IMPACT OF MONETARY POLICY ON ECONOMIC GROWTH IN NIGERIA:

1985-2022.

Abstract

The study examined the impact of monetary policy on economic growth in Nigeria, using annual data spanning the period 1985 to 2022. Monetary policy is an economic management technique used to bring sustainable economic growth and development in a given economy which has been a pursuit of nations. One of the major objectives of monetary policy in Nigeria is economic growth using money supply and inflation control (price stability) as a measure; but despite the various monetary regimes that have been adopted by the Central Bank of Nigeria over the years, inflation still remains a major threat to Nigeria's economic growth. Despite the increased focus on monetary policy manipulation in Nigeria, the country's economic growth remains an issue. High unemployment, low investment, high inflation, and an unstable foreign exchange rate are examples of such issues. These alleged issues are said to have contributed to Nigeria's rapid drop in economic growth. The objective of this paper is to find out the significant relationship between economic growth and exchange rate, interest rate and money supply which are monetary policy variables in Nigeria. In this regard, the study employed the Autoregressive-Distributed Lag (ARDL) approach and established a long- run relationship between economic growth and interest rate, inflation, exchange rate and money supply. Specifically, the findings suggested that in the long-run only interest ratehas significant effects on economic growth while exchange rate, money supply and interest rate has a positive relationship with the dependent variable though insignificant, it was only inflation rate that has a negative relationship with economic growth in Nigeria. Given the important role of interest rate in promoting economic growth, the study recommends that a significant decrease in interest rate will lead to an increase in the growth of the economy as reduced interest rate will serve as bait for investors in Nigerian economy.

Key words: Monetary Policy, *Economic growth*,Money supply.

JEL Classification: E52; A1; E51.

Introduction

Macroeconomic instability scourging economies over the world is not a new phenomenon. Over three decades ago, it has manifested itself in several forms ranging from trade cycles to inflation, unemployment, balance of payment deficits and many more. Often times, these conditions degenerate to economic recession as the case may be all over the world. Reducing this wreck has therefore given birth to the formulation of various policies to address the problem. Prominent among these policies is the monetary policy.

Pursuant to the above, the Central Bank of Nigeria (CBN) has been saddled with the responsibility of formulation and implementation of this policy which involves the regulation of the supply and cost of money as well as the direction of credits in the country since its establishment in 1959 by the Central Bank Act of 1958. This traditional role has been made possible through the use of various monetary policies for the achievement of full-employment equilibrium, rapid economic growth, price stability and maintenance of balance of payment equilibrium in agreement with the expected level of economic activity in the country (Adesoye et al, 2012; Fasanya et al, 2013; Baghebo&Ebiba, 2014; Adigwe et al, 2015).

These objectives are adjudged to be paramount in the achievement of both internal and external balance as well as in the promotion of economic growth of a nation. Nevertheless, it should be noted that both the monetary policy and macroeconomic policies of governments all over the world, developed and developing ones are synonymous with diversities only in the effects of monetary policy measures employed. Generally, the prevailing economic situation of a nation (whether in a recession or a boom) dictates the monetary policy to be used in an economy to achieve the stated objectives in the country, either expansionary or contractionary.

For a desirable outcome of monetary policy, the nominal rate of GDP growth should not be less than the rate of inflation. If the effect of monetary easing on inflation is stronger than its effect on growth, it will lead to higher level of poverty. In other words, a positive real rate of growth in GDP is the indicator of an effective monetary policy. This target can be achieved if monetary expansion leads the enhancement in business activities. The volume of external trade and creation of new business entities are the indicators of enhancement in business activities, while a higher rate of GDP growth can lead to alleviation of poverty. Mehar (2018a, b) has analyzed the effects of monetary policy on poverty. The accelerated growth in investment and control over inflation are the twin objectives of a monetary policy while

growth in investment is closely related to the creation of employment opportunities. Any policy instrument which affects the inflation or unemployment will also affect the level of poverty, because magnitude of poverty is determined by the level of unemployment and inflation. In fact, the effectiveness of monetary policy depends on the utilization of domestic credit to private sector in enhancement of economic and business activities.

Money supply by definition comprises narrow money and broad money. Narrow money includes currency in circulation with non-bank public and current account balances with banks. While broad money includes narrow money in addition to savings and time deposits as well as foreign denominated accounts balances (CBN, 2006). Broad money therefore represents the total volume of money available in the economy. Excess money supply or liquidity may arise in the economy when the amount of broad money is over and above the level of total output (economic activity), a situation that may lead to high prices of goods and services or inflation, if not controlled through monetary policies. The implication of this is that there should be a stable relationship between the quantity of money supply and economic activity. The above presents a strong presumption that monetary policy can be linked to economic growth as it influences aggregate demand and supply which would ultimately affect the growth of the economy (Gul, Mughal & Rahim, 2012).

With developing countries like Nigeria putting in more effort to achieve economic growth, the goals of monetary policy in Nigeria have been to achieve both price and exchange rate stability. The actuality, on the other hand, has fallen far short of expectations. Inflation rates in Nigeria have been highly volatile since the early 1970s, with four significant episodes of high inflation totaling more than 30%. Money supply increase has been linked to high inflation episodes because money growth has often outpaced real economic growth. However, some indicators reflecting the economy's fundamental characteristics can be observed before the increase in the money supply. Some of these are supply shocks, which can be caused by starvation, currency devaluation, or changes in trade arrangements. In 1976, the first period of 30% inflation occurred (12-month moving average) (CBN, 2009). Drought in northern Nigeria, which has hurt agricultural productivity and increased the cost of agri-food, causing a significant increase in the share of the simple consumer budget, is one of the most frequently cited explanations for this inflation. Furthermore, there was an excessive monetization of oil export proceeds during this time, which may have given inflation a monetary aspect.

Interest rate is the primary instrument of price stability target of monetary policy as the interest rate channel is recognized by most economists as the most effective channel of monetary policy transmission (Adekunle, et al, 2018). Monetary policy has been found to influences macroeconomic variables such as employment creation, gross domestic product growth, price stability, equilibrium in the balance of payment in developing country (Precious, 2014). Economic growth is the increase in the amount of goods and services in a country at a time resulting in increase in real per capita income of a country over time. Economic growth implies raising the standard of living of the people and reducing inequalities of income distribution (Ufoeze, et al, 2018). Interest rate refers to the price for money and credit. It is the rate charged by suppliers of money and credit. Those borrowers for investment and consumption spending pay interest for the use of credit, as such increase in interest rates discourages borrowers from borrowing from banks and a reduction in interest rate encourages borrow from banks.

The Keynesians on the other hand believe that variations in money supply could lead to an increase or decrease in interest rate. A decrease in interest rate will affect aggregate investment and enhance aggregate income and output. This is based on the belief that interest rate is the key determinant of investment in the market economy. The investment process involves the employment of factors such as labour and capital which lead to increase in total employment (Nwoko, Ihemeje&Anumadu 2016).

Problem Statement

Despite the increased focus on monetary policy manipulation in Nigeria, the country's economic growth remains an issue. High unemployment, low investment, high inflation, and an unstable foreign exchange rate are examples of such issues. These alleged issues are said to have contributed to Nigeria's rapid drop in economic growth. In 1990 the economic growth rate which was at 1.36% drop to 1.19% in 1999 as the result of the increase in the unemployment rate from 3.35% to 17.5% and the inflation rate was 6.62%, in 2004 and 2008 there was a drop in growth rate from 6.58% to 6.41% with an increase in unemployment and inflation rate to 14.7% and 11.58% respectively. As a result of a decrease in the unemployment rate to 7.8% and inflation rate to 8.06% there was an increase in economic growth to 12.91% in 2014. In 2019 the GDP growth rate was 2.21% when the unemployment

rate increased to 8.53% and inflation to 11.4% (CBN, 2019). Over the years there has been an unstable exchange rate regime which also poses a threat to economic growth.

In Nigeria, various regimes of monetary policy instruments have been used on one occasion or the other. On few occasions, the monetary policy is tight while at other times it is loose. Also there has being periods of expansion and contraction in the economy but the overall effect has been minimal as the Nigerian economy is still overwhelmingly beset with the macroeconomic problems of unemployment, low investment and high inflation episodes which has caused it to fall back into retarded growth and recession.Consequently, it becomes sacrosanct to examine the effectiveness of the Central Bank of Nigeria's monetary policies over the years with specific objective of assessing the impact of monetary policy instruments (money supply, interest rate, exchange rate and inflation) on economic growth of Nigeria between 1985 and 2022.

Research Questions

In this paper, the following questions are addressed:

i. To what extent does money supply (M2) affect economic growth in Nigeria?
ii. What is the impact of interest rate on economic growth in Nigeria?
iii. How doesinflation rate affect economic growth in Nigeria?
iv. What is the effect of exchange rate on economic growth in Nigeria?

Objectives

The main purpose of this study is to examine the impact of monetary policy on economic growth in Nigeria. The specific objectives are to:

i. examine the extent to which money supply (M2) affect economic growth in Nigeria
ii. investigate the impact of interest rate on economic growth in Nigeria
iii. evaluate how inflation rate affect economic growth in Nigeria

iv. Assess the effect of exchange rate on economic growth in Nigeria

Hypotheses

The following hypotheses were tested in the course of this paper.

H_{01}:There is no significant relationship between money supply (M2) and economic growth in Nigeria.

H_{02}: Interest rate has no significant impact on economic growth in Nigeria.

H_{03}: There exists no significant relationship between inflation rate and economic growth in Nigeria

H_{03}: Exchange rate does not significantly affect economic growth in Nigeria.

Significance of the Study

The research work is of great importance to different groups of people which include government, researchers, monetary authorities etc. Firstly, it will provide adequate overview of monetary policy making to monetary authorities and serves as useful guidelines to the formation of monetary policies that will affectgrowth and investments given its benefits and projected usefulness to the Nigerian economy;the conclusions from this paper are of importance, not only for Nigeria as an economy but also for other developing countries around the globe. Also it will add to existing knowledge on the benefits of monetary policy in an economy and how monetary policy can be of impact in Nigeria, thereby serving as a Gap for further research.

Scope of the Study

The paper is concerned with the impact of monetary policy on economic growth in Nigeria covering the period 1985 to 2022. The reason for choosing these time series is because it

covers both the civilian and military administrations, thus allowing for a thorough investigation of the monetary policy's role in promoting economic growth dynamics in Nigeria.To assess the monetary policy's contribution to economic growth in the country, this paper employs money supply (M2), interest rate, exchange rate and inflation rate as proxies for monetary policy, while economic growth (GDP) serves as the dependent variable under scrutiny.

MATERIALS AND METHODS

Conceptual Review

Monetary Policy

Lyndon and Godspower (2019) describes monetary policy as the economic actions taken by the monetary authorities usually through the apex bank of a country to control the value, supply and cost of money in the economy in order to achieve set macroeconomic objectives decided upon by government. Monetary policy is a deliberate action of the monetary authorities to influence the quantity, cost and availability of money credit in order to achieve desired macroeconomic objectives of internal and external balances [CBN, 2011]. In a similar study, Nwoko, Ihemeje and Anumadu (2016) defined monetary policy as the combination of measures designed to regulate the value, supply and cost of money in an economy in consonance with the level of economic activities.As opined by Ndife (2020) monetary policy refers to discretionary control of money supply by Central Banks with a view of achieving desired economic objectives. It consists of actions of monetary authorities designed to influence the behavior of the monetary sector towards achieving monetary and price stability. The goal of monetary policies in most countries includes- maintenance of balance of payments equilibrium, price stability, output growth, sustainable development and promotion of employment (Ayodeji and Oluwole, 2018).Monetary policy is the macroeconomic policy laid down and carried out by the central bank of a nation (Adeagbo, 2021).

Economic growth

Timothy (2022) describes gross domestic growth (economic growth) as the monetary worth of all commodities and services generated in an economy during a given period, usually a year. Economic growth is defined as a steady increase in the output of goods, services, and job opportunities with the express purpose of improving citizens' economic and financial well-being (Ogbulu&Torbira, 2012). Economic development is a major topic in economics,

and it is regarded as one of the required conditions for achieving greater social welfare outcomes, which is the primary goal of economic policy. As a result, it is a necessary component of long-term development. Economic growth is a rise in per capita income which connotes an increase in the total output of an economy per person all things being equal (Jelilov& Muhammad (2015). It is the process whereby real per capita income of a country increases over a long period of time (Adeagbo, 2019).

Empirical Review

Igbafe (2022) examined the effectiveness of monetary policy in stimulating economic growth in Nigeria between 1990 and 2019, thus utilizing secondary data. The paper utilised ARDL Bounds testing approach as the variables are of mixed order and error correction mechanism. The ARDL Bounds Test result indicated that there is long run relationship among the variables with the lower bound and upper bound less than the calculated at 5% level of significant. The paper recommended that since economic growth in Nigeria is greatly influenced in the long-run by interest rate and reserve requirement making monetary policy an effective tool in stimulating economic growth. Nigerian government through its monetary authorities should unveil other policies that will stimulate economic growth not only in the long run but also, in the short run period.

Adeagbo (2021) examine the effect of monetary policy on economic growth in Nigeria for a period of 48 years (1971-2018). The paper utilised ordinary least square as a method of analysis. From the analysis it depicts that a long-run relationship exists among the variables and that some explanatory variables (Monetary policy rate, Interest rate, Investment to productive sector) presents a positive but non-significant effect on economic growth while real exchange rate has a negative impact on economic growth in Nigeria. However, monetary supply, which is another explanatory variable has a positive significant effect on economic growth. The paper recommends that government and relevant monetary authorities should make financial sector less volatile and ensure the effective monitoring of money supply levels, among others.

Lyndon and Godspower (2019) carried out an empirical analysis on monetary policy and economic growth in Nigeria using data from 2000 to 2017. The dependent variables are - broad money supply (BMS), interest rate (INT), cash reserve ratio (CRR), and liquidity ratio (LQR) which were used as proxies for monetary policy and the independent variables. The paper employed descriptive statistics and multiple regression technique based on the E-views

12 software as methods of data analysis. The results showed that all the independent variables had significant positive effect on gross domestic product, proxy for economic growth except cash reserve ratio which had an insignificant negative link with gross domestic product. In total, the findings of the paper established that monetary policy had a significant link with economic growth. The paper recommended that monetary policy authorities should ensure general stability in broad money supply, try to maintain a stable interest rate regime as well as stable liquidity position, and put sound monetary policies in place to direct the flow of funds to highly productive sectors to spur growth in the economy.

Gaps in the Literature

Many studies have been carried out in the past on the link between monetary policy and economic growth. The review of past empirical literature revealed a lack of consensusin the paper findings of previous scholars. The lack of consensus by past researchers leaves a research gap which indicated that more studies are required on this subject. This paper therefore examined the impact of monetary policy on economic growth in Nigeria using time series data covering 1985 to 2022 as a contribution to fill that research gap and also extending the scope to 2022 which to the best of the researcher's knowledge is the most recent study on the subject area. Also, this paper utilized four explanatory variablesincluding exchange rate which was lacking in addition in the previous studies to decipher how it affects our economy.

Theoretical Underpinning

The theoretical framework that underpins this paper hinges on the Keynesian model which recognises the crucial role monetary policy plays in an economy.This theory is established on the notion of price rigidity and possibility of an economy setting at a less than full employment level of output, income and employment. Keynesian believed that velocity of circulation was volatile and there often existed under-employment of resources as a result of recessionary conditions in the economy. The theory explains the effect of variation in money supply on the rate of interest which determines investment in the economy.

The Keynesian viewed monetary policy as influencing interest rate which influences investment decisions and consequently, output and income via multiplier process. To them the effect of a change in the quantity of money on prices is indirect and non-proportional (Jhingan, 2009). They focused on issue of output rather than prices as a pre-requisite for changing economic conditions and this serves as a modification of the classical quantity

theory of money.They believed that money supply, through its transmission mechanism, has indirect effect on real GDP.

METHODS AND MODEL SPECIFICATION

This paper examine the impact of monetary policy on economic growth in Nigeria and because it is a cause and effect relationship which observes an existing situation and searching back in time for causal agent, the research design is the ex-post facto design.

This paper uses time series data covering a period of 38 years from 1985 to 2022. The research made use of secondary data on monetary policy and foreign direct investment in agriculture. The researcher sources relevant data which were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin of various issues and National Bureau of Statistics.

The fundamental assumption of the model of the paper is time series stationarity. The unit root test is required to ensure that the variables are stationary within I (0) and (1) because above this levels of integration the ARDL cannot be applied. Thus, since economic time series are non-stationary, the paper avoided spurious results by utilising Augmented Dickey Fuller (ADF) test to identify the order of integration.

Model Specification

$RGDP = f(INTR, MS, INF, EXR)$ …… *(1)*

Where;

RGDP = Real Gross Domestic Product

INTR = Interest rate

MS = Money Supply

INF= Inflation

EXR= Exchange rate

In linear stochastic forms:

$RGDP = \beta o + \beta 1\ INTR + + \beta 2MS + \beta 3INF + \beta 3EXRUt_2$ ……..*(2)*

However, the ARDL model is thus;

$$\Delta RGDP_t = \beta_0 + \sum_{g=1}^{k} \beta_{1i}\, \Delta RGDP_{t-i} + \sum_{h=1}^{l} \beta_{2i}\, \Delta INTR_{t-i} + \sum_{i=1}^{m} \beta_{3i}\, \Delta EXR_{t-i} + \sum_{j=0}^{n} \beta 4_i\, \Delta MS_{t-j} + \sum_{j=0}^{n} \beta 5_i\, \Delta INFR_{t-j} \sum_{g=1}^{k} \beta_{1i}\, RGDP_{t-i} + \sum_{h=1}^{l} \beta_{2i}\, INTR_{t-i} + \sum_{i=1}^{m} \beta_{3i}\, EXR_{t-i} + \sum_{j=0}^{n} \beta 4_i\, MS_{t-j} + \sum_{j=0}^{n} \beta 5_i\, \Delta INFR_{t-j} + \varepsilon_t \quad \ldots\ldots (3)$$

Below is the ARDL ECM model

$$\Delta RGDP_t = \beta_0 + \sum_{g=1}^{k} \beta_{1i}\, \Delta RGDP_{t-i} + \sum_{h=1}^{l} \beta_{2i}\, \Delta INTR_{t-i} + \sum_{i=1}^{m} \beta_{3i}\, \Delta EXR_{t-i} + \sum_{j=0}^{n} \alpha_{4i}\, \Delta MS_{t-j} + \beta ECM_{t-1} + \sum_{j=0}^{n} \beta 5_i\, \Delta INFR_{t-j} + \varepsilon_t \ldots\ldots (4)$$

The model above is used to adjust the estimation until the ECM turned negative. The negative sign of coefficient of the error correction term ECM (-1) shows the statistical significance of the equation in terms of its associated t-value and probability value.

Where

Δ = first differencing operator

U_t = white noise or disturbance term

Bo = is the intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ **. . .** are the coefficient to be estimated

DATA PRESENTATION AND ANALYSIS

Table 1:Summary of Descriptive Statistics for the Variables

	RGDP	INTR	MS	INF	EXR
Mean	10.49632	18.46553	7.396006	18.54737	138.4779
Median	10.45895	17.77000	7.620906	12.95000	126.9500
Maximum	11.23568	29.80000	10.85927	72.80000	447.1300
Minimum	9.750924	9.250000	3.104587	5.400000	0.990000
Std. Dev	0.524503	4.370604	2.504472	16.08613	121.0765
Skewness	0.097019	0.677828	-0.288265	1.919433	1.029823
Kurtosis	1.417159	4.012711	1.727431	5.874625	3.389658
Jarque Bera	4.026473	4.533697	3.090380	36.41724	6.957124
Probability	0.133556	0.103638	0.213271	0.000000	0.030852

Source: Researcher's computation, using E-views 12, 2023

The descriptive results presented in Table 1 indicate that Real Gross Domestic Product (RGDP) in Nigeria during the period of 38 years (1985-2022) has minimum and maximum values of 9.75% and 11.23% respectively. Real gross domestic averaged 10.49% during the period with standard deviation of 0.52%, implying that the data deviate from both sides of the mean by 9.97%. This suggests that RGDP in Nigeria is relatively widely dispersed during the period under investigation. The implication of this disparity depicts fluctuations in the growth of gross domestic output which has relatively remained poor over the years. The fluctuations in RGDP may also be attributed to inconsistent policy changes that characterised different administration in Nigeria over time. Skewness, which measures the shape of the distribution revealed that coefficient of 0.097019 (which is greater than zero) implied that though RGDP is positively skewed, it is not symmetrical around the mean and thus deviating from normal distribution. Kurtosis, value of 1.417159, it implied that RGDP is platykurtic (fat or short tailed) meaning that the distribution is not peaked relative to the normal distribution. The descriptive normality results also showed that RGDP is normally distributed. This was captured by the Jarque-Bera probability value of 0.133556, found to be greater than 0.05.

Thus, Table 1 further showed that INTR during the period has minimum and maximum values of 9.3% and29.8% respectively. The average value of INTR during the period is 18.46553% (which is quite high) with standard deviation of 4.370604%, implying that the data deviate from both sides of the mean by 14.094926%. This suggest that the data from the INTR variable is not widely dispersed from the mean during the sample period, as the standard deviation was found to be lower than the mean value. The skewness coefficient of 0.677828 suggest that the data is positively skewed and did not comply with the symmetrical

distribution assumption. With a kurtosis value of 4.012711 (found to be greater than 3) implied that INTR is leptokurtic (slim or long tailed) implying that the distribution is peaked relative to the normal distribution. Also, the p-value of 0.103638 for Jarque-Bera implies that the Gausian distribution assumption of normal data was met at 5% level of significance.

Furthermore, MS, INFR and EXR has a minimum and maximum value of (3.104587, 10.85927), (5.400000, 72.80000), (0.990000, 447.1300) respectively. While there average values are 7.396006, 18.54737 and 138.4779 during the period under investigation. The kurtosis for money supply is 1.727431 implying that MS is platykurtic (fat or short tailed) meaning that the distribution is not peaked relative to the normal distribution. While that of INFR is 5.874625 greater than 3 depicting that inflation is leptokurtic (slim or long tailed). And of course, kurtosis for EXR is 3.389658 which is mesokurtic (equal to 3).

Table 2: Summary of Unit Root Test Results

Variables	**ADF**		
	ADF Values	Critical Values	Order of Int.
RGDP	-3.956208	-3.540328	1
INTR	-3.417467	-2.945842	0
INFR	-4.460966	-3.580622	1
EXR	-5.543064	-3.540328	1
MS	-4.951840	-3.540328	1

Source: Researcher's computation, using E-views 12, 2023

Table 2depicts the results of the unit root test indicating varying levels of integration. Interest rate shows unit roots at levels and others show at first difference.

Table 3: Summary of Bound Test

F-Bounds Test		**Null Hypothesis: No levels relationship**		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	6.192231	10%	1.9	3.01
k	4	5%	2.26	3.48
		2.5%	2.62	3.9
		1%	3.07	4.44

Source: Researcher's computation, using E-views 12, 2023

The co-integration test result shows that F-statistic value of 6.192231 is greater than the lower (I(0) and upper bound (I(1) critical values 2.26 and 3.48 respectively at the 5% significance level. Thus, the null hypothesis of no long run relationship is rejected at the 5% level. It can therefore be inferred that the variables are co-integrated, and as such there is a long run equilibrium relationship between monetary policy and economic growth output between 1985 and 2022.

Table 4: Summary of ARDL-ECM

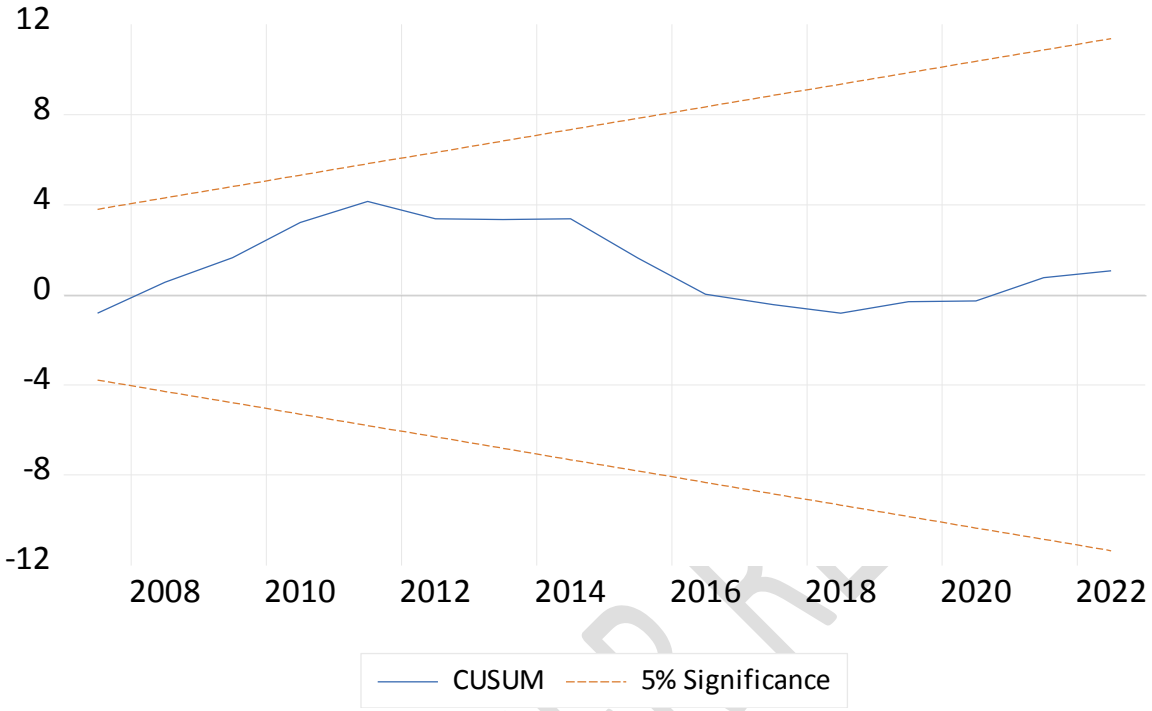
Variable	**Coefficient**	**Std. Error**	**T. Statistics**	**Probability**
D(PRGDP(-1))	0.043161	0.136141	0.317029	0.7553
D(INTR)	0.004749	0.001278	3.717098	0.0019
D(LMS)	-0.005643	0.030932	-0.182423	0.8575
D(INFR)	-0.002537	0.000445	-5.695163	0.0000
EXR**	2.16E-05	9.12E-05	0.236406	0.8161
R-squared	0.881256			
Adjusted R-squared	0.829628			
Prob(F-statistic)	0.000000			
		Long run ARDL		
Variable	Coefficient	Std. Error	T.Statistics	Probability
INTR	0.542812	0.216000	2.513012	0.0231
LMS	0.357097	0.358911	0.994947	0.3346
INFR	-0.197462	0.160410	-1.230984	0.2361
EXR	0.001636	0.007330	0.223137	0.8263

Source: Researcher's computation, using E-views 12, 2023

The ARDL-ECM results in Table 4, it could be observed that ratio of real gross domestic product (RGDP) contributed positively and insignificantly to economic growth, in the period as captured by its coefficient value of 0.043161 and a p-value of 0.7553. Further, it was found that interest rate (INTR) contributed positively to economic growth as captured by its positive coefficient values of 0.004749 and a p-value of 0.0019 which was statistically significant under the period of investigation. Money supply with a negative coefficient of -0.005643 and a p-value of 0.8575 means that there is a negative and insignificant relationship with economic growth during the period. Thus, the coefficient value of inflation rate showed that it has a negative relationship with economic growth but contributed significantly to RGDP this means that a little amount of inflation is needed in the economy which is an indicator to the business people that their economy of interest is actually progressing and there is money there, indicating further that when they do business they will be patronized, that is their business will not shut down, evident in this is the negative coefficient of-0.002537 and a p-value of 0.0000 being statistically significant during the current period. The variable of exchange rate (EXR) was found to be have a positive association with coefficient value of 2.16E-05 and a p-value of 0.8161 with RGDP meaning that there is a positive relationship between RGDP and exchange rate.Also, the P-value of the F-statistics of the model is significant indicating a goodness of fit of the model. Furthermore, R-squared of 0.881256 suggests that about 88% of variation in RGDP is explained by the model while 12% is explained by variables outside the model.

From the foregoing, we can aver that interest rate and exchange rate has a positive relationship with the dependent variable, that is, Real Gross Domestic Product; but it was found that only interest rate is statistically significant while exchange rate is insignificant. Hence, we can submit that interest rate has a positive and statistically significant relationship with RGDP as against our initial hypothesis that there is no significant relationship between monetary policy and economic growth. Since, exchange rate was insignificant we reject the alternative hypothesis and accept the null hypothesis of no relationship. Thus, we accept our alternative hypothesis of a relationship between monetary policy and inflation and reject the null hypothesis of no relationship even though it has a negative association with the dependent variable. However, we accept our null hypothesis of no relationship between monetary policy and exchange rate during the period under investigation. We can submit that some of the variables of monetary policy has a positive and statistically significant relationship with economic growth in Nigeria.

Fig.1 Stability test result



Also, the plot of the cumulative sum control (CUSUM) test result remains within their critical values represented by the two straight lines indicating that the coefficients are constant (Fig.1).

Table 5: Diagnostic test

Test type	F-Statistics
Heteroskedasticity Test	0.0766
Breusch-Godfrey Serial Correlation LM	0.6489

Source: Authors compilation, 2023 (Eviews-12)

The diagnostic test result indicates that the residuals of the ARDL specification are not affected by auto-correlation, heteroskedasticity or misspecification.

Table 6: ECM Result

Variable	Coefficient	Std. Error	T. statistics	Probability
CointEq(-1)*	-0.014887	0.001473	-10.10371	0.0000

Source: Authors compilation, 2023 (Eviews-12)

From the above result ECM is statistically significant, less than one and negative which shows that there is a high speed of adjustment from the short run to the long run of the model.

Discussion of Findings

The short run result revealed a positive and significant relationship of RGDP and INTRwith their coefficient and probability as 0.004749, 0.0019. Further, the result revealed a negative and insignificant relationship of RGDP and MS with coefficient and probability as -0.005643,0.8575;it also unveiled a negative and significant relationship with INFR with coefficient and probability as -0.002537, 0.0000. It further disclosed that exchange rate has a positive and insignificant relationship with RGDP. This indicates that during the review period interest rate had a relevant contribution to real gross domestic product, hence, by having a positive association.But interest rate and exchange rate has a positive influence which may likely be the result of some good policies that were implemented under the review period.However, the low output of the real GDP, which results in low standard of living, unemployment, poverty amongst others is a result ofpoor implementation of economic policies, poor technology, poor investment, inadequate funding and poor infrastructures amongst others.In the short run, ECM value of -0.014887indicates that the adjustment from economic disequilibrium to stability will take Nigeria 14.89% of the time. This suggests that the likelihood of the nation escaping any state of disequilibrium such as stagflation or recession is positive.

In the long run it was discovered that real gross domestic product has a positive influence with the variables of monetary policy except for inflation which has a negative association. The implication of this finding is that monetary policy has the capacity to influence greatly the output in the economy with good and sound government policies, implementation to help take our economy to the next level.

However, real gross domestic product has a positive relationship with monetary policy according to the findings of the paper. According to the findings, an increase in monetary policy will lead to anincrease in economic growth. The positive influence was found to be statistically insignificant (P-value 0.7553<0.05).

According to the coefficients, every 1% increase in monetary policy will results in anincrease of 43,161,000 in economic growth.Lyndon(2019), research work establishes a positive association between monetary policy andeconomic growth and found out that monetary policy had a significant link with economic growth. That is, monetary policy intervention plays a crucial role in economic growth and development.

CONCLUSIONS AND RECOMMENDATIONS

The paper therefore concludes that Nigeria economy has not being performing well due to the fluctuations in the exchange rate, interest rate, money supply and inflation while over the years; the government has made considerable efforts to increase the GDP in Nigeria. On the basis of the empirical findings the following recommendations are proffered;

i. Monetary policy authorities should ensure that there is a significant fall in interest rate which will lead to an increase in the growth of the economy as reduced interest rate will serve as bait for investors.

ii. The government should also protect our exchange rate as a continuous fall or rise in it discourages investors as it brings about uncertainty thus delaying them from taking relevant and major decisions.

iii. The money supply should also be increased significantly so that there will be money in the economy, this will lead to increase in employment, poverty reduction amongst others.

iv. The government through the Central bank should approximately release the quantity of money that the economy needs so that it won't exceed the economic activities thus leading to inflation.

REFERENCES

Adeagbo, M. O. (2019). Restructuring government expenditure as prerequisite for improved economic growth in Nigeria. In S. A. Adeyera, R. A. Kehinde, & M. A. Adesewo (Eds.). The quest for restructuring the Nigerian nation: Myth or reality? (Pp. 160-183) School of Arts and Social Sciences, Federal college of Education (sp.) Oyo and Sales world production, Oyo.

Adeagbo, M. O. (2021). Monetary policy and economic growth nexus in Nigeria. Ianna Journal of Interdisciplinary Studies, Vol 3 issue 2.

Adekunle P. A., Yaaba, B. N., Stephen, S. A., Ogbuehi, F., Idris A. &Zivoshiya P. B. (2018). Monetary Policy Transmission in Nigeria: How Important is Asset Prices Channel. Microeconomics and Macroeconomics 2018, 6(3): 55-66.

Adesoye, A. B., Maku, O. E., & Atanda, A. A. (2012). Is monetary policy a growth stimulant in Nigeria? A vector autoregressive approach. Munich Personal RePEc Archive (MPRA) Paper No 35844, pp. 1-24.

Adigwe, P. K., Echekoba, F. N., &Onyeagba, J. B. S. (2015). Monetary policy and economic growth in Nigeria: A critical evaluation. Journal of Business Management, 17(2),110-119.

Baghebo, M., &Ebiba, T. S. (2014). Monetary policy and economic growth in Nigeria (1980-2011). Asian Economic and Financial Review, 4(1), 20-32.

CBN, "What is Monetary Policy?" Understanding Monetary Series No. 1 (2011).

Central Bank of Nigeria, Monetary Policy Department (2006) What is monetary policy? Monetary Policy Series, CBN/MPD/Series/01/2006, 1-2 https://www.cbn.gov.ng/Out/EduSeries/Series1.pdf.

Fasanya, I. O., Onakoya, A. B. O., &Agboluaje, M. A. (2013). Does monetary policy influence economic growth in Nigeria? Asian Economic and Financial Review, 3(5). 635-646.

Gul, H., Mughal, K. & Rahim, S. (2012) Linkage between monetary policy instruments and economic growth, Universal Journal of Management and Social Sciences, 2(5), 69-76.

Jelilov, G., & Muhammad, Y. M. (2015). Energy growth and energy consumption in Nigeria. The Empirical Economics Letters, 1187-1196.

Jhingan, M. L. (2009). Principles of economics (3rd ed). Vrinda Publications (P), Ltd.

Lyndon, M. E., and Godspower T. O., (2019). Monetary policy and economic growth nexus: further evidence from Nigeria. Global Journal of Arts, Humanities and Social Sciences, Vol.7, No. 8, pp.24-37.

Mehar, A. (2018a), "Impact of monetary policy on growth and poverty: drastic consequences of government intervention", Journal of Modern Economy, Vol. 1, p. 1, 2018.

Mehar, A. (2018b), "Populism versus IMF conditionalities: demand management policies in present regime of globalization", Management and Economics Research Journal, Vol. 4, pp. 1-18.

Ndife, C. F. (2020). Impact of Monetary Policy on Economic Growth of Nigeria. African Scholar Publications & Research International VOL. 18 NO. 7 ISSN: 2276-0732.

Nwoko, N. M., Ihemeje, J. C., Anumadu, E. (2016). The Impact of Monetary Policy on the Economic Growth of Nigeria. African Research Review ,An International Multi-disciplinary Journal, Ethiopia Vol. 10(3), Serial No.42, 192-206.

Ogbulu, O. M. and Torbira, L. L., (2012). "Budgetary Operations and Economic Growth: The Nigerian Perspective," British Journal of Arts and Social Sciences, 4(2): 180-194.

Timothy Igbafe Aliu (2022). Effectiveness of Monetary Policy in Stimulating Economic Growth in Nigeria. International Journal of Research in Social Science and Humanities (IJRSS), Vol. 3 (2).

Ufoeze, L. O., Odimgbe, S. O., Ezeabalisi, V. N. & Alajekwu, U. B (2018). Effect of Monetary Policy on Economic Growth in Nigeria: An Empirical Investigation. Annals of Spiru Haret University Economic Series, 2018(1):123-140.