

EFFECT OF COMMERCIAL BANK LENDING ON SUSTAINABLE ECONOMIC GROWTH IN NIGERIA, 2015-2024: (AUTOREGRESSIVE - DISTRIBUTED LAG MODEL)

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Abstract

This paper study's the influence of commercial bank lending on economic growth in Nigeria, 2015-2024. The precise intentions were to: ascertain the implications of aggregate bank credit, determine the influence of Prime lending rate and survey the association between broad money supply and economic growth in Nigeria. This study used ex post-facto research design. Data used were from the Central Bank of Nigeria and the World Bank, analyzed using Augmented Dickey-Fuller Unit Root test statistic, Johansen Co-integration test, Autoregressive -distributed lag Model. The major findings of the study are that aggregate bank credit (ABC) has positive and significant implications on economic growth in short run with [t-statistics; 6.9881; P-value (0.0029) > (0.05) significant value. Prime lending rate has negative and non-notable influence on economic growth in short run with [t - statistics; -1.2040; P-value (0.8400) > (0.05) significant value. Broad Money supply (BMS) has positive and notable influence on real gross domestic product (RGDP) because its probability value of 0.0028 which was less than 0.05 in short run. The study recommended that monetary authorities should review its credit policies by regulating interest rate more and try to supervise how bank rate is charged by different banks to make the key economic sectors to uplift output and their scope utilization since interest rate rises in Nigeria affect the execution of key economic sectors.

Keywords: *Commercial Banks' Credits, Banks' Prime Lending Rate, Aggregate Bank Credit, Broad Money Supply (M2), ARDL Model*

Introduction

Financial intermediary institutions that accept deposits from surplus units and facilitate loans and advances to shortfall units within the economy is known as Commercial Bank. These loans and advances contributed in economic development by bringing the capital required for businesses and investment to, expand, and sustain their operations. Businesses, particularly in in these sectors such as agriculture, manufacturing, mining, and small scale enterprises, utilize these funds to purchase inputs (labour, land, and capital), and thereby contributing to the production of goods and services. These Loans and advances can take various forms,

including overdrafts, term loans, trade credits, and specialized financial arrangements. The effectiveness of these loans in promoting economic growth largely depends on factors such as interest rates, repayment terms, money supply and the borrowers' capacity to utilize the funds productively.

How-be-it, bank loans and advances has notable influenced on how these funds are utilized and the terms of repayment. Nuri and Ibrahim (2019) highlighted that the development of any sector is closely tied to funding from the financial institutions. Similarly, Greenwood and Jovanovic (1990) argued that financial intermediaries improve resource allocation, provide better information, and foster growth. The availability of credit can influence saving rates, investment decisions, technological innovations, employment levels, aggregate demand, and, ultimately, long-term economic growth.

Statement of the Problem

The banking sector play a crucial role on the financial system and accounts for about 90% of the total assets in the system (Aliyu & Yusuf, 2019).

Poor execution of the sector has been attributed to lot of problems that faced the sector. The problems like inadequate capital, high non execution of assets that had contributed to constant distress and collapse of the sector in the past. Non-performing loans (NPLs) in Nigeria negatively affected the financial performance of banks and the stability of the financial system. NPLs reduced the amount of money available to pay operating costs and create new loans. Banks with high NPLs may have less access to capital markets and liquidity and can increase borrowing costs for banks. NPLs can reduce the amount of credit available to the real economy. A high percentage of NPLs can cause a bank's stock price to drop. Rising non-performing loans threaten bank's profit and its intermediation (Tomola, Adebisi & Olawale, 2023) there has been frequent complaint from organize private sector in Nigeria on the lack of ability of deposit money bank to grant credit facility to private sector as required. The few banks granting this credit do so at exceptionally high interest rate. The inability to grant long term credit to investors requiring investment in capital project that can impact on economic growth is also a major concern. If banks are unable to lend to the deficit units requiring funds for economic investment, the business sector will not grow, deposits will be limited and this will hamper the capacity of banks to create income (Kabiru & Idowu, 2022) . There are few literature and studies relating to bank lending and economic growth in Nigeria and almost none or very few hat considered the combined effect of deposit interest rate, lending interest rate and asset quality on economic growth. This study therefore focuses on these gaps by looking at the communal effect of these indicators on economic growth in Nigeria.

1.3 Study Objectives

The main intention of the study is to examine the influence of Bank Lending on RGDP in Nigeria. The précised intentions were to:

1. Ascertain the implications of Aggregate Bank Credit on RGDP in Nigeria.
2. Determine the influence of Prime Lending Rate on RGDP in Nigeria.
3. Examine the association between Broad Money Supply (M2) and RGDP in Nigeria

1.4 Statement Hypotheses

1. Ho₁: Aggregate Bank Credit has on positive and notable implications on RGDP in Nigeria
2. Ho₂: Prime Lending Rate has no positive and notable influence on RGDP in Nigeria

3. Ho₃: Broad Money Supply (M2) has no positive association with RGDP in Nigeria

Literature Review

Conceptual Literature

Bank Lending

Bank lending can be defined as the process where by banks give loan to those that need it, from which an interest is charged (Sunday & Ehiejele, 2017). Lending is a major function that money deposit banks perform. Commercial banks in playing their intermediation role do give their deposits mobilized out to the deficit economic unit as loan, which may be on short, medium or long-term basis. This assists them in achieving their profitability principles and other ends for which they are setup. Aguwamba and Ekienabor, (2017) noted that Deposit money bank's credit is an agreement by one party to pay another for money borrowed or goods and services received. Credit cannot be divorced from the banking sector as banks serve as a conduit for funds to be received in form of deposits from the surplus units of the economy and passed on to the deficit units who need funds for productive purposes. Banks are therefore debtors to the funds and creditors to the borrowers of funds.

Aggregate Bank Credit (ABC)

Aggregate bank credit refers to the total amount of credit, including loans and other forms of lending, extended by all banks in a specific economy or region. It's a key indicator of the financial health and lending activity within the banking system, and it can be a useful measure for understanding economic growth and stability. (Online copy, 2025)

Prime Lending Rate (PLR)

The Prime Rate is a standard interest rate that serves as a reference point for various financial products. It acts on behalf of the interest rate that banks offer to their most creditworthy customers, typically large corporations and financial institutions. In essence, it's the baseline interest rate that influences the cost of borrowing and the returns on savings and investments for many individuals and businesses.

Broad Money Supply M2 (BMS)

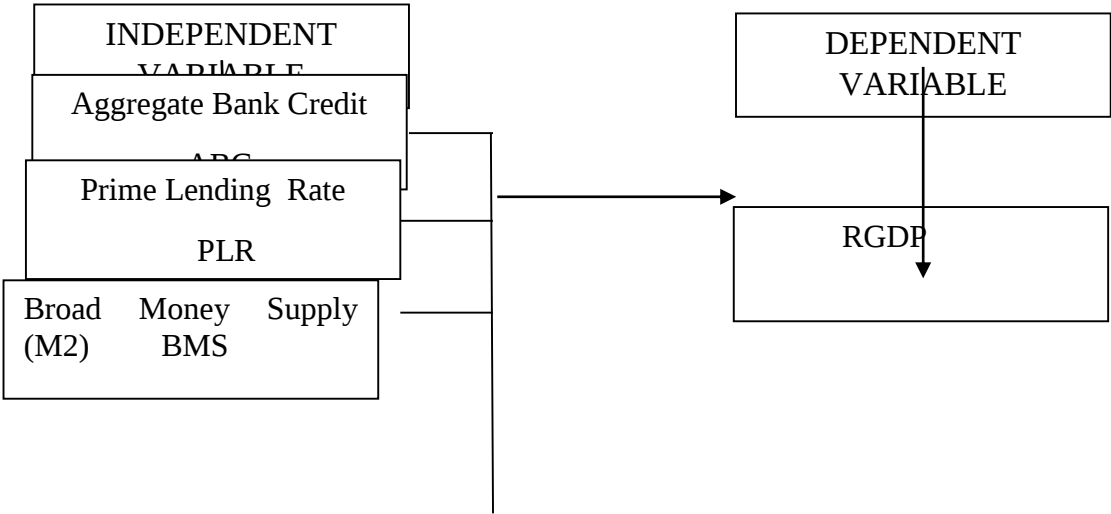
Broad money supply is a measure of the amount of money going around in an economic system. It is defined as the most total way of determining a given country's money supply and includes narrow money along with other assets that can be easily converted into cash to buy goods and services.

Countries has different ways of determining the supply of money. Broad money is the largest measure, including narrow money that is cash and checkable deposits, along with little liquid assets inform of certificates of deposit, and so on that can easily be converted into cash.

Economic Growth

Economic growth is the increase in the value of goods and services produced by a country over a period and (RGDP) is used to represent economic growth. Real gross domestic product is an inflation-adjusted measure which reflects the value of all goods and services produced by an economy in a given year, usually expressed in base-year prices, and is often graded as constant-price or inflation-corrected GDP. Unlike nominal GDP, real GDP can account for changes in price level and provide a more accurate figure of economic growth (Ume, Obasikene, Oleka, Nwadike and Okoyeuzu, 2017).

Conceptual Framework
Diagrammatic representation of the conceptual framework



Source: Researcher’s Design, 2025

Theoretical Literature

This study is anchored on the supply led finance theory.

Supply Led Finance Theory

This theory which was first developed by Patrick in 1966, is based on the understanding that finance is the key variable to real sector growth (Alkhazaleh, 2017). Supply led finance theory is growth inducing or growth induced, which means finance is the most significant factor for promoting economic development. The supply-leading hypothesis presumes that the economy responds to growth in the real sector facilitated by financial development. A contradictory view on the supply-leading hypothesis was pioneered by Robinson (1952) who stated that financial deepening is dependent on growth that occurs in the economy. The theory held that the provision of funds by financial institutions through the extension of credit to businesses support the creation, transformation, expansion of industries and developmental projects thus enhancing the growth potentials of the economy.

Empirical Review

There are many studies about banks’ lending and economic growth. Tomola, Adebisi and Olawale, (2023) looked at the effect of bank lending, economic growth and the performance of the manufacturing sector in Nigeria. The methods of data analysis were employed and tested with the cointegration and vector error correction model (VECM) techniques. The findings of the study show that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria.

Magaji, Ibrahim and Saminu (2023) analyzed the impact of banking sector credits on the real sector in Nigeria. Specifically, the study sought to examine impact of Commercial Bank Credit (CBC), Domestic Private Investment (DPI) and Government Capital Expenditure (GCE) on Real GDP (RGDP proxy for real sector). The

methods of data analysis were Bound test, Auto Regressive Distributed Lagged model. The bound testing result indicates that there is a long-run association among the variables of interest with Real GDP as the dependent variable.

Ogbonna, Anaemena, Okechukwu and Ibenyenwa, (2023) examined bank credit to the different segments of the industrial sector in the economic development of Nigeria. The specific objectives are to examine the impact of bank on agriculture, mining, quarrying, manufacturing, and government on economic development in Nigeria. The method of data analysis was Auto Regressive Distributed Lag (ARDL) technique to test the interaction between independent variables and the dependent components in human development index at 5% level of significance. The findings revealed a short and long-run relationship. However, the individual short-run impact showed bank lending to the agriculture and government segment of the industrial sector showed a negative insignificant relationship with economic growth. While bank credit to the manufacturing segment of the industrial sector significantly impacted economic growth, bank credit to the mining and quarrying segment of the industrial sector showed a nonsignificant impact on economic growth.

Methodology

Research Design

The research design was *ex post-facto* method. These variables consist of real Gross domestic Product (RGDP), aggregate bank credit (ABC), Broad Money Supply (BMS), Banks Prime Rate (PLR), Bank and Inflation Rate (INFR) which serve as control variable for the period of 2000 to 2024 as defined in our model specification. All the variables were sourced from Central Bank of Nigeria's (CBN) statistical bulletin for various years. The econometric software for the study was e-view version 9 because it is user- friendly software. The method of data analysis was divided into three phases namely: pre estimation, estimation and post-estimation. The pre estimation statistics includes descriptive statistics, Correlation Matrix of the Variables, Augmented Dickey Fuller Unit Root test statistic and Johansen Co-integration test. The estimation technique includes fully modified ordinary least square (FMOLS) while post-estimation technique involves Histogram Normality Test

Model Specification for the Study =

$$\text{RGDP} = f(\text{ABC}, \text{PLR}, \text{BMS}, \text{INFR}) \quad (3.1)$$

Where:

RGDP = Real Gross Domestic Product -- (Dependent Variable)

ABC = Aggregate Bank Credit, --- (Independent Variable)

PLR = Prime Lending Rate, ----- (Independent Variable)

BMS= Broad Money Supply--- (Independent Variable)

INFR = Inflation Rate----- (Control Variable)

In a linear function, it is represented as follows:

$$\text{RGDP} = \beta_0 + \beta_1 \text{ABC}_t - \beta_2 \text{PLR}_t + \beta_3 \text{BMS}_t + \beta_4 \text{INFR}_t + \mu \quad (3.2)$$

Where: β_0 = Constant term, β_1 to β_4 = Regression coefficient,

μ = Error Term and

t = the period.

To reduce the outliers among the variables, all variables will be expressed in logarithmic form.

$$\text{LogRGDP} = \beta_0 + \beta_1 \text{LogABC}_t - \beta_2 + \text{LogPLR}_t - \beta_3 + \text{LogBMSt} + \beta_4 \text{LogINFR}_t + \mu \quad (3.3)$$

Where: β_0 = Constant term, β_1 to β_4 = Regression coefficient,

U_t = Error Term and

t = the period

Presentation of Data and Analysis

Descriptive Statistics of the Variable

	RGDP	ABC	BMS	PLR	INFR
Mean	1867500	129067.7	1168644	18.59706	21.64618
Median	5787239	143752.3	875396.8	19.44500	13.50000
Maximum	97195141	217007.8	2998939	2980000	72.80000
Minimum	1639290	1310.200	40844.30	1.900000	5.400000
Std. Dev	2759607	106277.0	1100819	5.747497	17.49910
Skewness	1.662139	-0.045599	0.339742	1.220231	1.235094
Kurtosis	4.424371	1.309663	1.499937	5.218770	3.729872
Jarque-Bera	18.52951	4.059536	3.834925	15.41163	9.398931
Probability	0.000095	0.131366	0.146979	0.000450	0.009100
Sum	63495012	4388301	39733885	632.3000	735.9700
Sum- Dev	2.51E 14	3.73E 11	4.00E 13	1090.113	10105.21
Observation	24	24	24	24	24

Source: E-view computations 20,24

The table shows descriptive statistics of the variables. In the model established in the study, there is one dependent variable and six independent variables. The mean of real Gross domestic Product (RGDP) was 1867500.2, the median was 578723.9, maximum was 9719514.9, minimum was 16392.90, and sum of the variable was 63495012.00 respectively. The mean of aggregate bank credit (ABC) was 129067.7, the median was 143752.3, maximum was 271007.8, minimum was 1310.200 and sum of the variable was 4888303.4 respectively. The mean of broad money supply (BMS) was 1168644.6, the median was 875396.8, maximum was 2998939.5, minimum was 40844.30, and sum of the variable was 39733885.5 respectively. The mean of inflation rate (INFR) was 12.64618, the median was 13.50000, maximum was 72.80000, minimum was 5.40000, and sum of the variable was 9.398931 respectively.

Unit Root Test using Augmented Dickey-Fuller Test

Table 4.1: Results of Stationarity (unit root) Test

Variables	ADF Statistics	Critical Value 5% level	Lag Value	Remarks
RGDP	4.868711	2.948404	0	1 (0)
ABC	6.005845	2.948404	0	1 (1)
BMS	5.120232	2.948404	0	1 (1)
PLR	6.866837	2.948404	0	1 (0)

INFR	6.210462	2.948404	0	1 (1)
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Source: Author's computation from E-view 9

In the table 4.1, the variables that were tested with unit root are shown, the values for Augmented Dickey Fuller (ADF) statistics was presented, the lag level of each variable was identified. The Mackinnon critical values at 5% level of significant were pointed out. The order of integration of each variable was enumerated, and finally the stationarity position of each variable was also stated. The unit root test was based on the level of Augmented Dickey Fuller (ADF) statistics which was stationary or not stationary at 5 percent significance level. When Augmented Dickey Fuller statistic is greater than Mackinnon 5 percent critical value in absolute term, it is concluded that the variable is stationary. Two variables were stationary at level 1(0)I while three variables were stationary at first difference. It is now preferable to use Auto-Regressive Distributed Lag model to estimate the parameters.

Estimation of Regression Model

Table 4.2: Empirical Results of the Autoregressive -distributed lag Model

ARDL Cointegration and Long Run Form				
Dependent Variable: RGDP				
Selected Model: ARDL(1,0,0,0)				
Date 01/07/25 Time:15.10				
Sample:2015-2024				
Included observations :23				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob
D(ABC)	0.140307	0.020078	6.988142	0.0029
D(BMS)	0.703697	0.175477	4.010314	0.0024
D(PLR)	-0.277743	0.230677	-1.204036	0.8400
D(INFR)	-0.490891	0.996974	-5.062093	0.0010
CointEq(-1)	-0.542045	0.131733	-4.114727	0.0004

Cointeq = RGDP -(-0.542045*ABC+ 0.140307 *BMS+ 0.703697 *PLR -0.27743*INFR +0.490891

Source: E-view 9 compilation

The Autoregressive -distributed lag Model (ARDL) model was carried out to examine parameters estimates. In testing this hypothesis, aggregate bank credit (ABC), broad money supply (BMS), banks interest rate (PLR), inflation rate (INFR) were regressed against Real GDP (RGDP). The result of the regression analysis represents the model for investigating effect of bank lending on economic growth in Nigeria. The empirical result shows that the coefficient of aggregate bank credit (ABC) has positive and significant impact on real gross domestic product (RGDP) because its probability value of 0.0029 was less than 0.05. The empirical result shows that the coefficient of broad money supply (BMS) has positive and significant impact on real gross domestic product (RGDP) because its probability value of 0.0024 was less than 0.05. The empirical result shows that the

coefficient of bank interest rate (PLR) has negative and nonsignificant relationship with real gross domestic product (RGDP) because its probability value of 0.8400 was greater than 0.05.

The empirical result indicated that the coefficient of inflation rate (INFR) has negative and significant impact on real gross domestic product (RGDP) because its probability value of 0.0010 was less than 0.05.

Test of Hypotheses

The hypotheses of this study as stated in chapter one were tested in line with the procedure below;

Step 1: Re-statement of the hypotheses in null form (H_0)

Step 2: Statement of decision criteria

Step 3: Presentation of test result

Step 4: Decision

These steps were adopted for each hypotheses of this study. For all the hypothesis, a regression analysis was conducted between the independent and dependent variables given in the model. Based on the output generated from the regression conducted, decision were taken.

Decision rule

The decision rule is based on a 5% probability value and is stated as follows:

$$H_0: \theta = \theta_0 \text{ versus } H_a: \theta \neq \theta_0$$

Test of Hypothesis One

H₀₁: Aggregate bank credits have no significant impact on economic growth in Nigeria

H₁₁: Aggregate bank credits have no significant impact on economic growth in Nigeria

Based on **table 4.2** above, Aggregate bank credits have no significant impact on economic growth in Nigeria. This was explained by the positive coefficient value 0.140307 of Aggregate bank credit and its corresponding probability value (0.0029), which is less than 0.05 significant levels. Thus, we reject the null hypothesis and accept the alternate hypothesis that Aggregate bank credits have a positive and significant effect on economic growth in Nigeria.

Prime Lending Rate has no positive and significant impact on Economic Growth in Nigeria

Test of Hypothesis Two

H₀₁: Bank interest rate (PLR) has no significant impact on economic growth in Nigeria.

H₀₂: Bank interest rate (PLR) has significant impact on economic growth in Nigeria.

Table 4.2 was used in testing this hypothesis, banks interest rate (PLR) is regressed against real GDP (RGDP). The empirical result shows that the coefficient of bank interest rate (PLR) has negative and insignificant impact on real gross domestic product (RGDP) because its probability value of 0.8400 was greater than 0.05 in short run but it was negative and significant impact on real gross domestic product (RGDP) because its probability value of 0.0088 was less than 0.05 in long run. Bank interest rate has 27 percent negative and insignificant impact on economic growth in Nigeria in short run. A percent change in bank interest rate results to 27 percent decrease in economic growth in Nigeria in short run. Again, bank interest rate has 35 percent negative and significant impact on economic growth in Nigeria in long run. A percent change in bank interest rate results to 35 percent significant increase in economic growth in Nigeria in long run.

Test of Hypothesis Three

H₀₃: Broad Money Supply (M2) has no relationship with RGDP in Nigeria

H₁₃: Broad Money Supply (M2) has relationship with RGDP in Nigeria

Table 4.2 was used in testing this hypothesis, broad money supply (BMS) is regressed against real GDP (RGDP). The empirical result shows that the coefficient of broad money supply (BMS) has positive significant impact on (RGDP) because its probability value of 0.0024 was less than 0.05 significant level in the short run. Broad money supply has 70 percent positive and significant impact on economic RGDP in Nigeria in short run. A percent change in broad money supply results to 70 percent increase in RGDP in Nigeria in short run.

Discussion of the Findings

Impact of Aggregate Bank Credit on Economic Growth in Nigeria

It was observed from the hypothesis tested that aggregate bank credit (BC) has positive and significant impact on economic growth in short run [t-statistics; 6.9881; P-value (0.0029) > significant value (0.05)] but it was positive and significant impact on economic growth in long run [t-statistics; 4.9519; P-value (0.0029) > (0.05) significant value]. Aggregate bank credit has 14 percent positive and significant impact on economic growth in Nigeria in short run. A percent change in aggregate bank credit results to 14 percent increase in economic growth in Nigeria in short run.

Impact of Prime Lending Rate on Economic Growth in Nigeria

It was observed from the hypothesis tested that bank interest rate (PLR) has negative and insignificant impact on economic growth in short run [t-statistics; -1.2040; P-value (0.8400) > significant value (0.05)] but it was negative and significant impact on economic growth in long run [t-statistics; -6.2056; P-value (0.0088) > (0.05) significant value]. Bank interest rate has 27 percent negative and insignificant impact on RGDP in Nigeria in the short run. A percent change in bank interest rate results to 27 percent decrease in economic growth in Nigeria in short run.

Impact of Broad Money Supply on economic growth in Nigeria

The hypothesis tested that broad money supply (BMS). The empirical result shows that the coefficient of broad money supply (BMS) has positive and significant impact on (RGDP) because its probability value of 0.0024 was less than 0.05 significant level in the short run. Broad money supply has 70 percent positive and significant impact on economic RGDP in Nigeria in short run. A percent change in broad money supply results to 70 percent increase in RGDP in Nigeria in short run.

Findings, Conclusion and Recommendations

Summary of the Findings

The following are the major findings of the study:

1. Aggregate bank credit (BC) has positive and notable influence on economic growth in short run [t-statistics; 6.9881; P-value (0.0029) > significant value (0.05)] but it was positive and significant impact on economic growth in long run [t-statistics; 4.9519; P-value (0.0029) > significant value (0.05)]. Aggregate bank credit has 14 percent positive and significant impact on economic growth in Nigeria in short run. A percent change in aggregate bank credit results to 14 percent increase in economic growth in Nigeria in short run. Again, aggregate bank credit has 46 percent positive and

significant impact on economic growth in Nigeria in long run. A percent change in aggregate bank credit results to 46 percent significant increase in economic growth in Nigeria in long run.

2. Bank interest rate (PLR) has negative and no notable influence on economic growth in short run [t-statistics; -1.2040; P-value (0.8400) > significant value (0.05)] but it was negative and significant impact on economic growth in long run [t-statistics; -6.2056; P-value (0.0088) > significant value (0.05)]. Bank interest rate has 27 percent negative and insignificant impact on economic growth in Nigeria in short run. A percent change in bank interest rate results to 27 percent decrease in economic growth in Nigeria in short run. Again, bank interest rate has 35 percent negative and significant impact on economic growth in Nigeria in long run. A percent change in bank interest rate results to 35 percent significant increase in economic growth in Nigeria in long run.

3. The empirical result Broad Money Supply (BMS) shows that the coefficient of broad money supply (BMS) has positive and notable influence on (RGDP) because its probability value of 0.0024 was less than 0.05 significant level in the short run. Broad money supply has 70 percent positive and significant impact on economic RGDP in Nigeria in short run. A percent change in broad money supply results to 70 percent increase in RGDP in Nigeria in short run.

Conclusion

This study concludes that bank lending has notable influence on economic growth in Nigeria. The growth in industrial sector output in Nigeria has not been reasonable enough to generate expected sizeable growth in the economy. These results imply that the government manufacturers and the lending institutions must work together to jump-start industrial output in order to generate a corresponding increase in economic growth. This can be achieved through the provision of conducive macroeconomic environment and appropriate investment incentives, as well as encouraging investment-friendly lending and borrowing by the financial institutions. The industrialists could reciprocate the gesture through commitment to the use of the funds and promptly honouring of loan obligations.

Recommendations of the Study

Based on the findings of this study, the following recommendations were made.

1. Monetary authorities should review credit policies by regulating interest rate more and try to monitor how the rate is charge by different banks to enable the key economic sectors to increase output and their capacity utilization since interest rate increase in Nigeria affect the performance of key economic sectors. Monetary policy should, therefore, emphasize mandatory sectoral allocation of bank credit with appropriate incentives to boost the flow of credit to the key economic sectors. Monetary policy should, therefore, emphasize mandatory sectoral allocation of bank credit with appropriate incentives to boost the flow of credit to the key economic sectors.

2. The monetary authority of Nigeria CBN should have strong collaboration with investors in project initiation, implementation and management in order to reduce issues of non-performing loans. The apex monetary institution, the Central Bank of Nigeria should ensure that the rate of interest should encourage investors to borrow to do business or to expand their businesses. This will increase manufacturing output and in turn support economic growth.

References

- Ahmed GJ, Hanaa MSA. (2020) The Impact of commercial bank lending on economic growth in Nigeria; A Cointegration and Causality Evaluation, *International Journal of Economics and Empirical Research*. 3(10):499-506.
- Ajibola JO. (2020) Commercial Bank Lending and Economic Growth: The Nigerian Experience (1970-2013). *Open Access Library Journal*.2:e1431.
- Aliyu M, Yusuf AH.(2019) Impact of Bank Lending on Economic Growth in Nigeria; *Research Journal of Finance and Accounting*. 2019; 5(18):174-180.
- Alkhazaleh A. (2017) Does banking sector performance promote economic growth? Case study of Jordanian commercial banks, *Problems and Perspectives in Management*. 15(2):55-64.
- Kabiru AA, Idowu AO.(2022) Impact of banking sector credit (Loan) on business growth in Nigeria. *International Journal of Business, Economics and Entrepreneurship Development in Africa*. 10(4):49-59
- Magaji S, Ibrahim M, Saminu SD. (2023) Analysis of the impact of banking sector credits on the real sector in Nigeria; *International Journal of Management and Business Applied*; 2(1):12-20.
- Ogbonna KS, Anaemena HC, Okechukwu PAC, Ibenyenwa EK. (2023) Bank lending to industrial sector and economic development of Nigeria. *International Journal of Accounting Research*. 8(1):12-22.
- Sunday GJ, Ehiejele Y.(2017) Effect of Bank Lending to the Socio-economic Transformation of Nigeria (1980-2005), *International Journal of Economic Development Issues*. 2017; 6(2):222-228
- Tomola MO, Adebisi TE, Olawale FK.(2023) Bank lending, economic growth and the performance of the manufacturing sector in Nigeria. *European Scientific International Journal of Advanced Multidisciplinary Research and Studies* www.multiresearchjournal.com 1658 *Journal*.8 (3):19-25.
- Umar-Abbas I, Ndidi MI.(2020) Effect of bank lending on the growth of selected SMEs in Nigeria; *International Journal of Research in Business and Social Science*. 9(4):237-243.

Yua H, Upaa JU, Adiga DL, Haruna HA. (2020) Deposit money Bank Credit and Manufacturing Sector Performance in Emerging Economies: Evidence from Nigeria 1985-2018; The International Journal of Business & Management. 8(5):155-169.