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BANK LENDING, ENTREPRENEURSHIP AND ECONOMIC GROWTH IN NIGERIA

By

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Abstract

Global economic downturns have shown that the performance of financial institutions is critical to economic growth. This paper examined the impact of bank lending on entrepreneurship and the real growth of the Nigerian economy, using annual time series data from 1991 to 2021. Granger causality tests and the two stage least square method of estimation were used for the analysis. The Granger causality test result showed that there was a bi-directional causality between bank lending and entrepreneurship in Nigeria. The results of the 2 stage least square regression analysis revealed that bank lending did not have significant impact on entrepreneurship in Nigeria but had significant impact on economic growth in Nigeria. Further analysis showed that bank lending did not have significant impact on interest rate but had significant impact on inflation rate in Nigeria. The study suggested that the Central Bank of Nigeria and the policy makers should periodically consider the optimality of the lending rate to place the lending rate at the optimal level. Periodic review of interest rate with respect to macroeconomic performance and entrepreneurship development will make funds affordable for entrepreneurs in Nigeria.

Keywords: Bank lending, Economic growth, Entrepreneurship

JEL Codes: E51, L26, O44

1. Introduction

Development of the private sector is a core element in the global strategy to foster economic growth, employment and poverty alleviation. This is because, entrepreneurship constitutes the driving force of industrial growth and development and this is due to its great potentials in ensuring diversification and expansion of industrial production as well as

the attainment of the basic objectives of development. Thus, entrepreneurship financing (bank lending) is a critical policy objective for the achievement of Nigeria's goal of sustainable growth.

Productive activities of the self-employed and entrepreneurs play key roles in developing countries. Private firms typically account for the greatest number of all firms outside the white-collar jobs sector, constituting a major source of employment and they generate significant domestic and export earnings. Entrepreneurship emerges as a key instrument in poverty reduction efforts; therefore, entrepreneurship obviously contributes to economic growth, social development and poverty reduction.

Building an entrepreneurship venture in agriculture, manufacturing and services sectors, the entrepreneur needs to access diverse forms of resources such as financial capital, human capital and physical capital, with each, playing significant roles. To a large extent, extractive activities have always provided the enabling resources for major secondary entrepreneurial activities but the bottom line remains their financing. No economic activity works without finance as no one can give what he/she does not have. It is only with finance that any perceived business investment, be it extractive (primary) or manufacturing (secondary) entrepreneurship can be actualized (Sotonye & Nwanyanwu, 2020).

The economy is made up of surplus and deficit units. In performing their primary function of financial intermediation, banks collect deposits from the surplus units of the economy and lend out to the deficit units in form of loans and advances. The role of the financial system in mobilizing and channelling of funds to the deficit sectors of the economy is of critical importance. Reliable financial system is recognized as a necessary and sufficient condition for rapid growth and development for every modern economy. 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.

There are so many sectors of the economy in which entrepreneurship is in progress. Aremu and Adeyemi (2011) identified the sectors of an economy to include agriculture, hunting, forestry and fishing; mining and quarrying; manufacturing; building and construction; hotels and restaurants; transportation, storage

and communications; real estate, renting services activities education; health and social work; community, social and personal services; formal and informal financial intermediation. The formal part which is large scale such as banks and other financial institutions; while the informal intermediaries are co-operative groups, *Esusu*, local money lenders and black market foreign exchange. In addition, entrepreneurship is in progress in the photography and movies industry, industrial technology industry and the social media industry.

The weight of the private sector in the economy is increasing. Productivity growth and consequently economic growth is strongly influenced by the competition inherent in the birth and death, entry and exit of smaller firms. This process involves high job turnover rates in labour markets, which is an important part of the competitive process and structural change. Some of these firms survive the competition and only a fraction develop into the core group of high performance firms which drive industrial innovation and performance. This underscores the need for governments to reform policies and framework conditions that have bearing on financial support for entrepreneurship, with a view to optimizing the contributions that these firms can make to growth (Taiwo., 2016).

In every economy, the financial sector is designed to drive economic growth. Finance–growth design of economic planning requires favourable culture from the government and the financial institutions in the country. As a developing economy, is Nigeria facing financial-sector led growth? Thus, the significance of the financial sector on economic growth remains a phenomenon for empirical research. One of the activities of financial institutions (banks) includes intermediating between the surplus and deficit sectors of the economy. According to Bencivenga and Smith (1991), the basic activities of banks are acceptance of deposits and lending to a large number of agents, holding of liquid reserves against predicated withdrawal demand, issuing of liabilities that are more liquid than their primary assets and eliminating or reducing the need for self-financing of investments.

The role of the banking system in an economy focuses on two main channels: credit allocation and capital accumulation. On credit allocation, Schumpeter (1934) affirmed that improved financial intermediation and innovation in an economy drives economic growth, which helps to boost investment and productivity. On capital accumulation, Hicks (1969) states that the financial intermediation function of banks helps to diversify risks and

reduces transaction costs in the mobilization of savings. There is belief that efficient allocation of savings through identification and funding of entrepreneurs offers the best chances of successfully implementing innovative products and production processes that add value to the macro-economy. Several scholars like McKinnon and Shaw (1973); King and Levine (1993) have supported this postulation about the significance of banks to the growth of the economy.

Is it bank lending that causes economic growth or economic growth causes bank lending? According to Mohd and Osman (1997), the causal relationship between bank lending and economic growth is categorized into demand-following relationship and supply following relationship. The proponents of demand-leading hypothesis argued that economic growth is a causal factor for bank lending, not the reverse. Robinson (1952) maintained that economic growth propels banks to finance enterprises. Gurley and Shaw (1969) also argued that as the economy expands and grows, the increasing demand for financial services stimulates banks to provide more credit. However, the proponents of supply-leading hypothesis are of the opinion that bank lending is a veritable tool for the attainment of economic growth. The hypothesis was originally credited to the works of Schumpeter (1934). Schumpeter strongly believed that efficient allocation of savings by means of identification and funding of entrepreneurs who invest such funds in innovation and production of goods and services, thus leading to economic growth.

The Nigerian economy is characterized by a growing labour force, without corresponding channels to absorb the growing talented population. Given the unemployment situation in Nigeria, people with productive minds need to be given the necessary support, to encourage them enter into productive activities which they have sufficient energy. This will make them earn their income, employ people to also earn a living, thereby reducing unemployment. One way to actualize this goal is to finance entrepreneurship in Nigeria. The monetary authorities in Nigeria and the commercial banks have not adequately shown the needed support for entrepreneurship, to consolidate financial liberalization for entrepreneurship in Nigeria. Most young Nigerians, after graduating from the tertiary institutions, are unable to find the right job, they pick up menial jobs and most of them try to save up their income to enable them establish their own businesses. They still find it difficult to establish their businesses because of inadequacy of funds. The fact is when an entrepreneur seeks for funds, the cost

of funds must be considered. The nature and structure of interest rate in Nigeria does not give the impression that the government and the financial sector has the goal of financing the great number of outstanding businesses and entrepreneurship in Nigeria.

Going by the main focus of this research, understanding that bank lending channel is significant in designing and implementing a suitable monetary policy framework, the inquiry for this study was to investigate impact of bank lending on entrepreneurship and economic growth in Nigeria.

2. Literature Review

Theoretical Discussion

The credit creation theory of banking proposes that individual banks can create money, and banks do not solely lend out deposits that have been provided to the bank; instead, the bank creates deposits as a result of bank lending. Consequently, the amount of money that a bank can create is not constrained by their deposit taking activities, and the act of bank lending creates new purchasing power that did not previously exist. The repayment of existing debt destroys money, as a consequence of reducing bank loans (asset side of balance sheet) and customer deposits (liability side of the bank balance sheet). A bank's ability to create new money, which is referred to as credit money, is a consequence of a range of factors. Firstly, non-cash transactions account for more than 95% of all transactions conducted within the economy, with non-cash transactions being settled through non-cash transfers within the banking system.

Banks' ability to create credit money arises from combining lending and deposit taking activities. Banks act as the accountant of record within the financial system, which enables banks to create the fiction that the borrower deposited money at the banks. The first step in credit creation has to do with the bank agreeing a loan with a customer, and the accounting treatment for the loan is the same approach followed by any other type of financial intermediary. The accounting entries associated with second stage of the process, when the bank places money into a borrower's bank account, is the point at which the bank's accounting treatment of the loan differs from other types of financial intermediaries. A bank creates new credit money as a consequence of its accounting treatment of liabilities. The bank ledger converts the account payable arising from a bank's lending activity to a customer deposit, where the customer deposit represents another category of bank liability. This accounting process causes the bank to create new customer deposit that was not

previously paid into the bank, but instead represented the reclassification of an account payable liability of the bank. This accounting treatment of the transaction enables the bank to expand both sides of their balance sheet at the same time when making a loan. This makes the difference between money that a bank has created, and money saved at the bank by depositors (Starkey, 2018).

Creation of credit-money is determined by a commercial bank's confidence that issued loans will be repaid. Therefore, banks perception of credit-default-risk is an important factor influencing the amount of bank lending. Strong growth in property prices over a prolonged period of time reduces bank's perception of the level of credit default risk associated with property lending, because money owed as a consequence of the borrower's failure to repay a loan will be recovered by the bank repossessing the property that provided security for the loan. Secondly, borrowers are likely to repay loans whilst the asset value exceeds the total amount of money outstanding on the loan.

Empirical Issues

Akpansung and Babalola (2011) examined the relationship between banking sector credit and economic growth in Nigeria over the period 1970-2008. Data used were real GDP, industrial production index, credit to the private sector and lending rate of commercial banks. The causal links between the pairs of variables of interest were established using Granger causality test while two-stage least square (TSLS) estimation technique was used for the analysis. The Granger causality test result showed evidence of unidirectional causal relationship from GDP to private sector credit (PSC) and from industrial production index (IND) to GDP. The result also showed that private sector credit impacts positively on economic growth over the period of the study.

Afolabi (2013) investigated the effect of SMEs financing on economic growth in Nigeria between 1980 and 2010. Data used for the study were retail trade output, commercial banks credit, lending rate and exchange rate. The study employed ordinary least square (OLS) estimation technique and the result revealed that lending rate exerts negative effect on economic growth in Nigeria. In a study of the impact of commercial bank credit on the growth of SMEs in Nigeria from 1986 to 2012, using error correction model, Imoughele and Ismaila (2014) found that commercial bank credit to SMEs and total government expenditure had direct but insignificant effects on the country's SMEs output and economic growth. They further

found that interest rate had adverse effect on SMEs output.

Nwaru and Okorontah (2014), using the OLS technique, investigated the significance of banks credit in stimulating output (GDP) and the factors that prompt financial intermediation using annual data from 1985 to 2010. The data used for the study were real GPD, real capital inflow, real total export growth and bank credit. Evidence from this work showed that the marginal productivity coefficient of bank credit to the domestic economy (proxied by credit to the private sector) was positive and insignificant. In the same vain, Akujuobi and Nwezeaku (2015) examined the effect of bank lending activities on economic development in Nigeria from 1980 to 2013. Human development index and the industrial gross domestic product were employed as proxies for human development and industrial development, respectively. Then commercial bank credit to the general commerce, production and services formed components of bank lending activities. Adopting the ordinary least square (OLS) estimation technique the result revealed a significant relationship between bank lending activities and economic development in Nigeria.

Examined the impact of banking sector credit on the growth of small and medium enterprises in Nigeria from 1985 to 2010, and adopting the error correction model, Bello and Mohammed (2015) revealed that banking sector credit had significant impact on the growth of small and medium enterprises in Nigeria. The results also showed positive impact on some major macroeconomic variables of growth such as inflation, exchange rate, trade debts. Meanwhile, Ilegbinosa and Jumbo (2015) polled 84 SMEs in Nigeria to examine how they affect Nigeria's economic growth from 1970 to 2012. The study adopted ordinary least square technique, co-integration, and error correction model using variables such as gross domestic product, finance available to SMEs, interest rate and inflation rate. The result showed that finance to SMEs had a positive relationship with economic growth while interest rate and inflation rate had negative and positive significance impact, respectively.

Orji et al, (2015) investigated the impact of financial liberalization on economic growth in Nigeria from 1981 to 2012 using the McKinnon–Shaw framework. This study adopted the ordinary least square and cointegration techniques; while the variables include real GDP, private lending interest rate and real lending interest rate. The result

revealed that real lending rate (LDR) proved to be negatively related to economic growth in Nigeria within the period under review. Also, Ajiboye et al, (2018) analysed the impact of bank financing on the growth of SMEs in Nigeria, using multiple regression model. Annual data from 1993 to 2013 were collected from bank financing, credit from private sectors, fiscal deficit and management accounting information and used for the analysis. The long-run results indicated that bank financing had a positive and significant impact on SMEs growth in Nigeria. On the other hand, Okolie et al., (2018) investigated the influence of entrepreneurship (proxied by micro, small and medium-sized enterprises) financing on unemployment rate in Nigeria from 2001 to 2017. Using the vector autoregression (VAR) model, they found that loans to micro, small and medium-sized enterprises (MSMEs) did not lead to positive and meaningful job opportunity.

Sotonye and Nwanyanwu (2020) examined the impact of bank loans on entrepreneurship development in Nigeria from 1981 to 2018. The study used data on entrepreneurship development and bank lending to the agricultural and manufacturing sectors which were estimated using autoregressive distributive lag (ARDL) model. The results revealed that bank loans to the agricultural sector had negative effect on entrepreneurship development, but a positive effect on the manufacturing sector, in the short run. Meanwhile, Umar and Ifeyinwa (2020) in their study on the effect of bank lending on the growth of selected SMEs in Nigeria, using survey study found that bank lending to SMEs encouraged self-employment, thereby reducing unemployment and crime rates. This helped to strengthen the country's economic condition.

3. Methodology

Theoretical Framework

The theoretical framework for this study is based on the new growth theory, also known as the endogenous growth theory. It was propounded by Romer in 1990. The new growth theory states that economic growth depends on the accumulation of capital and ideas, that technological change is the result of efforts by entrepreneurs who are motivated by economic incentives. The endogenous growth theory notes that the enhancement of a country's human capital would lead to economic growth by means of the development of new forms of technology and efficient and effective means of production. Improvement in Nigeria's economic productivity can rise from private financial institutions support for entrepreneurship, not

only in their competitive quest for profit making but also as part of their corporate social responsibility for the country.

Increasing returns that results from non-rivalry leads to the possibility of sustained exponential growth. Relative to the other growth models of the time, this framework has a ring of truth that growth occurs because of innovation from private entrepreneurs, who are incentivized by the prospect of earning profits from their ideas. The central building block in framework of new growth theory is that it placed the key AK linearity in the idea production function whereby the growth of output is a function of capital and stock of knowledge;

$$Y = AK \qquad (3.1)$$

Where, Y = total output in the economy, K = capital, A = stock of knowledge. Assuming capital K to represent bank domestic credit to the private sector (BDCPS) and A = Entrepreneurship (ENTR). Then

$$Y = f(BDCPS + ENTREP) \qquad (3.2)$$

Thus, the model specification for the study will be consonance with the theoretical framework/model.

Empirical Model Specification 1 (Granger Causality Model)

This study employed the Granger causality test to determine the direction of causality among the variables under study. Our approach follows Granger (1969) who proposed a time-series data-based approach in order to determine causality between economic variables. A question that frequently arises in time series analysis is whether or not one economic variable can help forecast another economic variable. In the Granger-sense therefore, a time series x is a cause of y if it is useful in forecasting y. More precisely, variable X is said to Granger-cause another variable, Y, if the current value of Y(yt) is conditional on the past values of X (x_{t-1}, x_{t-2}, ... , x_0) and thus the history of X is likely to help predict Y.

Following Kumo (2012), the equation specification can be stated as follows:

$$LNBDCPS_t = \beta_0 + \beta LN_1 BDCPS_{t-1} + \beta_2 LNRGDP_{t-1} + \beta_3 LNENTREP_{t-1} + \beta_4 LNINTR_{t-1} + \beta_5 LNSAVINGS_{t-1} + \beta_6 LNINV_{t-1} + \beta_7 LNINFR_{t-1} + U_t. \qquad (3.3)$$

Where *LNBDCPS* = log of bank domestic credit to the private sector**,** *LNRGDP* = log of real GDP, *LNENTREP* = log of entrepreneurship, *LNRINT* = log of interest rate, *INFR* = of inflation rate, *LNSAVINGS* = log of private domestic savings, *LNPINV* = log of private domestic investment, β_0 = constant term, β_1, β_2,.....β_7 = coefficients of the explanatory variables.

Empirical Model Specification 2 (The Simultaneous Equation Model)

Given the mathematical equation showing relationship between bank domestic credit to the private sector and other variables under study;

$$LNBDCPS = F(LNENTREP, LNRGDP, LNRINT, LNPDSAV, LNPDINV, INFR) \quad (3.4a)$$

Following this functional form, we obtain a system of simultaneous equations:

$$LNENTREP_{t=} a_0 + a_1 LNBDCPS_t + a_2 LNRGDP_t + a_3 LNRINT_t + a_4 LNPDSAV_t + a_5 LNPDINV_t + a_6 INFR_t + U_t \quad (3.4b)$$

$$LNRGDP_t = b_0 + b_1 LNBDCPS_t + b_2 LNENTREP_t + b_3 LNRINT_t + b_4 LNPDSAV_t + b_5 LNPDINV_t + b_6 INFR_t + U_t \quad (3.4c)$$

$$LNRINT_{t=} C0 + c_1 LNBDCPS_t + c_2 LNENTREP_t + c_3 LNRGDP_t + c_4 LNPDSAV_t + c_5 LNPDINV_t + c_6 INFR_{t.} + U_{t.} \quad (3.4d)$$

$$LNPDSAV_t = d_0 + d_1 LNBDCPS_t + d_2 LNENTREP_t + d_3 LNRGDP_t + d_4 LNRINT_t + d_5 LNPDINV_t + d_6 INFR_{t.} + U_t \quad (3.4e)$$

$$LNPDINV_t = e_0 + e_1 LNBDCPS_t + e_2 LNRGDP_t + e_3 LNENTREP_t + e_4 LNRINT_t + e_5 LNPDSAV_t + e_6 INFR_t + U_{t.} \quad (3.4f)$$

$$INFR_t = f_0 + f_1 LNBDCPS_t + f_2 LNRGDP_t + f_3 LNENTREP_t + f_4 LNRINT_t + f_5 LNPDSAV_t + f_6 LNPDINV_t + U_{t.} \quad (3.4g)$$

Where a_0, a_1, ...a_6; b_0, b_1.....b_6; c_0, c_1, ...c_6; d_0, d_1, ...d_6; e_0, e_1, ...e_6; f_0, f_1, ...f_6 represent structural parameters of the model and U_t represents stochastic error term of the model.

Model Estimation

The study employed the two stage least squares method to estimate the simultaneous equation. The system of equation estimating parameters of the model that contain such variables is called the 2 Stage Least Squares equation model. A multi-equation model which include separate equations with each dependent and independent variables appearing as endogenous variables, even though they may appear as explanatory variables in other equations of the model. The system describing this joint dependence of variables is called system of simultaneous (2SLS). The next step in the simultaneous process is to identify the reduced form equations, which are finally estimated.

Reduced Form Equations

$$LNENTREP_t = Z_{10} + Z_{11}LNBDCPS_t + Z_{12}LNRGDP_t + Z_{13}LNINTR_t + Z_{14}LNPDSAV_t + Z_{15}LNPDINV_t + Z_{16}INFR_t + \varepsilon_t \quad (3.5a)$$

$$LNRGDP_t = Z_{20} + Z_{21}LNBDCPS_t + Z_{22}LNENTREP_t + Z_{23}LNINTR_t + Z_{24}LNPDSAV_t + Z_{25}LNPDINV_t + Z_{26}INFR_t + \varepsilon_t \quad (3.5b)$$

$$LNINTR_t = Z_{30} + Z_{31}LNBDCPS_t + Z_{32}LNENTREP_t + Z_{33}LNRGDP_t + Z_{34}SAVINGS_t + Z_{35}LNPDINV_t + Z_{36}INFR_t + \varepsilon_t \quad (3.5c)$$

$$LNPDSAV_t = Z_{40} + Z_{41}LNBDCPS_t + Z_{42}LNENTREP_t + Z_{43}LNRGDP_t + Z_{44}LNINTR_t + Z_{45}PINV_t + Z_{46}INFR_t + \varepsilon_t \quad (3.5d)$$

$$LNPDINV_t = Z_{50} + Z_{51}LNBDCPS_t + Z_{52}LNRGDP_t + Z_{53}LNENTREP_t + Z_{54}LNINTR_t + Z_{55}LNPDSAV_t + Z_{56}INFR_t + \varepsilon_t \quad (3.5e)$$

$$INFR_t = Z_{60} + Z_{61}LNBDCPS_t + Z_{62}LNRGDP_t + Z_{63}LNENTREP_t + Z_{64}LNINTR_t + Z_{65}LNPDSAV_t + Z_{66}LNPDINV_t + \varepsilon_t \quad (3.5f)$$

Where the representatives for Zij (i = 1, 2, 3, 4, 5, 6 and J = 0, 1, 2, 3, 4, 5, 6 and 7) and ε represents the error term for the reduced form mode. The reduced form model shows that there are 36 reduced form parameters against 35 structural parameters, which implies that the model is over identified. Thus, the appropriate estimation technique to be used is the instrumental variable method such as two stage least square, three stage least square etc., to estimate the simultaneous equations. This study employed annual time series data from 1970 to 2021. The data were obtained from Central Bank of Nigeria statistical bulletins (of various periods) and the National Bureau of Statistics.

4. Data Analysis and Discussion of Result

Unit Root Test

The unit root test determines the order of integration of series under consideration using the Augmented Dickey – Fuller (ADF) test

Table 4.1: Summary of Unit Root Test at 5%

Level			First Difference	
Variable	**T Statistics**	**Critical T**	**T Statistics**	**Critical T**
LNBDCPS	-0.403932	-2.976263	-3.648351	-2.976263
LNENTREP	-0.590189	-2.971853	-4.262067	-2.971853
LNRGDP	-1.114912	-2.967767	-2.752100	-2.967767
LNINTR	-1.171215	-2.963972	-5.785588	-2.967767
LNINF	-2.863310	-2.967767	-4.094153	-2.986225
LNSAVINGS	-1.956053	-2.963972	-5.440009	-2.967767
LNINV	-1.398805	-2.967767	-2.637977	-2.967767

Source: Author's Computation

From the test result in Table 4.1, all variables were integrated of order zero (the variables were stationary at level). Thus, the null hypothesis of no autocorrelation among the variables was accepted. It implies that the data employed for the study did not have unit root, and were stationary data.

Cointegration Test

The cointegration test was undertaken to identify whether there is at least one cointegrating vector, to examine whether there is long run relationship among the variables.

Table 4.2: Cointegration Test Results

Null Hypothesis	Alternative Hypothesis	Trace Statistics	95% critical value	Max-Eigen statistics	95% Critical Value
r = o	r = 1	131.8766	95.75366	42.62789	40.07757
r ≤ 1	r = 2	89.25070	69.81880	34.35511	33.87687
r ≤ 2	r = 3	54.89559	47.85613	23.23193	27.58434
r ≤ 3	r = 4	31.66366	29.79707	21.67680	21.13162
r ≤ 4	r = 5	9.986865	15.49471	9.519831	14.26460
r ≤ 5	r = 6	0.467035	3.841465	0.467035	3.841465

Source: Author's Computation

For the cointegration analysis, the study employed Johansen Cointegration test. The trace statistic dictated 5 cointegrating vectors at 95% level of confidence, while Maximum Eigen value dictated 3 cointegrating vectors at 95% level of confidence. The values of the Trace statistics are greater than the chosen level of significance. Again, the values of the Max Eigen statistic were greater than the chosen level of significance. Thus, the alternative hypothesis of long run relationship was accepted. The conclusion was that there was long run relationship among the variables.

Granger Causality Test Results: The Granger causality test shows the direction of causality of the variables and provides confidence in forecasting.

Decision Rules for Granger Causality Test

If probability significance is less than the chosen level of significance (P-Value < Critical-t), reject the null hypothesis, and accept the alternative hypothesis. If probability significance is greater than the chosen level of significance (P-Value > Critical-t), accept the null hypothesis.

Note: Significance level = 0.05 (95% level of confidence)

Table 4.3: Pairwise Granger Causality Test Results

Direction of Causality	F- Statistic	P- Value
LNBDCPS → LNENTREP	8.74252	0.0014
LNENTREP → LNBCDPS	6.36569	0.0061
LNBDCPS → LNRGDP	2.14844	0.1386
LNBDCPS→LNINT	3.67846	0.0404
LNSAVINGS→ LNENTREP	6.69665	0.0049
LNINT → LNINV	0.05447	0.9471
LNINV → LNINT	1.84736	0.1794
LNINT → LNINF	3.13551	0.0617

Source: Author's Computation

The Granger causality test result shows that there was a bi-directional causality between bank lending and entrepreneurship in Nigeria. Also, that bank lending granger caused interest rate in Nigeria; that private domestic savings granger caused entrepreneurship in Nigeria while interest rate did not granger cause private domestic investment. That private domestic investment did not granger cause interest rate in Nigeria while interest rate did not cause inflation in Nigeria.

Presentation of Regression Results (2SLS Estimates) 95% confidence level

Table 4.4: 2SLS Regression Results for Bank Lending and Entrepreneurship

Dependent variable (LNENTREP)	Coefficient	t-Statistic	P-Value	R-Squared	F-statistic
LNBDCPS	0.015163	1.843405	0.0777	0.941955	64.91240

Result: 0.0777 > 0.05 (P-Value > Critical-t)

Bank lending did not have significant impact on entrepreneurship in Nigeria.

Table 4.5: 2SLS Regression Results for Bank Lending and Real GDP

Dependent variable (LNRGDP)	Coefficient	t-Statistic	P-Value	R-Squared	F-statistic
LNBDCPS	0.201481	2.944830	0.0071	0.963845	106.6338

Result: 0.0071 < 0.05 (P-Value < Critical-t)

Bank lending had significant impact on the real economic growth of Nigeria.

Table 4.6: 2SLS Regression Results for Bank Lending and Interest Rate

Dependent Variable (LNINT)	Coefficient	t-Statistic	P-Value	R-Squared	F-statistic
LNBDCPS	-0.104589	-1.173645	0.2521	0.702703	9.454542

Result: 0.2521 > 0.05 (P-Value > Critical-t)

Bank lending did not have significant impact on interest rate in Nigeria. In fact, it had negative and insignificant impact on interest rate.

Table 4.7: 2SLS Regression Results for Bank Lending and Inflation

Dependent variable (LNINF)	Coefficient	t-Statistic	P-Value	R-Squared	F-statistic
LNBDCPS	**0.440753**	**1.030911**	**0.3129**	**0.407221**	**2.747882**

Result: 0.3129 > 0.05 (P-Value > Critical-t)

Bank lending had insignificant impact on inflation rate in Nigeria.

Table 4.8: 2SLS Regression Results for Entrepreneurship and Private Domestic Savings

Dependent variable LNENTREP	Coefficient	t-Statistic	P-Value	R-Squared	F-statistic
LNSAVINGS	0.008775	-1.173645	0.3472	0.941955	64.91240

Result: 0.3472 > 0.05 (P-Value > Critical-t)

Private domestic **s**avings did not have significant impact on entrepreneurship in Nigeria.

Table 4.9: 2SLS Regression Results for Private Domestic Savings and Investment

Dependent variable (LNINV)	Coefficient	t-Statistic	P-Value	R-Squared	F-statistic
LNSAVINGS	0.300197	2.389462	0.0251	0.848351	22.37667

Result: 0.051 < 0.05 (P-Value > Critical-t)

Private domestic savings had significant impact on private domestic investment in Nigeria.

Discussion of Findings

The major motivation for this study was an inquiry on how a long term sustainable economic growth, envisioning a well-funded private sector to sustain productivity growth can be achieved. Hence, this study however investigated the impact of bank lending on entrepreneurship and the real economic growth of Nigeria. The unit root test result for stationarity showed that all the variables under study were integrated of order zero (variables are stationary at level). This motivated us for the cointegration test. The cointegration test was undertaken to find out whether long run relationships existed among the variables under study. The result showed that there was long run relationship among the variables. The study further examined the direction of causality between the variables under study, using the Granger causality model. The Granger causality test result showed that there was a bi-directional causality between bank lending and entrepreneurship in Nigeria. Also, bank lending caused interest rate in Nigeria

while savings caused entrepreneurship in Nigeria. Furthermore, interest rate did not cause investment and that investment did not cause interest rate in Nigeria.

This study further estimated the impact of bank lending on entrepreneurship and the real economic growth of the Nigeria, using the 2 stage least square model. The result showed that bank lending did not have significant impact on entrepreneurship in Nigeria but bank lending had significant impact on the economic growth of Nigeria. The results also showed that bank lending had no significant impact on interest rate in Nigeria; that bank lending had significant impact on inflation rate in Nigeria; that private domestic savings had no significant impact on entrepreneurship in Nigeria and that private domestic savings had significant impact on private domestic investment in Nigeria.

5. Conclusion and Recommendations

This study examined the behaviour of financial institutions with respect to their ability to stimulate private sector led economic growth in Nigeria by providing credit to the private sector. Hence, the paper discussed the impact of bank lending on entrepreneurship and the real economic growth of Nigeria as well as analysing its relationship with other macroeconomic variables (interest rate, inflation rate, private domestic savings, and private domestic investment). Adopting the granger causality technique and the 2 stage least square model, the study revealed that bank lending had no significant impact on entrepreneurship in Nigeria, rather it had significant impact on the real economic growth of Nigeria.

Based on the findings, it was recommended that the CBN and the policy makers should strengthen the financial institutions in Nigeria to support entrepreneurship by way of public-private sector partnership in order to create enabling environment for productivity growth. Also, the CBN and the policy makers should periodically place the lending rate at the optimal level. Periodic review of interest rate with respect to macroeconomic performance and entrepreneurship will make funds affordable for entrepreneurs in Nigeria.

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