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IMPACT OF MONETARY POLICY ON ECONOMIC GROWTH IN NIGERIA (1990-2017)

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ABSTRACT: *The study examined the impact of monetary policy on economic growth in Nigeria; for the period 1990-2017. Secondary data were collected from the Central Bank of Nigeria Statistical Bulletin. The study used Gross Domestic Product as proxy for economic growth and employed as the dependent variable; whereas, monetary policy rate, liquidity rate and Treasury Bills respectively were used as the explanatory variables to measure monetary policy. Hypotheses formulated were tested using Ordinary Least Square (OLS) techniques. The study revealed a significant impact of Treasury Bills on Gross Domestic Product in Nigeria. Liquidity ratio had a significant impact on Gross Domestic Product in Nigeria. Monetary policy rate had a significant impact on Gross Domestic Product in Nigeria. The coefficient of determination indicated that about 62% of the variations in private sector of the economy can be explained by changes in monetary policy variables. The study concluded that monetary policy had impacted significantly on private sector growth in Nigeria. The study recommended that policy makers should strong economic policies that will maintain and stabilize the economy. CBN should lay down strict prudential guidelines to stabilize and strengthen the economy. The CBN should review the Monetary Policy Rate downwards so as to reduce the cost of credit and increase the flow of investible funds to the economy.*

KEYWORDS: monetary, policy, economic, growth, Nigeria

INTRODUCTION

The importance of monetary policy and growth had occupied central position in the financial economics literature in recent decades in Nigeria (Blundell-Wignall, 2016). Over the years, Nigeria has embarked on different monetary policy frameworks such as the prudential guideline, credit ceiling, and Structural Adjustment Programme to facilitate economic growth. The study carried out by Aliyu and Fatai (2017) revealed that there was an extensive use of direct control measures before the Structural Adjustment Programme in 1986. The precarious economic situation under the direct control framework led to the introduction of SAP; subsequently, followed by indirect financial liberalization policy. These measures were taken to make private sector-led economy viable. Thus, for the private sector to achieve the desired objectives the commercial

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banks are expected to provide financial resources in line with policy directives set out by the Central Bank of Nigeria (Oguda & Chinda, 2018).

The empirical work carried out by Okorieand Enzue (2018) stated that the real sector is ^ strategic for growth and development; because, of the following reasons: (i) it produces and distributes goods and services required to satisfy aggregate demand in the economy; (ii) the performance of the private sector can be used to measure the effectiveness of macro-economic policies. This is because, a well performing real sector; particularly agriculture, manufacturing, real estate, trade, oil and gas, construction and communication is expected to contribute to the growth and development of the economy. This corroborates the study by Andabai (2017) who found a positive significant relationship between private sector development and economic growth in Nigeria. Thus, the relevance of the private sector-led economy is also manifested in its capacity building role as well as high employment and income generating potentials for the economy. The work carried out by Berniteand Benson (2018) stated that for these reasons, there is need for adequate credit flow from the banking sector to the private sector-led economy.

Ofuegbo (2017) found that in Nigeria monetary policy appears to have some set-backs; because, of inconsistent government policy, inability to implement the formulated policies, political and economic instability, absence of workable long-term development plans, and corruption at all levels of government etc. Studies by Aliyu and Mustapher (2016) and Okorieand Enzue (2018) reveal a positive significant impact of monetary policy on private sector growth in Nigeria, while the study conducted by Olaife (2017) found a negative significant impact of monetary policy on private sector growth in Nigeria. Some other studies such as Adupo (2017) and Leburio (2018) found inconsistent impact of monetary policy on private sector growth in Nigeria. Therefore, there is no consensus on the impact of monetary policy on economic growth in Nigeria. It is against this background that the study attempts to investigate empirically the impact of monetary policy on private sector growth in Nigeria.

THEORETICAL FRAMEWORK

The study is anchored on the Keynesian theory of money and prices (1930).The theory views monetary policy instruments as a reward for parting with liquidity (money). This provides interest rate as a determinant of demand and supply of money, hence, the theory opines that money supply is usually determined by monetary authority which is the central bank,; while, the demand for money is a function of income and interest rate. The theory further explains that transactionary and precautionary motives of liquidity preference depends on income, while speculative motive depends on interest rate. Thus, the Keynesian theory implies that low interest rate as a component of cost administered is detrimental to increasing savings; and, hence investment demand. Proponents of this theory argue that increase in the real interest rate will have strong positive effect on savings which can be utilized in investment; because, those with excess liquidity will be encouraged to save subject to favourable interest rate. Therefore, banks will have excess money to lend to investors for investment purposes thereby raising the volume of productive investment and increasing their profitability. This theory introduced the concept of liquidity trap, a situation where low interest rate discourages savings and consequently reduces investments due to lack of investable fund.

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Empirical Review

Adupo (2017) investigated the determinants of loans and advances in the Nigerian financial system. Liquidity ratio, capital base, bank deposit and lending rates were used to determine their effect on loans and advances. The study reveals that a relationship exists between dependent variable (loans and advances) and independent variables of total deposit, capital base, liquidity ratio, and lending rate. Oguda and Chinda(2017) examined commercial banks' lending activities and economic growth in Nigeria. They posit that lending is undoubtedly the heart of banking business, and therefore, the administration of lending requires bank management to employ skill and dexterity in policy formulation and application that would guarantee reasonable income and adequate liquidity while ensuring safety of bank's funds.

Osayameh (2018) used lending and credit administration model for commercial banks to show that the increasing trend in bad debts and absence of basic business/corporate advisory services in most Nigerian commercial banks, are indicative of an apparent lack of use of effective lending and credit administration techniques in these banks. He argues that the present volume and complexity of transactions in bank lending and credit administration in the country call for the use of scientific techniques such as operations research to aid their lending and credit administration. The study does not identify explicitly the factors that influence lending behavior in deposit money banks in the country other than mere making allusion to regulation and interest rate.

Ofegbu(2018) conducted a study on the determinant of banks profitability in Nigeria, indicates that banks profitability is largely determined by risk and other factor that relates to the internal organization of banking firm. He further brings to bear that market concentration is a significant determinant of banks profitability. More so, exchange rate was found to be significant as a determinant of bank profitability through return on equity and net-interest margin, but not significant to return on asset (ROA) as a measure of profitability.

Aliyu and Daida (2017) investigated the effect of monetary policy on bank performance in Nigeria. Bank rate, inflation rate, and exchange rate are total credit enhancing while liquidity ratio and cash reserve ratio. They further add that monetary policy instruments are not effective to stimulate credit in the long run, while bank total credit is more responsive to cash reserve ratio. Agbokhese and Asekone (2016) appraised the impact of monetary policy on bank credit creation in Nigeria between 1980-2010 found that there was a positive linear relationship between total credit creation and the explanatory variables, total credit creation, total deposit and treasury bill rate while reserve requirement ratio and interest rate had a negative relationship with total credit creation. They further add that any monetary policy by the monetary authorities to control credit that emphasizes on reserve requirement could not be effective as the banks could afford to raise and keep substantial deposit as reserve contrary to the action of the monetary authorities.

Ekpo, and Mustapher (2015) investigated the effect of bank profitability on the performance of the Nigerian economy. The study examined whether liquidity affects banks profitability in the short run, labour efficiency only affect banks profitability in the long run but as for the external or macro-economic variable which determines bank profitability, broad money supply was found to be significant at both the long and short run. Fadzlan and Muzafa (2017) conducted a study on the determinant of bank profitability in a developing economy from Bangladesh. Their result indicated

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that loan intensity, credit risk and cost have positive and significant impact on bank performance, while non-interest income exhibits negative relationship with bank profitability. They further add that the size has a negative impact on returns on average equity (ROAE).

METHODOLOGY

The study employed *ex-post-facto* research design. Private Sector Output is used as a proxy for Private Sector growth and employed as the dependent variable; whereas, monetary policy rate, liquidity ratio and Liquidity ratio respectively are used as the explanatory variables to measure monetary policy.

Model Specification

Multivariate linear regression models are used to test each of the null hypothesis formulated for the study. Based on this, a model was adapted from the work of Oke (2017) and stated as: GDP =*f*(MPR, LQR)

Where: GDP = Gross Domestic Product as proxy for economic growth
MPR = Monetary Policy Rate
LQR = Liquidity Ratio
TB= Treasury Bill

The above model is modified in this study by introducing treasury bills and was employed as the dependent variable. The modified
model is stated as: GDP =*f*(MPR, LQR, TB)

Where: GDP= Gross Domestic Product as proxy for economic growth
MPR = Monetary Policy Rate
LQR = Liquidity Ratio
TB= Treasury Bills

The econometric model is stated as:

$\text{Log(GDP)} = e_0 + \text{Log}e_1\text{MPR} + \text{Log}e_2\text{LQR} + \text{Log}e_3\text{TB} + \mu$

eo = intercept and e_1, e_2 and e_3 are the coefficients of the regression equation.

Data Presentation and Discussion

The study used Gross Domestic Product as proxy for economic growth and employed as the dependent variable of the study; whereas, monetary policy rate, liquidity ratio and treasury bill respectively were used as the explanatory variables to measure monetary policy respectively as indicated in appendix 1.

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Table 1: Descriptive Statistics

	GDP	MPR	LQR	TB
Mean	322695.88	31.25434	12.03546	21246.37
Median	377467.65	36.84650	17.02020	23648.60
Maximum	323267.23	42.96645	36.33745	36546.32
Minimum	302347.54	34.03628	9.250000	32534.36
Std. Dev.	34748.02	148.1002	5.403850	25361.32
Skewness	0.6849.52	3.146739	1.067069	46375.86
Kurtosis	3.3859.32	14.19450	5.200220	26042.47
Jarque-Bera	0.253054	218.7151	12.11240	0.134459
Probability	0.253695	0.000000	0.001612	0.253649
Sum	162.3475	3173.45	596.4000	1243.929
Sum Sq. Dev.	1158.846	21274.4	907.1700	2227.166
Observations	28	28	28	28

Source: Author's computation with the use of E-view 8.0

The descriptive statistics on table 1 shows that Gross Domestic Product (GDP) for the period under study has a mean value of N32294, monetary policy rate has 31.25%and liquidity ratio has 12.03%, while treasury bills has N21243. The Jarque-Bera Statistic shows that two of the variables, namely treasury bills and Gross Domestic Product (GDP) were normally distributed while treasury bills and liquidity ratio were highly skewed. Furthermore, monetary policy rate has a mean of 31.25% this implies that for the period under review the liquidity ratio was very high.

Table 4: Ordinary Least Square (OLS) Estimation Results

Dependent Variable: GDP
Method: Least Squares, Time:3:08
Sample: 1990-2017
Included observations: 28

Date: 24/12/2018	Coefficient	Std. Error	t-Statistic	Prob.
C	15.64585	32.37845	12.03086	0.000001
Log(MRR)	5.231566	0.002709	0.324229	0.000080
Log(LQR)	6.645373	8.243568	2.412378	0.000054
Log(TB)	8.352436	0.003752	3.310023	0.000085
R-squared	0.624324	Mean dependent var		68.46480
Adjusted R-squared	0.590035	S.D. dependent var		67.83676
S.E. of regression	12.30025	Akaike info criterion		10.03759
Sum squared resid	378.3220	Schwarz criterion		10.46039
Log likelihood	123.1673	F-statistic		8.876598
Durbin-Watson stat	1.763587	Prob(F-statistic)		0.193746

Source: Author's computation with the use of E-view 9.0

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From table 2 the coefficient of determination (R^2=0.624324) indicates that about 62% of the variations in economic growth can be explained by changes in monetary policy variables (MPR, LQR and TB) in Nigeria. This implies that a significant portion of economic growth is explained by monetary policy variables. The F-Statistics of (8.876598) which is significant at 5% confirms the impact of monetary policy on economic growth in Nigeria; for the period 1990-2017. The influence of the explanatory variables on the dependent variable is statistically significant and this is also confirmed by the F-probability which is statistically zero.

CONCLUSION AND RECOMMENDATIONS

The study concluded that monetary policy has a significant impact on economic growth in Nigeria. This corroborates the work of (Bernite & Benson, 2018) which revealed that monetary policy has a significant effect on economic growth in Nigeria. This means that monetary policy variables are statistically significant in explaining macro-economic variables in the economy. Hence, this can also be stated that monetary policy has significantly contributed to the growth and development of the economy in Nigeria. This could be as a result of consistent monetary policies which is capable of influencing the economy. The study recommends that policy makers should make strong economic policies that will maintain and stabilize the economy. CBN should lay down strict prudential guidelines to stabilize and strengthen the private sector led-economy. The Monetary Policy Rate (MPR) should be reviewed downwards so as to reduce the cost of credit and attract more investment in the economy.

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Appendix 1:

Gross Domestic Product (GDP), Monetary Policy Rate (MPR), Treasury Bills (TB), Liquidity Ratio (LQR) in Nigeria from 1990-2017

YEAR	GDP (₦' Billion)	MPR (%)	TB (₦' Billion)	LQR (%)
1990	349,76	18.50	25.48	25.50
1991	545.67	14.50	57.76	20.01
1992	875.34	17.50	119.75	29.80
1993	1,089.68	26.00	116.38	18.32
1994	1,399.70	13.50	170.93	21.00
1995	2,907.36	13.50	276.91	20.18
1996	4,032.30	13.50	179.63	19.74
1997	4,189.25	13.50	364.52	13.54
1998	3,989.45	14.31	378.53	18.29
1999	4,679.21	18.00	361.76	21.32
2000	6,713.57	13.50	465.54	17.98
2001	6,895.20	14.31	584.54	18.29
2002	7,795.76	19.00	733.76	24.85
2003	9,913.52	15.75	825.05	20.71
2004	11,411.07	15.00	871.58	19.18
2005	14,610.88	13.00	854.83	17.95
2006	18,564.59	12.25	695.00	17.28
2007	20,657.32	8.75	574.93	15.94
2008	24,296.33	9.81	471.93	15.14
2009	24,794.24	7.44	797.48	18.99
2010	54,204.80	6.13	1,277.10	17.59
2011	63,258.58	9.19	1,727.91	16.02
2012	71,186.53	12.00	2,122.93	16.79
2013	80,222.13	12.00	2,581.55	17.02
2014	83,193.463	13.00	2,815.52	16.55

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Table 2: Dependent Variable: PSO
Method: Least Squares, Time: 4:45
Sample: 1990-2017
Included observations: 28

Date: 22/07/2018	Coefficient	Std. Error	t-Statistic	Prob.
C	13.64585	32.37845	12.03086	0.00010
Ln(MPR)	8.796366	0.002709	0.897685	0.00330
Ln(LQR)	6.689769	8.349406	2.437002	0.00078
Ln(TB)	6.743547	0.003752	3.797808	0.00238
R-squared	0.624324	Mean dependent var		68.89786
Adjusted R-squared	0.650143	S.D. dependent var		67.83676
S.E. of regression	12.37865	Akaike info criterion		10.03759
Sum squared resid	32263.10	Schwarz criterion		10.46039
Log likelihood	-122.673	F-statistic		8.876598
Durbin-Watson stat	1.960364	Prob(F-statistic)		0.00 0000

Source: Author's computation with the use of E-view 8.0

2016	94,144.966	12.00	2,679,24	15.00
2017	90,647.646	14.00	2,645,65	15.00

Source: Central Bank of Nigeria Statistical Bulletin,2017.

From table 2 the coefficient of determination (R^2=0.624324) indicates that about 62% of the variations in private sector growth can be explained by changes in monetary policy variables (MPR, LQR and TB) in Nigeria. This implies that a significant portion of private sector growth is explained by monetary policy variables. The F-Statistics of (8.876598) which is significant at 5% confirms the impact of monetary policy on private sector growth in Nigeria; for the period 1990-2017. The influence of the explanatory variables on the dependent variable is statistically significant and this is also confirmed by the F-probability which is statistically zero.

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