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Commercial bank loan and economic growth in Nigeria

Okon, Asidok Nsikhe
Department of Economics, University of Calabar
Cross River State-Nigeria

Onoja, ThankGod Chibuzo
Department of Economics and Development Studies
Alex-Ekwueme Federal University Ndufu Alike Ikwo
Ebony State-Nigeria

Ndem Bassey Ndem
Department of Economics, University of Calabar
Cross River State-Nigeria

Abstract

The study estimate the impact of commercial bank loan on Economic growth in Nigeria using selected variables like real gross domestic product, credit to private sector, interest rate, total deposits and interest rate from Central Bank Nigeria statistical bulletin. The study adopted the framework of Autoregressive Distributed Lag Model for analysis. The results of this study were analyzed using economic a priori criteria, statistical criteria and econometric criteria. The findings as analyzed in the empirical result of aggregate model revealed that interest rate has a positive and significant impact on Economic growth indicating that interest rate contributed to Economic growth in Nigeria. Financial deepening has a positive and significant impact on Economic growth implying that financial deepening contributes to Economic growth in Nigeria. Total deposit and credit to private sector have positive and insignificant impact on economic growth implying that these variables does not impact on economic growth in Nigeria. The study recommends that central bank of Nigeria should deregulate interest rate to make funds available for investors to expand their business, increase productivity and boast the economy at the end.

Keywords: *1.*Commercial Bank, 2.Bank Loan and 3.Economic Growth.

1.1. Background and motivation

A commercial bank loan is perceived as one of the factors that promote economic growth. This is because the availability and affordability of bank loans induces investment which in turn increases employment, income, output, hence economic growth in Nigeria.. Bank loans stimulate investment lending to increase in aggregate demand to boast economic growth in Nigeria. The primary function of financial intermediation is that banks collect deposit from the surplus unit of the economy and lend it out to the deficit unit in form of loans and advances (Kalu, 2009). The role of the financial system in mobilizing and channeling of funds to the real sectors of the economy cannot be taken for granted. Sound financial system is recognized as a necessary and

sufficient condition for rapid growth and development for every modern economy (Sanusi, 2012).The financial system consists of institutions like banks, insurance, stock market, and other financial institutions. In Nigeria, the banking sector is an important part of the financial system. The banking sector dominates the Nigerian financial system as it accounts for about 90 % of the total assets in the system and about 65 % of market capitalization of the Nigeria Stock Exchange (Soludo, 2009a). However, the banking sector has not contributed significantly to the growth and development of Nigerian economy as expected. The poor performance of the sector has been attributed to numerous problems that faced the sector such as inadequate capital, high nonperforming assets which had led to frequent distress in the sector and collapse of some banks in the past (Sanusi, 2012).

Commercial Bank Loans Jacoby and Saulnier (1942) defined a loan in terms of term loan which is credit extended to a business concern within the context of a direct relationship between a borrower and lender where some part of the principal is repayable after the passage of one year. Dhikhary (2006) therefore defines a loan as a written or oral agreement for a temporary transfer of a property, usually cash in cash form, from its owner called the lender to a borrower who promises to return it according agreed terms. The terms involve interest, time of repayment and the pattern of the repayment. This study, therefore, asserts a close relationship between commercial bank lending and economic growth but the nature of the relationship will depend on the context within which the study is done. Central Bank Nigeria (2018) bulletin reports that the banking sector has 22 commercial banks registered to improved performance with assets standing at NGN 2.4 trillion and loan advances amounting to NGN 1.4 trillion. Deposits into the banks stood at NGN 1.8 trillion. The number of loan accounts stood at 2.3 million respectively. The major components of the balance sheet of the sector were loans and advances accounting for 55.8 total assets. The Central Bank Nigeria (2018) goes further to report that the sector's gross loans and advances had increased from NGN 1.36 trillion in September 2018 to NGN 1.40 trillion in December 2018 leading to a corresponding increased in economic growth of 32,436billiom in 2015, 37,6498.5 in 2016, 42,3678.60 in 2017 and 43.278.94 in 2018.

1.2 Statement of the Problem

According to the Wicksell (2015) theory, lending had a close effect on economic growth within the context of interest rates. If the interest rates are below the rate of return on capital, entrepreneurs would borrow at the money rate to purchase capital goods which would spur a higher economic growth rate. Conversely, if the interest rates are above the rate of return on capital entrepreneurs would sell the capital goods and hold money in effect reducing economic growth. The government of Nigeria has encouraged lending from banks to private investors to boast economic growth in Nigeria. Cracknell (2016) argues that facilitating financial access provides impetus to the strengthening of the financial sector which is a key player in economic growth and development. Nigeria seems to have borrowed this argument and increased access of Nigerians to more financial facilities from banks to drive economic growth. However, there seems to be no automatically positive relationship between bank credit and economic growth. On the Nigeria scene, the study between credit and economic growth has focused on public debt.

Capital is usually mobilized from either personal savings of entrepreneurs and/or loans from banks therefore makes banks loans relevant to economic growth of countries. Research findings have revealed that bank loans can be a causal factor for economic growth. For instance, according to Bayoumi and Melander (2017), a 2.5% reduction in overall credit causes reduction in the level of GDP by around 1.5%. Demetriades and Hussein (2015) who studied 13 countries supported the causal relationship between bank loan and economic growth, but argued that the causality is time and country bound specific rather than general. In Nigeria, there is detailed information about Nigerian banking industry and its activities, but not too sufficient about how bank loans specifically affect economic growth (Oluitan, 2016). The research used a regression analysis in which the dependent variable was the growth rate of real GDP while the independent variables were domestic debt to nominal GDP ratio and other macroeconomic variables like government expenditure, private sector credit, broad money supply (M3), secondary school enrolment, and trade. The study indicated a positive relationship between domestic debt and economic growth in Nigeria. Therefore, this study seeks to estimate the impact of commercial bank loans on economic growth in Nigeria from 1980-2018 using interest rate, credit to private sector, gross domestic product and financial deepening. Findings from the study will help a number of persons, institutions and government in decisions making and implementation of policies relating to credit accessibility to stimulate economic growth in Nigeria.

2.1 Literature review and theoretical framework

2.1.1 Foreign studies

Interest rate and Economic growth

Marijana (2009) examined the impact of financial intermediation on economic growth in Zagreb using VECM to establish the link between financial intermediation by banks and economic growth in the two decades between 1989 and 2009. The study paid special attention to the issues of causality, non-linearity, time perspective, financial intermediation proxies, and interaction terms. The review showed that the relationship between financial intermediation by banks and economic growth cannot he taken for granted. Indeed the study questioned the prioritization of financial sector policies for economic growth. The study cast doubts on the assertion that financial intermediation by banks drove economic growth. Kamaan and Nyamongo (2014) examined the impact of interest rate on Economic growth in kenya using GARCH model. The study showed different results. In their study they sought to establish how Kenya's monetary policy affected her economic growth. The study covered the time period between 1997 and 2012. The study focused on how interest rates affected economic growth. By regression analysis with the study showed lending negatively affected economic growth given high interest rate.

Credit to private sector and Economic growth

Kelly, McQuinn and Stuart (2015) examined the impact of credit to private sector on economic growth in Ireland using Auto regressive distributed lag (ARDL).Findings showed that there was a strong positive relationship between private sector credit and economic growth.

Caporale and Soludo (2009) investigates to establish the connection between private sector credit and economic growth for countries that were new entrants in the European Union between 1994 and 2007 revealed that there was a close connection between economic growth and private credit in a sense that the poor availability of credit caused the poor economic growth in the ten countries.

Financial deepening and economic growth

Robinson (1952) maintains that economic growth propels banks to finance enterprises. Gurley & Shaw (1969) also argued that as the economy expands and grows, the increasing demand for financial services stimulates banks to provide more credit.

Zhang, Wang & Wang (2016) conducted a study on financial development and economic growth in China. The objective of the study was to investigate and establish the relationship between financial development and economic growth in China. The study was done at city level. 286 Chinese cities were studied over the five year period between 2001 and 2006. The study applied both traditional cross-sectional regression and first differenced and system GMM estimators for dynamic panel data. The results of the research suggested that most traditional indicators of financial development like Credit, Deposit, Savings, the share of fixed asset investment financed by domestic loans relative to that financed by state budgetary appropriation positively related to economic growth. However, the ratio of corporate deposits to total deposits had a negative effect on economic growth. This study showed that credit had positive effect on economic growth. The study by Aurang (2014) was done on the contribution of the commercial banking sector on economic growth in Pakistan. The aim of the study was to investigate the contributions of the commercial banking sector on Pakistan's economic growth. The study was done on 10 banks for the period of 1981 to 2010. Analysis of the data from the 10 banks was done using the Augmented Dickey Fuller (ADF), Philip Perron unit root test, ordinary least square and the granger causality test. The regression results indicated that deposits, investments, advances, profitability and interest earnings had significant positive impact on economic growth. The Granger-Causality test confirmed that there was a bidirectional causal relationship between deposits, advances and profitability and economic growth. The study concluded that activities in the banking sector, including advances by the commercial banks, affected economic growth.

2.1.2 Domestic studies

Interest (lending) rate and economic growth

Most scholars have agreed that there is relationship between bank loans and economic growth. Umaru, Hamidu and Musa (2010) conducted a research on bank loans and economic growth in Nigeria. The aim of the study was to establish the relationship between commercial bank loans and economic growth. The study used data on commercial bank loan and interest rate on economic growth for the period between 1970 and 2010. To establish the relationship, Ordinary Least Square analysis was used. The study also applied the Augmented Dickey Fuller technique in testing the unit root property of the series and Granger causality test to establish the causation between commercial bank loan and interest rate on economic growth. The causality test suggested that there was a bi-directional causation between commercial bank loan and

economic growth, but no causation between interest rate and economic growth. The OLS analysis, however, revealed a negative relationship between commercial bank loan and economic growth, and a positive relationship between interest rate and economic growth. This study concluded that commercial bank loan and economic growth did not cause economic growth. It also concluded that when commercial bank loan and economic growth, so did economic growth, but when commercial bank loan and economic growth.

Credit to private sector and economic growth

King and Levine's (1993) examined the relationship between credit to private sector and economic growth in Nigeria using ARDL model. The study found that credit to private sector expansion had a positive but not significant effect on economic growth during the period. The research therefore concluded that credit to private sector did not have an effect on economic growth. Aliero, Abdullahi and Adamu (2013) did a study on private sector credit and economic growth in Nigeria. The study sought to analyze and establish the relationship between private sector credit and economic growth in Nigeria. The study was conducted for the period 1974-2010. The Autoregressive Distributed Lag (ARLD) bound F-test for co-integration approach was used for analysis of the data. The results indicated that a long run equilibrium relationship existed between private sector credit and economic growth. However, causality results indicated that there is no causal relationship between private sector credit and economic growth. The conclusion was that that private sector credit did not affect economic growth.

Financial deepening and economic growth

Waiyaki (2013) did a study focusing on financial development, economic growth and poverty in Nigeria. This study was done with the aim of finding out the nature of the relationship between financial development, economic growth and poverty. The study covered the period 1997 to 2010 using data from annual reports from the Central Bank of Nigeria. Data were analyzed using unit root tests, co-integration analysis and granger causality tests. The study found mixed results concerning the relationship between financial development variables and economic growth. For instance, for the benefit of this research, money supply and bank deposits had a significant influence on economic growth. On the other hand, financial indicators like stocks volume had no significant influence on real GDP. The conclusion was that money supply and bank deposits had great positive effect on economic growth.

Abubakar and Gani (2015) conducted on financial development and economic growth. The aim of the study was to examine and establish the long run relationship between financial development indicators and economic growth in Nigeria. The study was done for the period of time between 1970 and 2010. Among other indicators of financial development, the study also used liquid liabilities of commercial banks, credit to the private sector, interest rate spread and government expenditure. The study applied the Johansen and Juselius (1990) approach to co-integration and Vector Error Correction Modeling (VECM). The study found that in the long-run, liquid liabilities of commercial banks exerted significant positive influence on economic growth while credit to the private sector, interest rate spread and government expenditure exerted significant negative influence. The study concluded that credit to the private sector deterred economic growth. Studies conducted across countries and continents have also supported the postulations of the supply-leading hypothesis.

2.3 Summary of the literature review and research gap

This study will deviate from the existing studies in terms of theoretical framework, methodology and scope of the study. It is noted that the previous studies failed to anchor their studies on relevant theoretical framework and methodology to show how commercial bank loans impact on economic growth in Nigeria. To the best of my knowledge and with thorough research, I have not come across any study that investigated the impact of commercial bank loans on economic growth in Nigeria from 1980-2018 using auto regressive distributed lag model method of estimation

2.4 Theoretical Review

2.4.1 Wicksell theory of Lending and economic growth

As posited by Weise (2006) this theory was postulated by a Swedish economist called Knut Wicksell in 1901 with strong influence from the quantity theory of money. Wicksell based his theory on a comparison of the marginal product of capital with the cost of borrowing money. The theory by Wicksell therefore took a monetary approach to economic growth. Wicksell (1901) argued that if the interest rate of borrowing money of was below the natural rate of return on capital, entrepreneurs would borrow at the money rate to purchase capital goods. This would lead to increased demand for all types of resources and, in turn, their prices. Conversely, if the interest rate of borrowing money of was above the natural rate of return on capital entrepreneurs would sell the capital goods and hold money. This would lead to a higher demand for money and in turn the cost of borrowing. Wicksell connected the rate of interest with the production gap. The production gap represented the variance between what ought to be produced and what is produced. This theory is important to this study since it give a direct connection between the demand for and the cost of money and output in a country. It shows how interest rates affect borrowing, which in turn affects the purchase of capital goods and how production is affected. If interest rates are higher than the natural rate of return, borrowing will reduce therefore reducing economic growth as a result of low investment. On the contrary, if the rate of interest is lower than the natural rate of return, then more borrowing will take place and this will spur economic growth through more investment (Weise, 2006).

2.4.2 Cobb-Douglas Theory of Economic Growth

This theory was put forth by Charles W. Cobb and Paul H. Douglas in 1928 to explain the relationship between production (and therefore economic growth), labour and capital. Based on data on population, capital and production for the period 1899 to 1922, Cobb-Douglass (1928) established that output was a function of labour supply and capital connected within a given level. The capital component provided the way through which lending enters the equation. A significant portion of credit borrowed from banks or elsewhere is used for capital accumulation. The accumulated capital becomes one of the variables of economic growth in the Cobb-Douglas theory (Ghani and Suri, 1999).

3.1 Research methodology

This study adopts the ex post facto research design to estimate the impact of commercial bank loan on economic growth in Nigeria The specified model is anchored on the Wicksell theory of lending and economic growth. This theory shows how interest rates affect borrowing, which in

turn affects the purchase of capital goods and how production is affected. If interest rates are higher than the natural rate of return, borrowing will reduce therefore reducing economic growth as a result of low investment. On the contrary, if the rate of interest is lower than the natural rate of return, then more borrowing will take place and this will spur economic growth through more investment (Weise, 2006).Therefore, based on this theoretical foundation, the empirical model for this study is specified functionally as follow.

RGDP = F (INTR, CPS, TOD, FDEP) ----------3.1

Where;

RGDP = Real gross domestic product (i.e measure for Economic growth)

INTR = Interest rate

CPS = Credit to Private Sector

TOD = Total Deposit

FDEP = Financial Deepening measured by (CPS/GDP)

The models in equation 3.1 can be written in a linear form as follow.

$RGDP = a_0 + a_1INTR + a_2CPS + a_3TOD + a_4FDEP + U_1$----------3.2

Where: α_0 to $\alpha_4$and β_0 to β_4 are the parameters to be estimated and U_1 is stochastic error terms. The a priori expectations about the signs of the coefficients of the parameters are as follows: α_1, $\beta_1 < 0$ and $\alpha_2, \beta_2, \alpha_3, \beta_3 > \alpha_4, \beta_4 > 0$

3.2 Estimation procedures

Several procedures were followed in estimating the specified equation for this study. These procedures are discussed as follows:

3.2.1 The Unit Root Test

The unit root test was carried out to test for the stationarity of the variables included in this study. The test was undertaken for two main reasons. First, the unit root test is performed to avoid the problem of spurious regression.

$$\Delta y_t = \alpha_0 + \alpha_1 \Delta y_{t-1} + \sum_{j=1}^{j} \beta_i \Delta y_{t-1} + \varepsilon_t \quad 3.3$$

Where:

$\Delta Y_t = Y_t - Y_{t-1}$ is the difference of series Y_t; $\Delta Y_{t-1} = Y_{t-i} - Y_{t-2}$ is the first difference of Y_{t-1}; e_t = Stochastic error term, and α_0, α_1 and β_i are the parameters to be estimated.

If $\alpha_1 = 0$, the null hypothesis of non – stationary is accepted.

But if $\alpha_1 < 0$ and statistically significant, the null hypothesis of non-stationarity is rejected.

3.2.2 Cointegration test

The cointegration test was conducted to determine the existence or otherwise of the long run relationship among the variables. The cointegration test was conducted using the ARDL Bounds testing approach developed by Pesaran, Shin and Smith (2001). Following from Pesaran, Shin and Smith (2001), the unrestricted Auto Regressive Distributed Lag (ARDL) equation based on (3.1) is specified as follows:

$$\Delta LRGDP_t = \alpha_0 + \alpha_1 LRGDP_t + \alpha_2 INTR_t + \alpha_3 LCPS_t + \alpha_4 LTOD_t + \alpha_5 LFDEP_t + \sum_{i=0}^{k} \alpha_6 \Delta LRGDP_{t-i} + \sum_{i=0}^{k} \alpha_7 \Delta INTR_{t-i} + \sum_{i=0}^{k} \alpha_8 \Delta LCPS_{t-i} + \sum_{i=0}^{k} \alpha_9 \Delta LTOD_{t-i} + \sum_{i=0}^{k} \alpha_{10} \Delta LFDEP_{t-i} + U_1$$

3.4

The first part of the right-hand side of equation (3.6) with parameters α_0 to α_7 represent the long-run dynamics of the models and second part with parameters α_8 to α_{14} represent the short-run dynamics of the models.

The ARDL method involves two stages for the estimation of the long run and the short run relationships. First stage involves the examination of the existence of a long-run relationship among all variables in the equation. The second stage involves the estimation of the long-run and the short-run coefficients of the same equation. However, the second stage is mainly essential only when a long-run relationship in the first stage has been established (Pesaran et al., 2000; Narayan, 2005).

In conducting the test to examine whether there was the presence of cointegration and hence long-term equilibrium association among the variables, equation (3.5) was employed such that restrictions were placed on the coefficients of the estimated long-term equation. Therefore, the following null hypothesis and alternative hypothesis were set up for the model specified in equation 3.4.

H_0: $\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = \delta_7 = 0$, implying that there is the existence of cointegration and hence no long-term association among the variables.

H_a: $\delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq \delta_7 \neq 0$, implying that there is no existence of cointegration and hence long-term association among the variables.

In order to reach an acceptable conclusion, the F- statistics test based on the Wald test procedures was applied.

3.2.3 The Autoregressive distributed lag models (ARDL)

ARDL regression models of this type have been in use for decades but in more recent tims they have been shown to provide a very valuable vehicle for testing for the presence of long run relationships between the economic time-series.

ARDL model can be used to test for cointegration, and estimate long run and short run dynamics, even when the variables in question may include a mixture of stationary and non stationary time series.

$$yt = \beta 0 + \beta 1yt - 1 + \cdots . + \beta pyt - P + a0xt + a1xt - 1 + a2xt - 2 + \cdots . + aqxt - q + \varepsilon t$$

Where is a random disturbance terms.

3.2.4 Data Sources

Data used for this study were sourced from Central Bank of Nigeria Statistical bulletin (2018) and was estimated using Eview9.

4.1 Data analysis and Discussion of findings

The Augmented Dickey Fuller (ADF) test was used to test the null hypothesis that the data under consideration in this study is stationary. Result of the ADF unit root test is presented in table 4.1 below:

Table 4.1: ADF unit root test result
Author computation, 2019.

VARIABLES	**Level**	**IST Difference**	**Order of integration**
RGDP	2.821710	-3.816543	I(1)
CPS	-0.017314	-2.012377	I(1)
INTR	-3.238620		I(0)
TOD	1.729563	-6.047201	I(1)
FDEP	-0.543862	-6.981467	I(1)

Critical value at level
I% = -3.631900
5% = -2.948404
10% = -2.612874

Critical value at first difference
1% = -3.621023
5% = -2.943427
10% = -2.610263

SOURCE: Researcher's computation, 2020

From the unit root result, all the variables were stationary at first difference except interest rate (INTR) which was stationary at level. Therefore, we adopt autoregressive distributed lag model technique of analysis.

Table 4.2: Bound test (Cointegration) result

The result of the cointegration test based on the bounds testing procedure is presented in table 4.2

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	5.408504	10%	2.45	3.52
K	4	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

(Author computation, 2019)

The result of the cointegration test based on the auto-regressive distributed lag (ARDL) model bounds test revealed that the computed F-statistic value of 5.408504 is greater than the

upper bound critical values of 3.52 and 4.01 at 10 percent and 5 percent and lower bound of 2.45 and 2.86 at 10 per cent and 5 per cent respectively. And since the computed F-statistic value is greater than the upper bound critical values at the conventional one, five and ten percent levels of significance, the study concluded that there was existence of a long run relationship among the variables in the model.

4.2 ARDL result and Interpretation of Results

Table 4.3: ARDL long run result

Dependent variable: LOG(RGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.240620	0.122880	42.64843	0.0000
LOG(FDEP)	0.216857	0.019978	10.85470	0.0000
LOG(TOD)	0.107489	0.036453	2.948685	0.0057
LOG(CPS)	0.047264	0.032892	1.436960	0.1599
INTR	0.013110	0.003605	3.636501	0.0009

R- Squared = 0.969005 F-statistic = 265.7349
Adjusted R-Squared = 0.965358 Durbin-Watson Stat = 1.302517

Table 4.3: ARDL short run result

Dependent variable: LOG(RGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(CPS)	-0.082447	0.072561	-1.136236	0.2662
DLOG(CPS(-1))	0.060109	0.109840	0.547239	0.5889
DLOG(CPS(-1))	-0.123149	0.066837	-1.842541	0.0768
DLOG(FDEP)	0.112910	0.017958	6.287285	0.0000
D(INTR)	0.008714	0.002591	3.362573	0.0024
DLOG(TOD)	0.033969	0.024380	1.393316	0.1753
CointEq(-1)*	-0.318003	0.101066	-3.146491	0.0041

Source: Researcher's Computation, 2020.

The long-run result in Table 4.3 indicates that financial deepening, total deposits and credit to private sector all have a positive impact on economic growth. This mean a one per cent increase in them will instigate an increase of 0.216857 per cent, 0.107489per cent and 0.047264 per cent respectively while an increase in interest rate will also increase economic growth by 0.013110 per cent. More so, all the variables are statistically significant at 5 percent level of significance except credit to private sector which is insignificant at both five per cent and ten per cent levels of significance. The adjusted R-squared indicates that about 96.54 per cent of the total variation in economic growth is explained by the factors considered in the study leaving the remaining 3.46 per cent for other factors not considered in the study. This means that the model has a high explanatory power. The F-statistic indicates the model has a good fit

and can be relied upon in forecasting the behavior of economic growth since it is statistically significant. The Durbin Watson statistic is used to test for autocorrelation among variables in the model. The Durbin-Watson (DW) statistic of 1.302517 shows that the estimated result falls on the inconclusive region, therefore we cannot conclude on the existence and non-existence of auto-correlation in our estimate.

The estimated short-run regression result in table 4.4 revealed that one-year lag of credit to private sector, financial deepening and total deposits have a positive relationship with economic growth proxy by real gross domestic product which is consistent with the a priori expectation that these variables are the real factor that influenced to economic growth in Nigeria. This implies that a one per cent increase in these variables will lead to an increase of 0.060109 per cent, 0.112910per cent and 0.033969 per cent respectively on economic growth. The result further show that log of current and two years lag of credit to private sector and interest rate impacted positively on economic growth, this is rather surprising for interest rate but other were consistent with the a priori expectation.

Moreover, the estimated result revealed that a one per cent increase in log of credit to private sector at current level and at two years lag will lead to reduction in economic growth in Nigeria by 0.082447 per cent and 0.123149 per cent respectively while interest rate will increase it by 0.008714. The result further reveals that all the explanatory variables were statistically significant except credit to private sector at current level and at one-year lag as well as total deposits. However, two years lag of credit to private sector was statistically significant at 10 per cent level of significant since its t-statistic calculated of -1.842541 is greater than t-statistic tabulated of 1.684 in absolute term. The other variables are significant at 5 per cent level of significance. The speed of adjustment is slow at 31.80 per cent every year. This means that about 32 per cent of the short run deviation will be corrected every year.

4.3 Discussion of findings

The positive and significant impact of interest rate on economic growth indicates that interest rate is a major factor that influenced economic growth in Nigeria. The positive and significant impact of financial deepening on economic growth indicates that financial deepening is a major factor that influenced economic growth in Nigeria. The positive and significant impact of credit to private sector on economic growth indicates that credit to private sector impacted on economic growth in Nigeria. The positive and significant impact of total bank deposits on economic growth indicates that a total bank deposit impacted on economic growth in Nigeria. The outcome of this study supports the findings of marijuana (2009) and Caporale and Soludo (2009) which posited that interest rate and credit to the private sector are very vital for the economic growth of Nigeria. It therefore mean that any policy aimed at achieving economic growth in Nigeria must consider these factors since they have a positive and significant effect in economic growth in both the long run and in the short-run.

4.4 Policy implication

The estimated regression result revealed that interest rate, financial deepening, credit to private sector and total deposits have positive and significant impact on economic growth

because of their signs and magnitude indicating that these variables are the factors that influenced economic growth in Nigeria. Therefore, there is need for central bank of Nigeria to deregulate interest rate to make funds available for investors to boast the economy at the end.

5.1 Conclusion and Policy recommendations

This study examined the impact of commercial banks loans on economic growth in Nigeria using time series data from 1980-2018 for estimation The theoretical foundation of the study is based on Wicksell theory of lending and economic growth**.** The study employed the framework of ARDL to estimate the model. Data used were sourced from Central Bank of Nigeria Statistical Bulletin 2018 and analyzed using E-view 9 software. Findings revealed that there exists a positive and significant impact of interest rate on economic growth indicating that interest rate impact on economic growth in Nigeria. Findings also revealed that there exists a positive and significant impact of financial deepening on economic growth indicating that financial deepening is a major factor that influenced economic growth in Nigeria. The positive and significant impact of credit to private sector on economic growth indicates that credit to private sector impacted on economic growth in Nigeria. The positive and significant impact of total bank deposits on economic growth indicates that a total bank deposit impacted on economic growth in Nigeria. The study recommends that Central Bank of Nigeria should deregulate interest rate to make funds available for investors to boast the economy at the end. The positive and significant impact of financial deepening calls for government to collaborate with commercial banks to create a stable macroeconomic environment that will encourage commercial to make fund available for human capital development to increase productivity and boast the economic growth in Nigeria.

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