

# The Effect of Monetary Policies on Foreign Trade in Nigeria: 1980-2017

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**Abstract:** *This study examined the effect of monetary policies on foreign trade in Nigeria between 1980 to 2017. Foreign trade was captured using total trade while the independent variables that described the various macroeconomic policies in Nigeria were money supply, minimum rediscount rate, Cash reserve ratio, exchange rate, interest rate and inflation rate. Time series data on the variables of the study was gotten from Annual reports of the Central Bank of Nigeria from 1980-2017. The secondary data was analyzed using E-views 9.0 software. A model was formulated for the study. The Augmented Dickey Fuller (ADF) stationary test showed that the variables in the study were stable at both levels and at first difference. The regression of the independent variables with total trade showed the existence of a long run relationship. The results revealed exchange rate exerts a significant positive effect on Total Trade in the long run while Minimum rediscount rate exerts a significant negative effect on total trade in the long run. The study thus concluded that the monetary policy channels through which foreign trade in Nigeria can be influenced are money supply, minimum rediscount rate and exchange rate. The paper thus recommended that the minimum rediscount rate should be reduced and further depreciation of the naira should be discontinued to allow for stability of the exchange rate*

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Date of Submission: 14-01-2020

Date of Acceptance: 01-02-2020

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## I. INTRODUCTION

Government establishes laws and policies in order to regulate and control the conduct of economic activities of their countries in order to provide enabling environment for economic growth and development. Likewise, in Nigeria, the federal government formulates policies and guidelines with a view to achieve economic growth and development. Monetary policy is one of the macroeconomic instruments with which nations (including Nigeria) use to bring about sustainable economic growth and development. It entails those actions initiated by a country's government through its apex bank which is aimed at influencing the cost and availability of credits (Nwankwo, 1991). It covers gamut of measures or combinations of packages intended to influence or regulate the volume, prices as well as direction of money in the economy. Specifically, it permeates all the efforts by the monetary authorities to control the money supply and achieving diverse macroeconomic objectives (Ajie & Nenbee, 2010). Similarly, Chamberlin and Yueh (2006) asserted that monetary policy which is the act of controlling the supply or prices of money are capable of exerting a positive powerful influence over the economy. Furthermore, Nnanna (2006) stated that macroeconomic

policies in developing countries are designed to stabilize the economy, stimulate growth and reduce poverty.

In Nigeria, the Central Bank of Nigeria is charged with the task of implementing the monetary policies of the government. Over the years, the objective of monetary policy in Nigeria has been the attainment of internal and external economic balance. It is important to note that the instrument used changed over the years due to changing economic conditions and socio – political atmosphere. However, it is generally acceptable that there are two major phases in the pursuit of monetary policy, namely, before 1986 and after 1986. The first phase placed emphasis on direct monetary control while the second relies on market mechanism. The economic condition that influenced monetary policy in Nigeria before 1986 was characterized by the dynamics of the oil sectors, the expanding role of the public sector in the economy and over dependence on the external sector during this phase; monetary management dependence on the use of direct monetary instruments such as credit ceilings, selective credit control, administered interest and exchange rates, as well as the prescription of cash reserve requirement and special deposit. As according to Adam (2005) the monetary control framework which relied heavily on credit ceilings and selective credit controls increasingly failed to achieve the set monetary targets as their implementation became less effective with time.

Aderibigbe (2004) noted that as a result of drastic fall in oil market internationally, economic conditions in Nigeria worsened and this brought about the introduction of the Structural Adjustment Programme (SAP). It was designed to achieve fiscal balance of payments by altering and restructuring the production and consumption patterns of the economy, eliminating prices distortions, reducing the heavy dependence on crude oil exports and consumers goods imports, enhancing the non – oil exports base and achieving sustainable growth. The strategies employed by SAP includes deregulation of external trade and payment arrangements, the adoption of a market determined exchange rate for Nigeria, substantial reduction on market forces as a major determinant of economic activity.

The monetary policy employed during this phase is the Open Market Operations (OMO). OMO is the primary indirect monetary policy instrument for promoting non-inflationary economic growth and development and other policy goals. It is basically the buying and selling of Treasury Security agency obligations and bankers acceptances by the Central Bank in the financial market in order to influence the volume of liquidity and level of interest rates which ultimately will affect money supply in the economy. The adoption of a market based framework such as OMO in an economy that had been under direct control for long, required substantial improvement in the macroeconomic legal and regulatory environment.

Also, additional efforts were directed at the management of excess liquidity in order to improve macroeconomic stability and they include reduction in the maximum ceiling on credit growth allowed for banks, the recall of the special deposits requirement against outstanding external payment arrears to CBN from banks, abolition of the use of foreign guarantee /currency deposits as collaterals for Naira Loans and the withdrawal of public sector deposits from banks to the CBN.

Economic theorist have sufficiently asserted strongly that economic development of any country is greatly influenced by the foreign trade transactions successfully carried out by her either in an advanced or less developed economy. Various studies on foreign trade recognize trade as a vital catalyst for economic development. According to Analogbei (2000) for developing countries such as Nigeria, the contribution of trade to overall economic development is immense owing largely to the obvious fact that most of the essential elements for development such as capital goods, raw materials and technical knows-how are almost entirely imported because that inadequate domestic supply and increased domestic demand invariably solicits corresponding expansion in exports.

Nigeria is basically an open economy with international transactions constituting a significant proportion of her aggregates output. Obadan (2004) noted that foreign trade provides both foreign exchanges earnings and market stimulus for accelerated economic growth. World Bank (2002) also asserted that small economics in particular have very little opportunity to achieve productivity and efficiency gains to support growth. Without tapping into large market through foreign trade, Nigeria's relatively large market can support growth but alone cannot deliver sustainable growth at the rates need to ensure macroeconomic stability and societal development. Hence appropriate monetary policies should be implemented to achieve sustained macroeconomic stability and increase gains from foreign trade.

Prior to the discovery and commercial exploration of crude oil in Nigeria, Nigeria economy was driven by foreign exchange earning derived from exports of groundnut, palm oil, solid minerals, cocoa etc. and in turn imports semi-finished goods. However, after this discovery till now Nigeria is still a country with one major export i.e. crude oil thus it is heavily dependent on imports from other countries. The imbalance in the foreign trade has led to huge balance of payment problems and other macroeconomic policies. Hence, the Nigeria economy is characterized by low capacity utilization in the real sector, poor performance of major infrastructural facilities, budget deficits, rising level of unemployment, exchange rate, unemployment, exchange rate, low purchasing power of the Naira and inflation base, low level of agricultural production, a weak private sector, high external debt overhang in efficient public utilities, low quality of social services and an unacceptable rate of unemployment.

Before 1986, the Nigeria government through the Central Bank of Nigeria initiated and implemented a number of monetary policies specifically designed to increase price stability and reduce inflation. However, after then, monetary policies initiated were implemented to restructure and diversify the productive base of the economy and reduce over dependence on the petroleum sector. Similarly the country has embarked on numerous polices aimed at reducing government over bearing on the economy and has continued to operate a free economy in order to encourage private participation and promote structural reforms. The diversification of the Nigeria economy is expected to increase foreign trade, foreign exchange earnings, and employment, increase exports and thereby leading to macroeconomic activities. Hence, this study intends to examine the effect of the various monetary policies (as indicated macroeconomic indicators) implemented over the years on foreign trade in Nigeria.

## **II. REVIEW OF LITERATURE**

According to CBN (2011), monetary policy encompasses deliberate efforts by the monetary authority, especially the central bank to control the value, availability and cost of money in the economy for the actualization of set objectives. As a macroeconomic instrument, monetary policy is employed by the monetary authority to ensure proper management of the economy to achieve intended and desired goals (Imoughele, 2014). This implies that monetary provides the baselines for meeting certain economic targets. Afolabi et al. (2018) posited that monetary policy serves as a key tool for economic stabilization for regulating the cost and availability of money or credit in the economy. Thus, the regulation of the monetary policy variable helps in controlling distortions in the economy.

The objectives of monetary policies include: the maintenance of price stability; maintenance of balance of payment equilibrium; attainment of high rate of employment; accelerating the pace of economic growth and development; and exchange rate stability. The techniques by which the stated objective is pursued by the monetary authorities can be classified into two categories: - the Market Control Approach and the Portfolio Control Approach. The Market Control Approach is an indirect or traditional approach of monetary control which includes the manipulation of Open Market Operations

(OMO) and the Central Bank's Discount Rate. While the Portfolio Control Approach is a direct or non-traditional approach of monetary control. It works through the instruments of portfolio constants, namely: Reserve requirements, Special deposits with the Central Bank, Selective credit controls, Moral suasion, Direct Measures.

The theoretical foundations for this study include the Keynesian theory of monetary policy and the classical theory of foreign trade. These theories established the relationship between monetary policy and foreign trade in an open economy as well as the principles upon which foreign trade will take place in such an economy. The monetary analysis provided by Keynes (1936) is anchored on the principles of effective demand. For Keynes, changes in output and employment are predicated on changes in aggregate demand. Thus, monetary policy tends to produce some real effects on the output growth. Unlike the classical theorists, Keynes advocated the role of the government in stimulating output and aggregate demand through the indirect role of the central banks. The channel through which monetary policy can affect output and employment is through changes in interest rates which stimulate investment. Although Keynesian economists admit that monetary policy can be helpful in stimulating output, they emphasized on large fiscal stimulus which involves expansion of government spending or reduction of taxes as monetary policy seems inadequate in facilitating overall revival of the economy through production and output growth. The ultimate goal of monetary expansion in the view of Keynes is to satisfy an unmet demand for money (Jahan et al., 2014). This focuses mainly on decline in the level of interest rate which increases investors' access to funds to stimulate investment. The major drawback of the Keynes theory is its assumption that interest rate is the only channel through which monetary policy affects demands. However, Mishkin (1996) outlined changes of exchange rate, financial assets prices, and bank-lending capacity among other channels through which monetary policy stimulate overall demand.

The classical theory of international trade is mostly based on the doctrine of comparative advantage. It strongly asserts that trade in a two country model is facilitated in the difference of overall advantage in terms of technology, economy, social status etc. furthermore he went further to note another important factor which affects comparative advantage. According to Ricardo, differences in climate and environment tend to result in differences in comparative advantage; differences in comparative advantage lead to trade. Thus, the business climate as well as the environment play important role in foreign trade. So, if the business climate is favourable for foreign interests base on the prevailing monetary policies of a country, this may go a long way in inducing foreign trade. Furthermore, in the context of a model of two countries, two commodities and one factor of production, Ricardo obtained the result that a country will tend to export the commodity in which it has a comparative advantage and to import the commodity in which it has a comparative disadvantage. Since comparative costs are the other side of comparative advantage, the classical theory is easily couched in terms of comparative costs. Specifically, the theory now states that a country will tend to export the commodity whose comparative cost is lower in autarky and import the product the comparative cost of which is higher in pre-trade isolation.

Various empirical studies have been carried out to establish the effect of monetary policy variables on macroeconomic performance of developing countries via foreign trade relations. This interest is buoyed by new studies favouring the export-led growth hypothesis, thus identifying monetary policies that positively influence exports and stabilizes imports is essential for developing countries like Nigeria. Thus, a review of these related studies are presented below.

Onuchuku et al., (2018) studied the effect of monetary policy variables on economic growth and balance of payment in Nigeria using Ordinary Least Squares (OLS) method. The study found that money supply has positive impact on the growth of gross domestic product (GDP) and balance of payment while money supply has negative impact on rate of inflation in the economy. Similarly,

Chipote & Makhetha-Kosi (2014) adopted error correction mechanism to examine the impact of monetary policy variables on economic growth in South Africa, and discovered that money supply and exchange rate have insignificant impact on economic growth in South Africa whereas the money supply has significant impact on inflation

Articles.com.ng (2017) displayed the work of an unknown author who examined the impact of monetary policy on foreign trade in Nigeria. The study employed quantitative analysis approach. The data collected from a period of 1981-2010 on appropriate indices for monetary policy (money supply, Interest rate, Exchange rate, inflationary ratio and liquidity ratio) were analyzed using multiple regression analysis. The model employed for the study was estimated using the ordinary least square technique. The result showed that money supply, exchange rate, inflationary rate exerted negative influence on foreign exchange. Based on the findings, the study concluded that a clear-out and obvious relationship existed between monetary policy and foreign trade in Nigeria and recommends for conscious efforts to be made to fine-tune the various monetary variables in order to provide an enabling environment to stimulate foreign trade.

Eze and Atuma (2017) examined the effect of monetary policy variables on net export of Nigeria for the period 1981-2016. Auto Regressive Distributed Lag (ARDL) bounds cointegration test and its associated ARDL short run and long run coefficients test and Pairwise Granger causality test were utilized in the analysis. The results also indicated that moneysupply (LMS) has positive insignificant effect on net export of Nigeria while total export (LTEXP) has positive significant effect on net export of Nigeria. Similarly, the results showed that interest rate (INR), exchange rate (LEXCR), foreign direct investment (LFDI) and total import (TIMP) have negative insignificant effect on net export of Nigeria. More so, the results of the Pairwise Granger causality test indicated that money supply (LMS) has unidirectional relationship with net export (NEX) with significant causality runs from money supply (LMS) to net export (NEX). The results however, indicated no significant causality between NEX and INR, LEXCR, LFDI, TEXP and TIMP. Thus indicating that any economic policy that targets increase in money supply and promotion of the total export of goods and services will lead to increase in net export of Nigeria while any attempt by the government to raise interest rate, exchange rate, foreign direct investment and import of goods and services will bring down the growth rate of net export of Nigeria. Based on these findings, the study recommended that government should rely much on the increase of money stock in the economy in promoting net export of Nigeria.

Lawal (2016) investigated the effect of monetary policy operations on the performance of the manufacturing sector in Nigeria from 1980-2015. The study employed the Ordinary Least Square (OLS) method to estimate the relationship between the variables in the model. Error Correction Model (ECM) was employed to ascertain the short-run dynamics of coefficients of the regressors included in the model and the speed of adjustment. The results revealed that broad money supply is positively and significantly related to manufacturing output in both short run and long run. Exchange rate exerted significant positive effect on manufacturing output in the long run, but its effect in the short run is negative. The study concluded that broad money supply is the largest driver of manufacturing output in the long run. The study recommended that the Central Bank of Nigeria should provide a policy thrust and requisite checks on the activities of deposit money banks to promote compliance in the provision of credit to the private sector in order to boost manufacturing activities.

Usman and Adejare (2014) empirically examined the impact of monetary policy on industrial growth in Nigerian economy, in line with the objectives of this study, secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1970 to 2010. Multiple regression analysis was employed to analyze data on variables such as manufacturing output, Treasury Bills, Deposit & leading and Rediscount Rate. They were all found to have significant

effects on industrial Growth with the Adjusted R2 of 0.8156 (81.56%). Following this outcome, the study therefore concluded that Rediscount Rate, and Deposit had significant positive effect on industrial output but Treasury Bills had negative impact on industrial output. It is recommended that government should develop the industrial sectors of the economy through its capital expenditure on productive activities and social overheads as they will contribute positively to industrial growth which will invariably enhance economic growth.

Nenbee and Madume (2011) investigated the impact of monetary policy on Nigeria's macroeconomic stability between 1970 and 2009. The study viewed macroeconomic stability in terms of price stability. Data analysis techniques employed were Cointegration and Error Correction Modeling (ECM). The results of the study revealed that only 47% of the total variations in the model are caused by the monetary policy variables – Money Supply (MS), Minimum Rediscount Rate (MRR), and Treasury Bills (TRB) at the long run. The study showed that the monetary policy tools showed a mixed result in terms of their impact on inflation in Nigeria. Therefore the study recommended that Nigeria should adopt macroeconomic mix of monetary, fiscal and exchange rate policies in managing inflation thereby promoting price stability which ultimately leads to macroeconomic stability.

Udude (2014) examined the impact of monetary policy instruments on economic growth in Nigeria for the period 1981-2012 using Vector Error Correction Mechanism (VECM). The study discovered that only exchange rate exerted significant impact on economic growth in Nigeria within the period studied.

Nwoko et al., (2016) utilized OLS in investigating the influence of monetary policy measures in Nigerian economy. The study revealed that average price and labour force have significant influence on gross domestic product while money supply has insignificant influence on the growth of Nigerian economy. .

Ajisafe & Folorunso (2002) examined the relative effectiveness of monetary and fiscal policy on economic growth in Nigeria using cointegration and its associated error correction model (ECM) techniques from 1970 to 1998. The study showed that monetary rather than fiscal policy exerts a greater impact on economic growth in Nigeria and concluded that emphasis on fiscal action by the government has led to greater distortion in the Nigerian economy. More so, Chukuigwe and Abili (2008) investigated the impact of monetary and fiscal policies on non-oil exports in Nigeria for the period 1974-2003 through the application of ordinary least squares (OLS) estimation method. The study indicated that both interest rate and exchange rate have negative influence on non-oil exports, while budget deficits had negative effect on non-oil exports of Nigeria.

Ogar et al., (2014) investigated the influence of the instruments of fiscal and monetary policies on the growth of Nigerian economy for the period of 1986-2010. The study was set to find the monetary and fiscal policy instruments determinants that significantly impacted on economic growth of Nigeria. The study used the method of ordinary least squares (OLS) in the data analysis. The results showed that government revenue has significant and positive impact on economic growth. Similarly, it was revealed in the study that money supply has significant positive impact on economic growth. The study also found that exchange rate has positive impact on the performance of the Nigeria's economy. However, the Imoisi et al., (2013) examined the effect of monetary policy on Nigeria's payments balance stability for the period from 1980 to 2010. The research employed the method of OLS in the analysis. The study discovered that interest rate and supply of money have significant and positive impact on payments balance position of Nigeria.

Danmola & Olateju (2013) examined the influence of monetary policy on the components of current account from 1970 to 2010 in Nigeria through the applications of Johansen Cointegration, error correction model (ECM) and ordinary least square (OLS) technique. The results indicate evidence of

long run relationship between money supply and the components of current account employed in the study. The study also revealed that money supply has positive influences on all the variables except the exchange rate that it influences negatively. The study as well discovered that money supply has significant effect on imports, exports and industrial output in Nigeria.

Most studies carried out sought to determine the relationship between monetary policy and economic growth in Nigeria, few took a sectoral approach, analyze and determined the impact of monetary policies on the channels of foreign trade that contribute significantly to economic growth. However, economic theory postulates that sustainable economic growth can be achieved rapidly with optimum foreign trade i.e. achieving a balance between imports and exports. Secondly, most studies reviewed did not cover a longer period, thus inadequately accounting for various shocks and causal effect that would manifest from changes in one monetary policy in favour of the other. Hence, what is need is a more dynamic model that shows both the short run and long run relationship between monetary policy and foreign trade. This study also uniquely disaggregated foreign trade into total export and total imports for the period under study. The study used a broader spectrum of monetary implementations comprising exchange rate, interest rate, monetary supply cash reserve ratio, minimum rediscount, it analytical technique which is quite different from others choice of variables in the studies renewed.

### **III. METHODOLOGY**

The study adopted the Quasi-experimental design because the study deals with time series data. The data for the study was annual time series data with the required time frame spanning the period 1980 – 2017. The variables that were used for the study are Total Trade (a proxy for foreign trade), Money Supply (MS), Minimum rediscount rate, interest rate; Cash reserve ratio, Exchange Rate (EXCR) and inflation rate (INFLR). The econometric software E-views 9.0 was used in running the model. The study adopted both descriptive and analytical statistics to examine trends and relationships of the variables. The augmented Dickey-Fuller test was employed as a test of stationarity. The Autoregressive distributed lag (ARDL) Bounds testing was also used to test for the long-run and short run relationship among the variables. The method of estimation employed for this study is based on Auto-regressive Distributed Lag (ARDL) Model approach - both longrun and shortrun ARDL models.

The models for this study are specified in linear relationship as follows:

$$TT = F (MS, MRR, CRR, EXCR, INTR, INFR) \quad (1)$$

where

MS	=	Money Supply
MRR	=	Minimum Rediscount Rate
EXCR	=	Exchange Rate
INTR	=	Interest Rate
INFLR	=	Inflation Rate
CRR	=	Cash Reserve Ratio
TT	=	Total trade

#### IV. RESULTS

**Table 1: Summary of Descriptive Statistics**

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob
<b>CRR</b>	8.06	7.65	1.10	22.50	5.72	1.0650	3.6897	7.9368	0.01890
<b>EXCR</b>	80.50	57.20	.55	305.80	80.35	0.7498	2.9045	3.5730	0.1674
<b>INFLR</b>	19.27	12.55	5.38	72.84	17.28	1.7416	4.8312	24.5199	0.0000
<b>INTR</b>	6.22	6.75	.32	11.06	2.84	-0.4940	2.4064	2.1034	0.3494
<b>MRR</b>	12.69	13.00	6.00	26.00	4.14	0.7123	4.2836	5.6694	0.0587
<b>MS</b>	4.81E+12	6.13E+11	1.44E+10	2.35E+13	7.22E+12	1.3200	3.240350	11.1277	0.0038
<b>TT</b>	8.23E+12	2.05E+12	1.52E+10	3.36E+13	1.08E+13	1.0986	2.749894	7.7422	0.0208

Source: Researchers computation using E-views 9.0

In table 1, comparing the means and standard deviation for each of the variable indicated that cash reserve ratio, exchange rate, inflation rate and minimum rediscount rate cluster around their means while interest rate, money supply and total trade are divergent from their means. This means that cash reserve ratio, exchange rate, inflation rate and minimum rediscount rate possess more stability to external shocks when compared to interest rate, money supply and total trade. This knowledge is quite important in prediction, forecasting and assessing certain risks associated with making and implementing monetary policies. In terms of skewness, the table indicated that exchange rate and minimum rediscount rate are normally skewed, while interest rate is negatively skewed due to its low standard deviation. Similarly, cash reserve ratio, inflation rate, money supply and total trade are all positively skewed. In terms of kurtosis, only cash reserve ratio and money supply is mesokurtic i.e normal distribution. The rest variables are leptokurtic in nature clearly indicating a higher value trend. From the Jarque-Bera Statistic it showed only exchange rate, interest rate and minimum rediscount rate are normally distributed.

#### Unit Root Test

Augmented Dickey Fuller (ADF) test for time series analysis was employed to determine the stationarity of the variables in the time series. The results are showed in Table 2.

**Table 2: ADF Unit Root Test Results Summary**

Variable	Level Test Result			First Difference Test			
	ADF Stat	5% T <sub>cr</sub>	Prob	ADF Stat	5% T <sub>cr</sub>	Prob	Order of Integration
<b>CRR</b>	-3.30	-3.55	0.0831	-3.62	-3.57	0.0453	1(1)
<b>EXCR</b>	-1.12	-3.54	0.9122	-3.85	-3.54	0.0241	1(1)
<b>INFLR</b>	-3.60	-3.54	0.0441	-5.59	-3.54	0.0003	1(0)
<b>INTR</b>	-2.78	-3.54	0.2143	-6.38	-5.54	0.0000	1(1)
<b>MRR</b>	-3.11	-3.54	0.1187	-5.44	-3/56	0.0006	1(1)
<b>MS</b>	4.75	-3.58	1.0000	3.15	-3.59	1.0000	1(0)
<b>TT</b>	-1.87	-3.53	0.6503	-5.34	-3.54	0.0006	1(1)

Source: Researchers computation using E-views 9.0

From the ADF test results in table 2 above, it was found that MS and INFLR are stationary at levels while CRR, EXCR, INTR, MRR and TT are stationary at first difference.



**Cointegration Test**

The bounds test cointegration results for the series in each of the models are summarized Table 2-5.

**Table 3: Cointegration test result for model 1**

Series: LOG(TT) LOG(MS) LOG(MRR) LOG(CRR) LOG(EXCR) LOG(INTR) LOG(INFLR)		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	7.093564	6
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.90
1%	3.15	4.43

Source: Researchers computation using E-views 9.0

**NB: k denotes number of explanatory variables in the model**

The test result for model 1 shows that the variables are co-integrated since the F-statistics (7.09) is greater than the upper critical bound value (3.61) at 5% significance level. This confirms that the variables in the model have long run relationship with TT.

**Model Estimation**

The ARDL results are presented from table 4 as shown below.

**Table 4: Parsimonious (ECM) Results for Model 1**

Dependent Variable: D(LNTOTAL\_TRADE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.071823	0.076615	0.937450	0.3572
D(LNMS(-1))	0.163968	0.309967	0.528985	0.6013
D(LNMRR(-1))	-0.757560	0.194228	-3.900359	0.0006
D(LNCASH_RESERVE_RATI O(-1))	-0.033319	0.093129	-0.357776	0.7234
D(LNEXCHANGE_RATE(-1))	0.545016	0.147469	3.695803	0.0010
D(LNINTEREST_RATE(-1))	0.301939	0.094496	3.195251	0.0036
D(LNINFLATION_RATE(-1))	-0.073963	0.064423	-1.148077	0.2614
ECM(-1)	-0.510630	0.175025	-2.917471	0.0072
R-squared	0.645862	Mean dependent var		0.191706
Adjusted R-squared	0.550517	S.D. dependent var		0.344770
S.E. of regression	0.231146	Akaike info criterion		0.110786
Sum squared resid	1.389136	Schwarz criterion		0.469930
Log likelihood	6.116631	Hannan-Quinn criter.		0.233265
F-statistic	6.773957	Durbin-Watson stat		1.747969
Prob(F-statistic)	0.000128			

Source: Researchers computation using E-views 9.0

The explanatory power of the regressors as captured by the R-squared (0.64) stood at 64.0 percent meaning that 64% of the variations in Total Trade can be explained by the explanatory variables in the model. The Durbin Watson stat of (1.75) indicates that the model is slightly positively auto-correlated. Also, the error correction model (ECM) coefficient is satisfactory (51%), rightly signed and significant. This implies that about 51% deviation from the long-run equilibrium relationship between Total trade and monetary policies is corrected every one year.

## **V. DISCUSSION**

The results from model 1 showed that the error correction mechanism result met the required condition of being negative, fractional and statistically significant. The coefficient of ECM (-1) is -0.5106 and the P-value (0.0072) therefore the negative sign of the coefficient satisfied one condition and the fact that the P-value is less than the critical value of 0.05 satisfied the second condition of statistical significance. The (R<sup>2</sup>) is 0.6458 showing that 64.5% of the total variations in Total Trade is accounted for, by the explanatory variables: Money Supply, minimum rediscount rate, cash reserve ratio, exchange rate, interest rate and inflation rate while the remaining 35.5% variations in total trade is attributed to the influence of other factors not included in the regression equation. The R<sup>2</sup> value of 64.5% is above 50% and thus is statistically significant and satisfactory. Durbin Watson statistics is 1.7479 showed the slight presence of positive auto correlation among the residuals. This can be due to the omission of other significant variables that affect international trade such as factors endowment and productivity, technological advancement, corruption, economic freedom and trade policies. This implies that money supply, minimum rediscount rate, cash reserve ratio, exchange rate, interest rate and inflation rate are slightly (insignificantly) serially correlated. Thus the problem of collinearity is not encountered in the model. The error correction model (ECM) coefficient is high (51%), rightly signed and significant. This implies that about 51% deviation from the long-run equilibrium relationship between Total trade and monetary policy variables employed in the study is corrected every one year.

The results revealed that a unit change in money supply brings about a 0.16 unit increase in total trade. This implies that in the long run the effect of money supply on total trade is positive however the strength of the relationship is insignificant. Also, the results revealed that a unit change in interest rate will bring about a 0.30 unit increase in total trade. This implies that in the long run the effect of interest rate on total trade is positive and slightly significant. Similarly, the effect of exchange rate on total trade in the long run is positive as a unit change in exchange rate will bring about a 0.54 unit increase in total trade which is statistically significant. This is in line with a priori economic expectation and agrees with the findings of Akinjare et al. (2016). The findings implies that an increase in the amount of money circulating in the economy will provide financial resources that will boost total trade mainly through the private sector channels. Interestingly, interest rate and exchange rate positively contribute to total trade due to the fact that a major portion of Nigeria's foreign trade is based on inelastic goods and so increase in interest rate and exchange rate do not affect demand or supply of these tradable goods.

The results also revealed that a unit change in minimum rediscount ratio will bring about a 0.75 decrease in total trade. This means that in the long run, the effect of minimum rediscount rate on total trade is negative and highly significant. Also, a unit change in cash reserve ratio will bring about a 0.033 decrease in total trade. This means that in the long run, the effect of cash reserve ratio on total trade is negative but insignificant. Similarly, a unit change in inflation rate will result in a 0.0739 unit decrease in total trade. This means that in the long run, the effect of inflation rate is negative and insignificant. This implications conform with a priori economic expectation and are in line with the findings of Ogbonna and Uma (2017). The finding implies that increase in minimum rediscount rate

is highly detrimental to the volume of total trade in Nigeria. This is because such increases will constrain the deposit money banks' ability to give out loans to manufacturing firms and similarly increases the interest rate at which loans can be given to firms thus making such firms to seek out relatively cheaper loans from other sources. Similarly, increase in cash reserve ratio tends to affect the level of money supply and the lending ability of deposit money banks which in turn negatively affects the economic activities of manufacturing and production firms in the country. Increase in inflation is detrimental to the purchasing power of a nation's currency, thus an increase in inflation rate of Nigeria will affect trade negatively as a reduction of purchasing power will induce low volume of activities in the foreign trade relations.

## **VI. CONCLUSION**

The imbalance of foreign trade in Nigeria has led to huge balance of payment problems and other macroeconomic problems such as large budget deficits, inflation, weak private sector and exchange rate fluctuations. Thus, this study was designed to examine the effect of monetary policies on foreign trade in Nigeria. The findings showed that in the long run, money supply, exchange rate and interest rate have a positive effect on Foreign Trade while minimum rediscount rate, inflation rate and cash reserve ratio had a negative effect on Foreign trade. This is simply because increasing minimum rediscount rate, cash reserve ratio reduces manufacturing sector productivity thus affecting foreign trade; furthermore, positive correlation of interest rate and exchange rate on Foreign Trade is explained by the concept of inelastic goods. Similarly, in the short run, the findings showed that only minimum rediscount rate, cash reserve ratio and inflation adversely affect Foreign Trade. Thus, we can conclude that minimum rediscount rate and cash reserve ratio highly affect Foreign trade both in the short and long run. The effect of exchange rate, interest rate and inflation rate is minimal because Nigeria's volume of trade is mainly inelastic goods.

## **VII. RECOMMENDATIONS**

On the basis of the empirical findings, the following recommendations are proffered.

1. The Central bank of Nigeria's focus on reducing inflation through monetary policies should be reduced to allow for monetary policies that will drive the Manufacturing and Agriculture sectors to produce raw materials and finished products for exports to other countries.
2. Government should implement policies such as free tax Regimes, Technology transfer and loans for specific sectors to boost export diversification and drive up foreign trade.
3. Volumes of import which usually causes balance of trade and payment problems can be resolved through the building of specialized and target-area industrial hubs to boost manufacturing activities which will in turn reduce import, increase export and provide economies of scale advantages in the long run.
4. The Federal Government through the Central Bank of Nigeria should stabilize the foreign exchange market in order to minimize the volatility in the nominal effective exchange rate and boost growth and competitiveness of the real sector which will contribute positively and significantly to Foreign Trade.
5. The Nigeria Export Promotion Council (NEPC) should promote policies that boost export such as reduction of export duty.

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