators.

2.3 Hypotheses Premise

The lack of consistency has prompted us to delve into this issue of monetary policy and economic growth, with the intention of adding more contribution to literatures while also trying to address contemporary issues. Abdullahi (2022) in his study of monetary policy opined that, monetary policy has positive impact on economic growth however his assertion was debunked by Adegboyo, Keji and Fasina (2021) in their study of the impact of government policies on Nigeria economic growth.

III. Methodology

3.1 Sources of Data and method of Analysis

We employed secondary data ranging from 2000 to 2022 collected from central bank of Nigeria statistical bulletin while using ex-post factor to analysed our data, this approached was to ensure data used are reliable as the researchers have no power to manipulate the data. Descriptive statistics and a multiple regression was adopted by the researchers. The hypotheses were tested using the analysed result from the study; the decision rule was to reject the hypotheses if the calculated the p-value is less than 5% (0.05).

3.2 Model specification

The below variables will tested using regression analysis with the help e-view 9.0 the model is stated as follows:

GDP = f (MS, IFNR, INR)

This can be expressed into an equation as follows:

$$GDP = \beta 0 + \beta 1MS + \beta 2IFNR + \beta 3INR + \mu$$

Where:

GDP = Gross domestic product i.e. representation of economic growth (the dependent variable).

ISSN No. 231-2705 | DOI: 10.51244/IJRSI | Volume X Issue VII July 2023

MS= Money supply

IFNR = Inflation rate, served as independent variable in the analysis.

INR = interest rate, served as independent variable in the analysis.

$\beta0$= server as intercept or constant term

$\beta1$ to $\beta3$, = served as the parameters or coefficients of the independent variables to be estimated through the regression.

μ = is the error term of the regression equation (stochastic variable)

IV. Data Presentation and Analysis

The data used and presented in our study were extracted from statistical bulletin of Nigeria, debt management office web-site.

4.1 Data Descriptive statistics

	GDP	MS	IFRN	INR
Mean	5.785870	11.0839	7.697391	18.24522
Median	4.030000	32.8900	7.760000	12.51000
Maximum	18.86900	31.0000	7.850000	19.4500
Minimum	3.420000	5.020000	7.370000	12.88000
Std. Dev.	3.977343	18.57877	0.157458	31.17160
Skewness	2.246721	0.604330	0.753138	0.313424
Kurtosis	6.968907	3.412592	2.211333	1.926533
Jarque-Bera	34.44561	1.563128	2.770412	1.480885
Probability	0.000000	0.457690	0.250272	0.476903
Sum	133.0750	3474.929	177.0400	1293.640
Sum Sq. Dev.	348.0236	172616.4	0.545443	21376.71
Observations	23	23	23	23

Source: Authors Computations

The above descriptive statistics showed that the descriptive that are used in our analysis, MS has the highest values, while GDP has the lowest value. The standard deviation also revealed that money supply is more spread among our study variables, while gross domestic product is the least spread.

4.2 Unit Root Test

Ho: There is a unit root i.e., series are non-stationary

Variables	**Level**		**1st Difference**	
	intercept	Trend & intercept	intercept	Trend & intercept
GDP	0.07082	0.0608	0.3735	0.9238
MS	0.4308	0.0710	0.0020	0.0040
IFRN	0.9850	0.8411	0.1452	0.0017
INR	0.4329	0.7382	0.0078	0.0169

Source: Authors computations using E-view10

The above revealed the unit root test at levels and at difference, the decision rule is to reject our null hypothesis if the P-values above are greater than 5% significant level. The table above rejected our null hypothesis at level, hence we can concluded that our variables can be used for critical economic decision makings.

4.3 Data analysis and hypothesis testing

Monetary Policy has no significant on Nigeria economic growth

Dependent Variable: GDP				
Method: Least Squares				
Date: 07/04/23 Time: 22:50				
Sample: 2000 2022				
Included observations: 23				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MS	-0.018893	0.004545	-4.156783	0.0005
IFRN	19.24218	2.505601	7.679666	0.0000
INR	-0.078909	0.013058	-6.042878	0.0000
C	-135.0360	18.99236	-7.110017	0.0000
R-squared	0.839405	Mean dependent var		5.785870
Adjusted R-squared	0.814048	S.D. dependent var		3.977343
S.E. of regression	1.715114	Akaike info criterion		4.073608
Sum squared resid	55.89073	Schwarz criterion		4.271085
Log likelihood	-42.84649	Hannan-Quinn criter.		4.123273
F-statistic	33.10343	Durbin-Watson stat		1.470207
Prob(F-statistic)	0.000000			

Source: Authors computations using E-view10

The data presented in the table above has showed that all our variables are statistically significant at 5% significant level, this also revealed that money policy a significant impact on economic growth with statistical value of 0.000000, this assertion is also supported by our Durbin-Watson statistic value which approximate 2.00, the hence this negated our null hypothesis proposed above. The table also confidence level of 84% approximately for our study variables. This output negated Adegboyo, Keji and Fasina (2021) study of impact of government policies on economic growth, that discovered that money supply deters growth in an economy, therefore concluded that fiscal policies has an inconsistent impact on Nigerian economic growth.

V. Conclusion and Recommendations

The study employed secondary data covering from 2000 to 2022 to analyzed monetary policy and economic growth by using Nigeria economy as a case study, our data were collected from Nigeria statistical bulletin, Central bank of Nigeria, and we discovered that all our variables a statistically significant except for interest rate. Also there was positive relation among our variables, this findings seconded the works of other scholars while also negating some other works as well.

Therefore we recommended that:

i. Monetary regulators should always consider key macro-economic variables such as the ones used in this study before implementing critical policy;
ii. The citizen and the economy should also be consider when adopting monetary policy;
iii. There is no perfect economy, hence policies makers should always strive to make policy that will make the economy be at economic advantage in order to strengthen our economic growth.

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ISSN No. 231-2705 | DOI: 10.51244/IJRSI | Volume X Issue VII July 2023

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