International Journal of Management, IT & Engineering Vol. 8 Issue 12, December 2018, ISSN: 2249-0558 Impact Factor: 7.119 Journal Homepage: <u>http://www.ijmra.us</u>, Email: editorijmie@gmail.com Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

# MONETARY POLICY AND CONTROL OF INFLATION IN NIGERIA

Adodo, Feyisayo Loveth<sup>1</sup>

**Akindutire, Opeyemi Roselyn<sup>2</sup>** 

Ogunyemi, Joseph Kayode<sup>3.</sup>

## ABSTRACT

This study examined the effectiveness of monetary policy and control of inflation in Nigeria. The study adopted Augmented Dickey – Fuller (ADF), Johansen Co-integration and Error Correction Model (ECM) to evaluate the effect of money supply, interest rate and exchange rate on inflation rate in Nigeria. The results of the unit root test revealed that Inflation Rate, Money Supply, Exchange Rate and Interest were stationary at first difference while the result of the Johansen Co-integration Test revealed there is long run equilibrium relationship among the variables. The result of the Error Correction Model revealed that both Money Supply and Interest Rate are statistically significant in explaining variation in Inflation Rate. It was however concluded that monetary policy has been partially effective in controlling in inflation rate in Nigeria. The study recommended that monetary authority should adopt adequate indirect instruments for the purpose of controlling the volume of money in circulation for effective and efficient control of inflation rate in Nigeria. Interest rate in Nigeria should be totally liberalized for the purpose of

<sup>1</sup> Department of Banking and Finance, Adekunle Ajasin University, Akungba Akoko, Ondo State, Nigeria.

<sup>3.</sup> Department of Banking and Finance, Adekunle Ajasin University, Akungba Akoko, Ondo State, Nigeria.

<sup>&</sup>lt;sup>2</sup> Department of Banking and Finance, Ekiti State University, Ekiti State, Nigeria.

making it a strong monetary policy instrument of regulating price level and economic activities. The money market and its instruments should be adequately developed for the purpose of making it an effective control mechanism for inflation in Nigeria. A robust and effective exchange rate regime should be adopted by regulatory authorities in order to ensure exchange rate stability capable of controlling inflationary pressure in the economy.

# Key Words: Monetary Policy, Inflation Rate, Money Supply, Exchange Rate and Interest Rate.

#### **Section One**

#### Introduction

The formulation of policy on the control of money and its control in the economy is vested with the Central Bank of a country. Monetary policy is the control of money circulating in the economy through the employment of monetary instruments by the monetary authorities. The formulation of policy framework that will ensure price stability has grace scholars and policy makers' attention. Parallel with academic progress and experience in this matter, the understanding of monetary policy has advanced significantly over the last few decades.

The relationship between money in circulation and inflationary rate are the main index for measuring country performance, prosperity and growth potentials. The control of the volume of money in circulation as well as maintaining price stability has been the main objectives of developing country including Nigeria. Monetarist economist has argued that there is an evidence of relationship between inflation and money supply and uncontrollable increase in the volume of money may have adverse effect economic condition (Chaudhry, Ismail, Farooq & Murtaza, 2015).

The major objective of policy makers in Nigeria is to ensure price stability and maintain inflation rate at single digit. This they try to achieve through the manipulation of monetary policy instruments so as to ensure a stable and strong financial system and enhance economic growth. In regards to this, Fabian and Charles (2014) opined monetary policy is one of the major tools employed by Central Bank of Nigeria to control economic activities through the control of

monetary policy rate, introduced in December, 2006 to influenced the level of economic activities in the money market.

Over the decades, the Nigerian economy has been faced with inflationary pressure which has retarded her growth process. Gbadebo and Muhammed (2015) stated that this could be traced to 1970s when inflation increased to a double digit. The trends of inflation in the economy indicated that inflation rate rose in 1990s from 63.6% to 72.8%. However, the economy experienced stability in 2003 through economic reforms programs which was later followed by inflationary pressure with rises in inflation rate 12.9%, and 14% in 2000 and 2001. Headline inflation rate remained at double digits between 2002 and 2005 as it recorded of 15%, and 17.9% in the respective years. However, it decelerated dramatically to 8.24% and 5.38% in 2006 and 2007 before rising astronomically to 11.60% and 12.00% in 2008 and 2009 in that order, although fell marginally to 11.8% and 12.3% in 2010 and 2013 respectively (Gbadebo & Muhammed, 2015). There is drop in the rate to 8.1% in 2014 but rises to 9.1% in 2015 with a sharp rise in 2016 to 15.7.

Despites the policy thrust of policy makers in controlling inflation much has not been achieved in curbing the menace of inflation in Nigerian economy. Indeed, inflation is the leading cause of economic retardation and social and political unrest in less developed countries like Nigeria (Philip, Christoper and Pius, 2014). Further, the effects of inflation includes continuous erosion of the purchasing power of money, inequitable distribution of income among earners, loss of social welfare due to price increases and reduction of savings and investments (Philip et al. 2014). Inflation causes excessive relative price variability and misallocation of resources. It reduced real income of labour where nominal wages are without escalator clauses. Given the chronic effect of inflation rate on the Nigerian economy, thus, it is needed to evaluate the impact of monetary policy on inflation rate in Nigeria with the aim of bringing silent issues and recommending policies that will suit the economy.

# Section Two Literature Reviews

Monetary policy involves the adoption of monetary instruments in order to control the level of economic activities. Monetary policy is associated with interest rate and availabilities of credit, the instruments used include short-term interest rates and bank reserves through the monetary base. According to Usman and Adejare (2014) the primary goal of monetary policy to ensure that money supply is at a level that is consistent with the growth rate. Inflation in means the persistent rise in general price level of goods and services as a result of high money in circulation. According to Jhigan (2010), inflation is defined as a persistence rise in general price of commodity. The prices increases must also be continuous not a once-for-all increase

The linkage between monetary policy and inflation has been a subject of debate among scholars. McCallum and Nelson (2010) considered the relationship existing between monetary aggregates and inflation, and whether there is any substantial reason for modification of policy analysis and it was hold that, the monetarist proposition holds in a model economy if, and only if the model exhibits the property known as long-run neutrality of money. Habibullah (2011) attempted to determine the long-run relationship between budget deficit and inflation in thirteen Asian developing countries, namely; Indonesia, Malaysia, the Philippines, Myanmar, Singapore, Thailand, India, South Korea, Pakistan, Sri Lanka, Taiwan, Nepal and Bangladesh. Using annual data for the period 1950-1999, the Granger causality within the error-correction model (ECM) framework suggested that all variables involved (budget deficits, money supply and inflation) are integrated of order one.

Dania (2013) examined determinants of inflation in Nigeria using Error Correction Model to capture the convergence of the inflation determining factors to achieving long run equilibrium and it was found that expected inflation measured by lagged term of inflation rate, money supply, significantly determined inflation, while trade openness, capturing the tendencies of imported inflation, income level, exchange rate and interest rate were found not to be significant with all showing signs that conform with apriori in the short run. In the long run likewise, none of the variables was found to be significant. Iya and Aminu (2014) investigated the determinants of inflation in Nigeria between 1980 and 2012 using the ordinary least square method. The result revealed that money supply and interest rate influenced inflation positively, while government expenditure and exchange rate influenced inflation negatively.

Hossain and Islam (2013) examined the determinants of inflation rate using data from 1990 to 2010 in Bangledesh with the ordinary least square method. The empirical result showed that money supply, one year lagged value of interest rate positively and significantly affect inflation rate. The result also indicated that one year lagged value of money supply and one year lagged value of fiscal deficit significantly and negatively influence inflation rate. There was an insignificant relationship between interest, fiscal deficit and nominal exchange rate. The findings was not corroborated by the study of Odusanya and Atanda (2010) using annual data from 1970 to 2007 to investigate the determinants of inflation rate in Nigeria, the result revealed that growth rate of GDP, growth of money supply, real share of import, first lagged of inflation rate and interest rate exerted positive influence on inflation rate. While, only growth of GDP and preceding inflation rate have significant effect on current inflation rate in Nigeria during that period. The findings of Odusanya and Atanda (2010) was supported by the findings of Maku and Adelowokan (2013) whose result indicated that fiscal deficit and interest rate exert decelerating pressure on dynamics of inflation rate in Nigeria in their work using annual data from 1970 to 2011 to examined the determinants of inflation in Nigeria by employing the partial adjustment model. While, other macroeconomic indicators such as real output growth rate, broad money supply growth rate, and previous level of inflation rate further exert increasing pressure on inflation rate in Nigeria. The real output growth and fiscal deficit were found to be significant determinants of inflation rate in Nigeria during the period.

Philip et al. (2014) examined the effectiveness of monetary policy in reducing inflation in Nigeria, for the period 1970 - 2012, employing the co integration and Error Correction Technique of econometric analysis. The test of both the Unit root and co-integration revealed that there is a long run relationship between the variables while the Granger Causality test revealed uni-directional relationship between monetary policy and inflation rate. However, the VECM test revealed that inflation rate, Gross Domestic Product (GDP) and exchange rate are negatively related and positively related to broad money supply (M2) and domestic credit. Fabian and Charles (2014) investigated the determinants of inflation rate in Nigeria using a monthly data from January 2007 to August 2014. The ordinary least square (OLS) was used and result showed that expected inflation, exchange rate and money supply influenced inflation, while annual treasury bill rate and monetary policy rate though rightly signed did not influence

inflation in Nigeria within the period under investigation. The findings of Fabian and Charles (2014) negate Rakić and Rađenović (2013), in an attempt to examine the influence of fiscal and monetary policy on the economic activity in Serbia, employed unit root and cointegration tests on quarterly time series for the period 2003-2012. They showed that monetary policy is more effective in stimulating economic growth relative to fiscal policy; the study of Asuquo (2012) corroborated the findings of Rakic and Radenovic (2013).

Asuquo (2012) evaluated inflation accounting and control through monetary policy measures in Nigeria from 1973 to 2010. Using multiple regression model and the ordinary least squares estimation techniques, it was showed that money supply, interest rate and exchange rate had significant impact on inflation rate while domestic credit was statistically not significant. Danjuma, Jbrin and Success (2012), examined the impact of monetary policy on inflation rate in Nigeria over the period 1980– 2010 with the aim of measuring the effectiveness of monetary policy in Nigeria. Using the least squares technique, granger causality, they showed that liquidity ratio and interest rate were the leading monetary policy instruments in combating inflation in Nigeria while cash reserve ratio, broad money supply and exchange rate were described as being "impotent" in effective monetary policy decision in Nigeria.

Nenbee and Madume (2011) examined the impact of monetary policy on Nigeria's macroeconomic stability between 1970 and 2009. Macroeconomic stability was taken to be synonymous to price stability. Employing the Co-integration and Error Correction Modeling (ECM) techniques they showed that only 47 percent of the total variations in the prices was explained by the monetary policy variables-Money Supply (MOS), Minimum Rediscount Rate (MRR) and Treasury Bills (TRB) in the long-run. They concluded that monetary policy tools therefore have mixed impact on inflation rate in Nigeria. These findings are also in line with empirical findings of Sanni, Amsua and Agbeyangi (2012) who investigated the use of fiscal policy and monetary policy in controlling economic activities in Nigeria over the period 1960-2011. Using Error Correction Mechanism (ECM) approach they showed that monetary policy instruments exert more influence on Nigeria, but results from granger causality test showed fiscal policy granger – causes GDP more than monetary policy. They therefore concluded that none of

the policies can be said to be superior to other and that a proper mix of the policies may enhance economic growth.

Edoumiekumo, Karimo and Amaegber (2013), examined the responsiveness of real sector output to monetary policy shocks in Nigeria over the period 1970 to 2011. Applying a VAR model their study revealed that credit to the private sector and investment had direct instantaneous impacts on real sector development (GDP). Real GDP responded more to shocks in MPR, CPI and own innovations in the log-run. Although monetary policy rate and interest rate had no instantaneous and direct impact on real sector development they indirectly do so through the credit and investment channels. To this end monetary policy rate and bank lending rates are the most important monetary policy tools that can make or mar the Nigerian real sector. Apere and Karimo (2014) examined the effectiveness of monetary policy on economic growth and inflation rate in Nigeria over the period 1970 to 2011 and estimated results showed that in the short run it is output and inflation rate that drives monetary growth, while output growth is affected by inflation rate only. Results from the impulse response and variance decomposition showed that monetary policy variables may not have an instantaneous impact on output, but are key determinants of output growth in the long-run. Furthermore, in the short-run the level of production is more important in controlling inflation but it is monetary policy variables that matter in the long-run. Usman and Adejare (2014) examined the impact of monetary policy on industrial growth in Nigerian economy, using data from central bank of Nigeria statistical bulletin covering the period of 1970 to 2010. Multiple regressions were employed to analyze data on such variables, manufacturing output, Treasury Bills, Deposit and lending and Rediscount Rates for Nigeria over the period and the study found that all the variables significant effects on the industrial Growth with the Adjusted R2 of 0.8156 (81.56%).

Chaudhry et al, (2015) investigated the impact of money supply growth on the rate of inflation in Pakistan. The study used annual time series data ranges form 1973-2013 which was analyzed using ARDL. Diagnostic and stability tests confirm that models are econometrically sound and stable. The results revealed that interest rate and money supply are important policy variables for controlling inflation in the long-run while it is the national output level which put downward pressure on inflation rate in the short-run. Gbadebo and Mohammed (2015) employed co-

integration and error correction methods approach examined the effectiveness of monetary policy as an anti-inflationary measure in Nigeria on quarterly time series data spanning from 1980Q1 to 2012Q4. The estimated result revealed that for the period covered, interest rate, exchange rate, money supply and oil-price are the major causes of inflation in Nigeria. It was also observed that although in the short-run increased in income encourages inflation, proper utilization of the growth would reduce inflation. However, money supply variable was discoed to have significant positive impact on inflation both in short and long runs.

Anowor and Okorie (2016) empirically reassessed the impact of monetary policy on economic growth of Nigeria adopting the Error Correction Model approach using time series secondary data spanning between 1982 and 2013. The result showed that a unit increase in Cash Reserve Ratio (CRR) led to approximately seven units increase in economic growth in Nigeria. Nasko (2016) examined the impact of monetary policy on economic growth in Nigeria. The study used time-series data covering the range of 1990 to 2010 and multiple regressions were employed to analyze data on variables such as money supply, interest rate, financial deepening and gross domestic product. It was found that all the variables employed that is, money supply, interest rate, financial deepening have marginal impact on the economic growth of Nigeria.

Ngerebo-A (2016) empirically examined the effectiveness of monetary policy in controlling inflation in Nigeria employing annual time series data, sourced from Central Bank of Nigeria (CBN) Statistical Bulletins (1985–2012) were analyzed using Software Package for Social Sciences (SPSS). It was found that MPR, TBR, PLR, MLR, and NDC are not statistically significant, while SR, M1g, M2g, NCG and CPS are statistically significant in explaining the changes in Inflation rate in Nigeria. Islam, Ghani, Mahyudin and Manickam (2017) assessed the determinants of factors that affecting inflation in Malaysia using quantitative method and the econometric model for identify the relationship between the dependent and independent variables. it was found that an increase in unemployment rate will lead to a drop in inflation rate and vice versa. High inflation may cause negative impact to a particular country. It was also found that exchange rate has a negative relationship with inflation while there is a positive relationship between inflation and money supply.

#### Section

## **Three Methodology**

This study evaluates the effect of monetary policy on inflation in Nigeria. The macroeconomic data for the study are time series data which covers the period of 1985 to 2016. Macroeconomic data are extracted from secondary sources which include Central Bank of Nigeria statistical bulletin (2016) and World Development Indicator.

#### **Model Specification**

The mechanism of the effect of financial liberalization on economic growth in Nigeria is modeled using multiple regression econometric model which was adopted from Charles and Fabian (2014) and it is given as:

INFR = f(MS, INT, EXR)

The linear equation of this model can be written as:

INFR<sub>t</sub> =  $\beta_0 + \beta_1 MS_t + \beta_2 INT_t + \beta_4 EXR_t + \pounds_t$ Where: INF = Inflation Rate MS = Money Supply INT = Interest Rate EXR = Exchange Rate  $\beta$  = Constant Term  $\beta_1 - \beta_3$  = Parameters of the variables to be estimated  $\pounds$  = Unexplained Error Term

# **Method of Analysis**

The method of analysis employed in this study is econometric based. Thus, the effect of the relationship between monetary policy and inflation in Nigeria is analyzed using Least Square (LS) techniques. Resulted will be presented using descriptive statistics and correlation matrix. In order to avoid the problem of spurious regression the time series data are subjected stationarity test using Augmented-Dick-Fuller (ADF) unit root test. Also, Johansen Co-integration test is employed to test the long run relationship among the macroeconomic variables. Also, Vector

Error Correction Mechanism (VECM) is employed to ascertain the speed of adjustment from the short run equilibrium to the long run equilibrium state.

The statistical significance and direction of relationships between the dependent variable (inflation rate) and the independent variables (money supply, interest rate and exchange rate) is analyzed using statistical criteria of Students T test, Adjusted R<sup>2</sup> is and F-statistic. Also, the regression result will be tested for reliability and robustness. For this purpose, Jarque Bera normality test is employed to test if the macroeconomic variables are normally distributed, Lagrange Multiplier test to check if the variables are serially correlated in order to avoid spurious or nonsense regression, Breuch Pagan test, to test for Heteroscedacity of the variables and finally, Cusum Test in order to test for the level of stability of the regression model.

#### **Section Four**

#### **Data Analysis and Interpretation of Results**

	INFR	MS	EXR	INT
INFR	1.000000			
MS	-0.324684	1.000000		
EXR	-0.389491	0.845481	1.000000	
INT	0.375163	-0.131341	0.074263	1.000000

 Table 1 Correlation Matrix

#### Source: Authors' Computation (2018)

The table 2 above shows the correlation matrix for the macroeconomic variables employed in this study. It was indicated that all the explanatory variables (Money Supply, Exchange Rate and Interest Rate) are negatively correlated with Inflation Rate. This implies that an increase in the explanatory variables will result in fall in Inflation Rate.

VARIABLES	TEST STATISTIC	5%	CRITICAL	Prob.	LEVEL	S/NS
		VALUE				
INFR	/5.430917/	/2.951125/		0.0001	1(1)	S
MS	/3.297546/	/2.951125/		0.0229	1(1)	S
EXR	/4.974089/	/2.951125/		0.0003	1(1)	S
INT	/5.044411/	/2.954021/		0.0002	1(1)	S

# Table 2:Analysis of Unit Root

#### Source: Authors' Computation (2018)

Table 2 showed the stationarity test of the variables. In order to reject the absence of unit root in the macroeconomic variables, the test statistics must be greater than the critical value at 5% level of significance in absolute term. It was revealed that when tested at level 1(0), all the variables (that is, Inflation Rate, Money Supply, Exchange Rate and Interest Rate) are not stationary at level because their respective test statistics are less than the critical value at 5% level of significance in absolute term.

However, at first difference 1(1) all the variables (that is, Inflation Rate, Money Supply, Exchange Rate and Interest Rate) are free from unit root tangle, since their respective t-statistics are greater than the critical value at 5% level of significance in absolute term as shown in the table. Hence, the null hypothesis of unit root was therefore rejected for the entire variables. Since all the macroeconomic variables were stationary at first difference 1(1), then, the study employed the Johansen Co-integration Test and Error Correction Model

Trace Statistic	0.05 Critical Value	Hypothesized No of CE(S)	Prob**
66.09966	55.24578	None *	0.0041
27.52420	35.01090	At most 1	0.2513
10.62818	18.39771	At most 2	0.4219
4.703092	3.841466	At most 3 *	0.0301
Max-Eigen statistic	0.05 Critical Value	Hypothesized No of CE(S)	Prob**
38.57546	30.81507	None *	0.0047
16.89602	24.25202	At most 1	0.3442
5.925091	17.14769	At most 2	0.8238
4.703092	3.841466	At most 3 *	0.0301

#### Table 3: Co-Integration Test

#### **Source: Authors' Computation (2018)**

Since all the macroeconomic variables employed in the study are stationary at first difference 1(1), the Johansen Co-interaction is employed to test the long run relationship among the variables. The results of the co integration test for the study are presented in table 3 above and it was established that there is a long run equilibrium relationship between the dependent and

independent variables. The result of the Johansen co integration test shows that there are two (2) co-integrating vector among the macroeconomic variables which are significant at 5% level of significance. This result is supported by the Eigen value test which indicates two (2) co-integrating equations at 5% level, which donate reject Null Hypothesis and accept alternative hypothesis.

# **Interpretation of Model Results**

# Table 4: Error Correction Model

Dependent Variable: BOP				
Method: Error Correction Model (ECM)				
Variable	Coefficient	Std. Error	Prob.	
D(LOG(INFR(-1)))	0.343388	0.150438	2.282583	
D(LOG(MS))	0.224529	0.175625	1.939669	
D(LOG(EXR))	-0.159418	0.270642	-0.589036	
D(LOG(INT))	1.342798	0.659482	2.036140	
ECM(-1)	-0.321416	0.025836	-0.828910	
С	-1.717146	2.119692	-0.810092	
R-Square =	0.735879		I	
Adjusted R-Square	0.627394			
Durbin Watson stat =	1.644398			
F-statistic =	4.017875			
Prob(F-statistic)	0.007805**			

# Source: Researchers' Computation, 2018

Table 4 presents the result of the Error Correction Model. It was revealed that the first period lag of Inflation Rate has significant direct effect on Inflation Rate. Going by the ECM estimated result, it was discovered that Money Supply has a significant direct effect on Inflation Rate with coefficient value of 0.224529 which implies that an increase in Money Supply will lead to rise in Inflation Rate in Nigeria.

Furthermore, it was revealed that the coefficient value of Exchange Rate is given as -0.159418 indicating that Exchange Rate has indirect insignificant effect on Inflation Rate in Nigeria and an increase in Exchange Rate resulted in fall in balance of Inflation Rate.

The regression result indicated that Interest Rate exacted positive significant effect on Inflation Rate with a coefficient value of 1.342798 indicating that an increase in Interest Rate will result in increase Inflation Rate. Finally, it was revealed that the value of Error Correction Term (ECT) is -0.321416 with a corresponding probability value of 0.0252 which is in consonant to the a priori expectation. The implication of this is that, the model is self adjusting and there is speed of adjustment in short run. Also, any deviation in Inflation Rate from equilibrium state will be corrected by 32%

The value of the adjusted R-Squared for the model was pegged at 0.627394 or 63%, which implies that Money Supply, Exchange Rate and Interest Rate explained about 63% systematic variation in Inflation Rate over the observed years while the remaining 37% variation are explained by other variables not captured in the regression model. This implies that the regression model is nicely fit.

The overall significance is test using F-statistic which measured the joint effect of the explanatory variables on the explained variables. The F-statistic for the regression model is given as 4.017875 with the corresponding probability value of 0.007805 which is significant at 5%. This implies that the explanatory variables proxied as that Money Supply, Exchange Rate and Interest Rate have significant effect on Inflation Rate in Nigeria.

Diagnostics test	Observed value	P-value
		(Chi-
		square)
Normality Test	2.416117	0.2988
Breusch-Godfrey LM test for autocorrelation	2.374630	0.1233
Heteroskedasticity Test: Breusch-Pagan-Godfrey	7.771250	0.1693
Ramsey Reset Test	0.154152	0.6982

#### **Table 5: Diagnostics**

#### **Researcher's Computation (2018)**

Table 5 presents the results of residuals diagnostics test for the model. The Jarque-Bera normality test revealed that the residuals of the model is normally distributed given a probability

value of 0.2988 which is less than the 5% level of significant, thus the null hypothesis of normality is therefore accepted for the model which implies that the model is normally distributed . Also, Breusch-Godfrey Lagranger Multiplier test (LM) revealed that the regression model is not serially correlated since the p-value of 0.1233 is greater than 5% conventional level which leads to the acceptance of null hypothesis of no serially correlation. The result of Breusch-Pegan test was conducted to check the presence heterosecedaticity in the model and it was revealed that there no heterosecedaticity in the regression model given a probability value of 0.1693 which is greater than 0.05 and implying that the model is homosecedatic. Finally, the Ramsey Reset Test revealed that there is no miss-specification in the regression model.



**Stability Test** 

The result above shows the stability test for the regression model. A relatively stable model regression model Cusum's line is expected to be in the acceptable region and it is indicated in the result above that the regression model is relatively stable

#### **Section Five**

#### **Conclusion and Recommendations**

The role of monetary policy in ensuring price stability cannot be underestimated. The monetary authority through monetary instruments influences economic activities for the purpose of maintaining price stability and controlling inflation rate. Thus, this study examined the efficacy of monetary policy in controlling inflation rate in Nigeria employing Error Correction Model (ECM). This assessment became crucial in view of the role of monetary authority in Nigeria in stimulating economic growth devoid of inflationary pressure.

The study revealed that money supply has significant effect on inflation rate in Nigeria which implies that money soppy serves as one of the major tool of controlling inflation rate and an increase in money supply escalate inflationary pressure. However, finding revealed that, exchange rate has insignificant effect on inflation rate while interest rate proved to be significant in explaining variation in inflation rate in Nigeria. It is however concluded that monetary policy has been partially effective in controlling in inflation rate in Nigeria. Based on the findings, it was recommended that:

Monetary authority should adopt adequate indirect instruments for the purpose of controlling the volume of money in circulation for effective and efficient control of inflation rate in Nigeria Interest rate in Nigeria should be totally liberalized for the purpose of making it a strong monetary policy instrument of inflowing price level and economic activities. Excess and irrelevant government spending should be curtailed by imposing spending quota and fiscal discipline on government agencies and parastatal for the purpose of controlling inflationary pressure.

The money market and its instruments should be adequately developed for the purpose of making it an effective control mechanism of inflation in Nigeria. A robust and effective exchange rate regime should be adopted by regulatory authorities in other to ensure exchange rate stability cabala of controlling inflationary pressure in the economy.

#### References

- Anowor, O.F. & Okorie, G.C. (2016). A reassessment of the impact of monetary policy on economic growth: Study of Nigeria. *International Journal of Developing and Emerging Economies*, 4(1), 82-90.
- Apere, T.O. & Karimo, T.M. (2014). Monetary policy effectiveness, output growth and inflation in Nigeria. International Journal of Economics, Finance and Management, 3(6), 301-307.
- Asuquo, A. (2012). Inflation accounting and control through monetary policy measures in Nigeria: Multi-regression analysis (1973-2010). *IOSR Journal of Business and Management*, 1(2), 53-62.
- Chaudhry, I.S., Ismail, R., Farooq, F. & Murtaza, G. (2015). Monetary policy and its inflationary pressure in Pakistan. *Pakistan Economic and Social Review*, 53(2), 251-268.
- Dania, E.N. (2013). Determinants of inflation in Nigeria (1970 2010). *The Business & Management Review*, 3(2), 106-114
- Danjuma, I., Jbrin, S.M. & Success, E.B. (2012). An assessment of the effectiveness of monetary policy in combating inflation pressure on the Nigerian economy. *Erudite Journal of Business Administration and Management*, 1(1), 7-16.
- Edoumiekumo, S. G., Karimo, T.M. & Amaegberi, M. (2013). Real sector responsiveness to monetary policy shocks in Nigeria. *Journal of Research in National Development*, 11(2), 269 277.
- Fabian, E.M. & Charles, E.N. (2014). The impact of monetary policy rate on inflation in Nigeria. *Journal of Economics and Sustainable Development*, 5(28), 146-153.
- Gbadebo, A.D. & Muhammed, N. (2015). Monetary policy and inflation control in Nigeria. *Journal of Economics and Sustainable Development*, 6(8), 108-115.
- Gbadebo, A.D. & Muhammed, N. (2015). Monetary policy and inflation control in Nigeria. *Journal of Economics and Sustainable Development*, 6(8), 108-115.
- Habibullah, M.S. (2011). Budget deficits and inflation in thirteen Asian developing countries. *International Journal of Business and Social Science*, 2(9), 11-21.
- Islam, R., Ghani, A.BA., Mahyudin, E. & Manickam, N. (2017). Determinants of Factors that Affecting Inflation in Malaysia. *International Journal of Economics and Financial Issues*, 7(2), 355-364.

- Iya, I.B. & Aminu, U. (2014). An empirical analysis if determinants of inflation in Nigeria. *Journal of Economics and Sustainable Development*, 5(1), 140-150
- Jhigan, M.L. (2010). *Macroeconomic theory*. (10th ed.). New Delhi: Vrinda Publications Ltd.
- Maku, A.O. & Adelowokan, O.A. (2013). Dynamic of inflation in Nigeria: An Autoregressive Approach. *European Journal of Humanities and Social Sciences*, 22(1), 10-51.
- McCallum, B.I. & Nelson, E. (2010). money and inflation: Some critical issues. Key Development in Monetary Economics. *The Federal Reserve Board*, 1(2), 10-19.
- Nasko, A.M. (2016). Impact of Monetary policy on the economic growth of Nigeria. *Pyrex Journal of Business and Finance Management Research*, 2(10), 163-179.
- Nenbee, S.G. and Madume, J.V. (2011). The impact of monetary policy on Nigeria's macroeconomic stability (1970 2009). *International Journal of Economic Development Research and Investment*, 2(2), 174 183.
- Ngerebo-A, T.A. (2016). Monetary policy and inflation in Nigeria. *International Journal* of Finance and Accounting, 5(2), 67-76.
- Odusanya, I.A. & Atanda, A.A. (2010). Analysis of inflation ant its determinants in Nigeria. *Pakistan Journal of Social Sciences*, 7(2), 97-100.
- Philip, N.O., Christopher, D.Z. & Pius, O.A. (2014). Effectiveness of monetary policy in reducing inflation in Nigeria (1970-2013). *Journal of Economics and Sustainable Development*, 5(13), 73-81.
- Rakić, B. & Rađenović, T. (2013). The effectiveness of monetary and fiscal policy in Serbia. *DOI: 10.5937/industrija41-4011*.
- Sanni, M.R., Amusa, N.A. & Agbeyangi, B.A. (2012). Potency of monetary and fiscal policy instruments on economic activities of Nigeria (1960-2011). *Journal of African Macroeconomic Review*, *3*(1), 161 176.
- Usman, O.A. & Adejare, A.T. (2014). Impact of monetary policy on industrial growth in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 4(1), 18-31.