

# Analysis of the Bank Credit, Economic Growth Nexus in Nigeria

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## Abstract

*In spite of Nigeria's recent ranking as one of the fastest growing economies in world, it is paradoxical that the rapid growth has not impacted on the welfare of the citizens and residents as poverty incidence has persistently been on the rise. Bank credit has been widely recognized as a veritable means of lifting people out of the abyss of poverty. This study was designed to appraise the bank credit, economic growth nexus in Nigeria, using annual time series data from 1970 to 2011. The paper specifically attempts to determine the flow of causality between private sector credit and economic growth. The research employed unit root, and granger causality tests. The study revealed that there exist a unilateral flow of causality which runs from bank credit to economic growth at 5% level of significance both in the short and long run. The paper therefore recommends that the Central Bank of Nigeria should prescribe and enforce rules on sectoral allocation of credit between the private and public sectors with a tilt towards the former, leverage credit disbursement as a tool for driving economic growth, and ensure that credit growth does not compromise credit quality.*

**Keywords:** Bank Credit, Economic Growth, Granger Causality, Unit Root.

## 1.0 Introduction

It is widely held view that the pursuit of economic growth is one of the popular strategies for poverty reduction. This strategy is premised on its capacity to engender an increase in the short term income and actualize a “trickle-down effect” on the grassroots in the long run. While Nigeria has recently been ranked as one of the fastest growing economies in world, it is ironic that poverty incidence has also been on the increase. This has questioned the effect of this rapid growth on the masses.

According to the World Bank (2013), Nigeria's poverty rate per capita stood at 62.6 per cent, which experts still consider to be on the high side for a resource-endowed country. According to a release by Regus, provided by Africa Consultant, BondPR EMEA Thompson (2013), the Micro, Small and Medium Enterprises (MSME's) account for approximately 50 per cent of GDP in Nigeria, and provide employment to almost half the workforce. A recent survey conducted by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) revealed that 80 per cent of entrepreneurs in Nigeria concur that one of the biggest obstacles is access to finance. In the research, 76 percent of respondents identified lack of access to credit as the biggest challenge facing a business today. This finding confirms the assertion of Ekpo (2013) that vast majority of Nigerians have been excluded from development net and this has been the state of affairs since 1960 despite the agricultural boom of the 1960's, the windfall from oil in the 1970's, 1980's and late 2000 as well as the financial boom of the 1990's. The lack of access to credit by the MSME's is largely responsible for the wide gap between current output level and the nation's production possibility frontier.

In Nigeria, the banking sector is recognized as the major provider of formal sources of credit. A sufficient quantum and appropriately injected credit is widely believed to be a good poverty reduction strategy that should

normatively empower individuals and firms to procure the required inputs as well as enable them achieve technical progress. However, with all the government's and the Central Bank of Nigeria's (CBN) efforts at formulating various policies aimed at enhancing access to credit in order to facilitate economic growth, Nigeria's GDP has been asymmetrically driven by agriculture, general commerce as well as the oil and gas sectors at the expense of the real sector. This situation calls to question the role of "hundreds of billions of Naira" worth of credit disbursed annually by the banking sector.

The findings emanating from studies on the nexus between finance and economic growth in Nigeria has been less consensual. Hence, there is need to investigate whether the nexus between bank credit and economic growth is "supply-leading", "demand following", or whether they do not even have any link at all. Investigating the impact of bank credit on economic growth also has some policy implications. If credit "granger-causes" economic growth, this weakens the arguments for restricting credits. If, on the other hand, economic growth "granger-causes" bank credit, then arguments in favour of growth-supporting measures (other than via bank credit) would be strengthened.

However, if no link is established between bank credit and growth, it would suggest that government should explore alternative strategies for re-jigging the economy, and in improving general welfare. While no single research would resolve all the issues involved at once, this study would contribute to this debate. This study therefore seeks to answer the following research question: "what is the direction of causality between economic growth and bank credit disbursed to the private sector?" The specific objective is to determine the flow of causality between credit disbursed to the private sector and economic growth. This study would serve as a guide on ways to formulate credit policies that would engender multi-sector balance and inclusive growth [Ianchovichina and Galbe, (2012), cited in Ekpo, (2013)] in Nigeria. It would also provide a sound data base upon which government can leverage when crafting growth-oriented strategies.

While majority of the previous studies on finance-growth nexus had employed relatively advanced methodologies, their weaknesses include: too general policy recommendations especially for cross-country analysis due to the implicit assumption of similar degree of subsisting conditions for countries with similar results; and some of the studies ignored the policy implications of the causality between credit and economic growth. Therefore, this study appraises the bank credit, economic growth nexus in Nigeria from 1970 to 2011, using granger causality analysis, and seeks to improve on the aforementioned weaknesses. In view of the above submission, this study fills the gap in existing knowledge.

The remainder of this paper is organized as follows: Section two deals with theoretical framework and review of relevant literature while the next section discusses the methodology of the study. Section four covers the presentation of the results and discussion of findings. Section five concludes the paper and proffers some recommendations.

## **2.0 Theoretical Framework and Literature Review**

This section is discussed under two sub-sections as follows:

### **2.1 Theoretical Framework**

Credit can be defined as the transfer of money or a resource from the lender to the borrower. Spencer (1977) noted that credit implies a promise by one party to pay another for money borrowed or goods and services received. The crucial role credit plays in the lives of individuals, firms and other organizations as well as in the public sector too cannot be overemphasized. Farmers require credit to purchase the required inputs such as seeds, seedlings, fertilizers, and implements, among others, while firms need credit in order to procure items such as raw materials, machinery and equipment. Credit also enables individuals and firms to operate at levels whereby they can harness economies of scale.

Commercial banks are the dominating formal credit institutions in Nigeria. According to Korkmaz (2015) banks are institutions that conduct operations on money, capital and credits and fulfill every need of natural and juridical persons, state and businesses in this field. Among primary functions of banks, collecting deposits from clients, preserving them and lending some part of their collected deposits in exchange for a certain price can be counted. In general, banks assume an intermediary role between the ones who want to let others to use money and the ones who need money. Thus, banks appear in economy mostly as service businesses (Korkmaz, 2015). A number of growth theories/models propounded by great scholars have been widely discussed in the literature. But as they all have merits, they are not bereft of limitations. Hence, there is no consensus as to which strategy will achieve the best success. Some of the popular growth models/theories include: the classical model of growth, the neo-classical model of growth, and the endogenous growth theory, among others.

Jhingan (2006) explains that the endogenous growth model emphasizes technical progress resulting from the rate of investment, the size of the capital stock and the stock of human capital. In an endogenous growth model, Nnanna *et al* (2004) observed that financial development can affect growth in three ways, which are: raising the efficiency of financial intermediation, increasing the social marginal productivity of capital and influencing the private savings rate. This means that a financial institution can effect economic growth by efficiently carrying out its functions, among which is the extension of credit.

According to Nurkse (1955), vicious circles of poverty are at work in underdeveloped countries which retard economic growth. If, however, they are broken, economic development will follow. Jhingan (2005) stresses that economic growth is a necessary (though not sufficient) condition for development. Nurkse (1955) emphasized that the vicious circles operate both on the supply and the demand sides. The demand side of the vicious circle, Nurkse (1955) continues, is that the low level of real income leads to a low level of demand (arising from small size of the market) which, in turn, leads to a low investment and hence, back to deficiency of capital, low productivity and low income. From the supply side, the low level of income triggers low saving. Low saving leads to low investment and to deficiency of capital. The deficiency of capital leads to low level of productivity and back to low income.

In view of the above, a timely injected, well monitored and efficiently utilized credit, of which bank credit is a major source, represents one of the veritable tools for breaking the vicious circles of poverty in the Less Developed Countries (LDC's) such as Nigeria. From the Demand Side, credit enhances purchasing power and thereby raises demand for goods and services, including other factors of production. This induces more investments which in turn triggers capital accumulation thereby increasing productivity and ultimately income. On the supply side, credit which ultimately leads to increased income, motivates increase saving which leads to enhanced investment. An increase in investment enlarges capital accumulation which engenders technical progress. Technical progress raises productivity which in turn leads to increased income. This process activates economic growth. The above processes turn the vicious circles of poverty into virtuous circles of economic prosperity.

The Finance-Growth literature can be summarized into four schools of thoughts. The two most popular are the "Supply-Leading" hypothesis, and the "Demand-Following" hypothesis. Other schools of thoughts are: "Finance impairs growth," and "Finance is inconsequential." The "Supply-leading" school of thought avers that the financial institutions increase the productive capacity of the economy by providing finance to individuals and firms and that countries with well developed financial system tend to grow faster than those whose financial systems are less developed. Among the scholars in this school are Schumpeter (1911), Mckinnon (1973), Shaw (1973), and King and Levine (1993).

The "Demand-following" Hypothesis school of thought contends that economic growth propels financial development. According to this hypothesis, as the real sector grows, the accompanying increase in demand for financial services stimulates the financial sector (Gurley & Shaw, 1967). Other economists that belong to this school of thought include Robinson (1952), and Goldsmith (1969), among others.

## 2.2 Literature Review

A number of economists have empirically investigated finance-growth nexus. Among those that provide empirical evidence on this nexus is Kasekende (2008) who argues that countries with efficient credit systems grow faster while those with inefficient credit systems bear the risk of bank failure. Since banking institutions intermediate between the surplus and deficit sectors of the economy, a well functioning credit system lessens the external financing constraints that hamper credit availability, and the growth of the private sector. Indeed, the role of bank credit is considered to be the key in economic growth and development (Khan & Senhadji, 2000). According to Ademu (2006), the provision of credit to the informal sector with sufficient consideration for the sector's large volume is a way to generate self-employment opportunities. This is because credit enables the creation and maintenance of a reasonable business size. It can also be used to improve informal activity and increase its efficiency via resource substitution, which is facilitated by its availability. Government agencies obtain credits to meet various kinds of recurrent and capital expenditures. Furthermore, individuals and households also obtain retail credit to procure consumer goods and services such as cars, household gadgets, and vacations, among others.

Ademu (2006) suggested that credit can be used to prevent an economic activity from total collapse in the event of natural disaster, such as flood, drought, disease, or fire. Thus, credit can be obtained to recoup investments from an economic activity that suffers a setback. The banking sector is of paramount importance as it represents a major vehicle for mobilizing substantial amount of saving in most developing economies, especially in Sub-Saharan Africa. This sector represents a major source of supply of formal credit as it helps in channeling funds from the surplus sectors to the deficit sectors. Thus, the banking sector helps by mobilizing surplus funds from savers who have no immediate needs of such funds and thus channel such funds in form of credit to investors who have brilliant ideas on how to create additional wealth in the economy but lack the necessary capital to execute such ideas (Nwayanwu, 2010). Thus, banks are debtors to the depositors of funds and creditors to the borrowers of funds.

The definition of bank credit adopted in this study is that given by the CBN (2003) as "the amount of loans and advances given by the banking sector to economic agents". Bank credit is often accompanied by some collateral or security that enhances the borrower's commitment to repay or helps the creditor by providing a "shock absorber" should the need arises to recoup the loan in the event of default. Some researchers have actively worked on establishing the relationships between credit and economic growth, and between financial development and economic growth, among others. They have also empirically determined the drivers of each of the above variables. While noting that these studies cut across the globe, we hereby review some of them. According to Bencivenga and Smith (1991), an investigation of the nexus between the banking sector and economic growth suggests that the financial system could impact positively on real economic performance by affecting the composition of savings. The financial sector is also expected to provide information (Greenwood & Jovanovic, 1990), and affect the scope for credit rationing (Boyd & Smith, 1997).

King and Levine (1993) suggest that innovation is the main channel of transmission between finance and growth while Levine (1997) posits that financial development promotes economic growth through two "channels", i.e. capital accumulation and technological innovation. Demetriades & Hussein (1996), in a cross-country study involving 13 countries, concluded that causality is country-specific rather than being general. In another study, Dey & Flaherty (2005), using a two-stage regression model to examine the impact of bank credit and stock market liquidity on GDP growth, observed that bank credit and stock market liquidity are not consistent determinants of GDP growth and that banking development is a significant determinant of GDP growth, while turnover is not. Also, in clear disparity to recent findings on the US, Capiello *et al* (2010) in their study on the Euro Area aver that the supply of credit, both in terms of volumes and standards applied on loans to enterprises, have significant effects on real GDP.

In a study carried out on the Indian economy, Mishra *et al* (2009) looked at the direction of causality between credit market development and the economic growth for the period 1980 to 2008. They concluded that credit market development drives economic growth.

In Nigeria, the preponderance of formal credit disbursed is from the Commercial Banks. The Nigerian banking industry has also undergone five major developmental phases namely: era of free or *laissez faire* banking, era of banking regulation, era of financial system deregulation, era of banking consolidation (Ajayi & Ojo, 2006) and era of cash-less banking.

Olomola (1995) applied cointegration and Granger causality to Nigerian quarterly series data for 1962-1992 in order to test if the relationship between financial deepening-growth is either “demand following” or “supply leading”. Among other findings, his study showed that the Nigerian economy exhibits a mixture of “supply-leading” and “demand-following” patterns whereby causation runs from the financial sector of the economy to the real sector and *vice-versa*. His study also supports the case of unidirectional causality from the real sector to the financial sector as in Odedokun (1989).

According to Nwanyanwu (2010) in her study examined the role of bank credit in economic growth of Nigeria. She observed that bank credit did not impact significantly on the growth of the Nigerian economy, and this was attributed to the fact that banks exhibited apathy in lending to the private sector for productive purposes such as agricultural sector, as they preferred to lend to the short-term end of the market such as commerce, which attracts quick return and high rate of turnover. As a result of this, the volume of loans actually given to investors is insignificant. Furthermore, World Bank (2007) as cited by Dalis (2010), and Nwanyanwu (2010) observed that the Nigerian Banks are burdened with excess liquidity but simultaneously very cautious in providing credit to the private sector. Excess liquidity exists because financial intermediaries lack investment opportunities with sufficient returns or perceive the risk in intermediating funds to be too high while weak financial intermediation capacity has caused limited access to finance for investment. Consequently, firms have been forced to rely to a high degree on self-financing. According to Nwanyanwu (2010), a large proportion of the total credit of deposit money banks that go to the government are usually not for productive purposes while most government expenditures are on transfer payments with little impact on productivity. It should be acknowledged that the model used by the above author is unsophisticated as she regressed GDP on only the growth of aggregate domestic credit to the economy. This could have significantly affected the results of her study with the regression results having an  $R^2$  of 4%!

Oluitan (2012) in her study on bank credit and economic growth in Nigeria empirically observed a reverse causation between real output and financial development and established that for factors that influence credit growth, trade variable measured by total exports and export of oil (which accounts for a significant aspect of the country's total exports) all measured in real terms are not adequate for the development of the financial sector within the country. Real total capital flow, export of non-oil and total import all measured in real terms are good in explaining this relationship. Her study also revealed that for the purpose of financial development in Nigeria, it is not where the economic activity (exports) is originating from that develops, but where intermediation for that economic activity originates from that eventually develops.

In a study on the impact of bank lending on economic growth in Nigeria carried out by Mamman and Hashim (2014), empirical results reveal statistically insignificant relationship between aggregate bank lending and economic growth in Nigeria which implies that banks in Nigeria exhibit a low level of activities and a weak capacity to fund activities in the Nigerian economy. However, the study suggests a significant relationship between Deposit Money Banks' assets and economic growth.

### 3.0 Methodology

The data employed in this study were sourced from the Central Bank of Nigeria statistical bulletins and annual accounts as well as the National Bureau of Statistics' publications. The paper adopts annual data that covers the period 1970 to 2011.

Recent studies by researchers such as Levine (2002) and Boyreau - Debray (2003) emphasize the importance of efficiency of the allocation of credit than an all bank intermediation. According to them, credit disbursed to the public sector is not strong enough to generate significant growth within the economy because they are prone to waste and politically motivated programmes which may not deliver the best results. Consequently, we used credit disbursed to the private sector rather total credit disbursement.

### 3.1 Model Specification

This study adopts, modifies and extends the model used by Vazakidis and Adamopoulos (2009) in order to enhance the robustness of our models with a view to strengthening our findings. Since there are a number of variables and proxies to measure economic growth and bank credit globally, some significant and widely accepted indicators used in this study are clearly explained below:

#### Model 1

In this study, economic growth is proxied by GDP at current prices while private sector credit is proxied by the ratio of credit allocated to the private sector to GDP. Inflation is proxied by consumer price index while lending rate is proxied by interest rate charged on loans. Capital formation is proxied by the gross capital formation while trade openness is proxied by total imports and exports to GDP.

The economic growth model is hereby formulated as follows:

$$GDP = f(PSC, CAF, INF, LER, TOP)$$

Sequel to the above, the economic growth equation is stated as follows:

$$\log GDP = \beta_0 + \beta_1 \log PSC + \beta_2 \log CAF + \beta_3 \log INF + \beta_4 \log LER + \beta_5 \log TOP + \varepsilon_{1t} \quad \text{-- Equation (1)}$$

Where:

GDP = The gross domestic product at current basic prices.

PSC = The annual domestic bank credits to private sector as a ratio of the GDP.

CAF = Capital formation proxied by gross fixed capital formation as a ratio of the GDP.

INF = Inflation rate proxied by consumer price index.

LER = The lending rate proxied by interest rate charged on commercial bank loans.

TOP = Trade openness proxied by the ratio of total imports and exports to GDP.

$\beta_0$  = constant or intercept term

$\varepsilon_t$  = Error term which is assumed to be random real variable with zero mean and a constant variance.

t = time period.

$\beta_1, \beta_2, \beta_3, \beta_4,$  and  $\beta_5$  are the coefficients of the relevant variables.

#### Model 2

The private sector credit model is formulated as follows:

$$PSC = f(GDP, CAF, LER, LDR)$$

Thus, the credit equation is hereby stated as follows:

$$\log PSC = \Omega_0 + \Omega_1 \log GDP + \Omega_2 \log CAF + \Omega_3 \log LER + \Omega_4 \log LDR + \varepsilon_{2t} \quad \text{-- Equation (2)}$$

Where:

LDR = Loan-to-deposit ratios of DMB's.

PSC, GDP, CAF, LER, and  $\varepsilon_{2t}$  are as defined above under model 1.

$\Omega_1, \Omega_2, \Omega_3,$  and  $\Omega_4$  are the coefficients of the relevant variables.

$\Omega_0$  = constant or intercept term.

The above model specifications show the sources of variables to subjected to both the unit root and granger causality tests. The Akaike Information Criteria (AIC) was employed to select the optimal lag length. This study employed the techniques of unit root because many macroeconomic time series are non stationary, and therefore prone to giving spurious results. In this study, causality test was conducted to explore the transmission mechanism between bank credit and economic growth. This involved estimating the following pair of regressions:

$$GDP_t = \sum_{i=1}^n \alpha_i PSC_{t-i} + \sum_{j=1}^n \beta_j GDP_{t-j} + \mu_{1t} \quad \text{..... Equation (3)}$$

$$PSC_t = \sum_{i=1}^n \gamma_i PSC_{t-i} + \sum_{j=1}^n \delta_j GDP_{t-j} + \mu_{2t} \quad \text{..... Equation (4)}$$

Where;

$\alpha_i, \beta_j, \gamma_i,$  and  $\delta_j$  = parameters to be estimated

$i$  = the optimal lag length.

$\mu$  = Error term assumed to be normally and randomly distributed with zero mean and constant variance.

### 3.2 Hypotheses Tested

We tested the following hypotheses:

$H_{01}$ : There exist no directional causality between private sector credit and economic growth.

$H_{11}$ : There exist causality between private sector credit and economic growth.

**Decision Criterion:** The  $H_0$  is not rejected when the coefficients of PSC and GDP are not statistically significant in both regressions.

## 4.0 Results and Discussion

### 4.1 Interpretation of Unit Root Test Results and Discussion of Findings

All variables were non-stationary at level as indicated by the absolute values of the ADF test statistic; (column two) been less than the McKinnon 1% critical values (column four). However, the time series of all the variables (logged) become stationary at first difference (Table 1). This implies that the logged variables being stationary at first difference would generate reliable and not spurious results.

**Table 1: Results of Unit Root Test**

Variable	ADF Test Statistic at Level	ADF Test Statistic at 1 <sup>st</sup> Difference	1% Critical Value of Level	1% Critical Value of first Difference	Order of Integration
LOGGDP	-1.644577	-5.678028	-4.198503	-4.205004	I(1)
LOGPSC	-2.320552	-6.328727	-4.198503	-4.205004	I(1)
LOGLER	-2.726601	-9.030783	-4.198503	-4.205004	I(1)
LOGINF	-3.647018	-6.343637	-4.198503	-4.205004	I(1)
LOGLDR	-3.214863	-5.175693	-4.198503	-4.205004	I(1)
LOGCAF	-1.983620	-5.920809	-4.198503	-4.205004	I(1)
LOGTOP	-2.046518	-5.836856	-4.198503	-4.205004	I(1)

Source: Authors' Computation (2014)

#### 4.2 Interpretation of Granger Causality Test Results and Discussion of Findings

The Granger Causality Tests were carried out for the short run and the long run and the results are separately presented in tables 2 and 3 respectively.

**Table 2: Result of Short Run Granger Causality Test**

Pairwise Granger Causality Tests			
Date: 02/08/14 Time: 14:28			
Sample: 1970 2011			
Lags: 6			
Null Hypothesis:	Obs	F-Statistic	Prob.
D(LOGPSC) does not Granger Cause D(LOGGDP)	35	3.09230	0.0238
D(LOGGDP) does not Granger Cause D(LOGPSC)		1.81781	0.1419
D(LOGCAF) does not Granger Cause D(LOGPSC)	35	1.02146	0.4374
D(LOGPSC) does not Granger Cause D(LOGCAF)		2.18090	0.0842
D(LOGLER) does not Granger Cause D(LOGPSC)	35	0.89798	0.5138
D(LOGPSC) does not Granger Cause D(LOGLER)		1.61312	0.1907
D(LOGLDR) does not Granger Cause D(LOGPSC)	35	0.94140	0.4859
D(LOGPSC) does not Granger Cause D(LOGLDR)		0.51212	0.7927
D(LOGLER) does not Granger Cause D(LOGCAF)	35	1.29865	0.2988
D(LOGCAF) does not Granger Cause D(LOGLER)		1.08663	0.4008
D(LOGLDR) does not Granger Cause D(LOGCAF)	35	0.66543	0.6782
D(LOGCAF) does not Granger Cause D(LOGLDR)		0.31414	0.9227
D(LOGLDR) does not Granger Cause D(LOGLER)	35	0.53074	0.7790
D(LOGLER) does not Granger Cause D(LOGLDR)		0.74895	0.6167

Source: Authors' Computation (2014)

In the short run, there is unilateral flow of causality which runs from credit disbursed to the private sector (PSC) to economic growth (GDP) because we reject the null hypothesis that credit disbursed to the private sector does not granger-cause economic growth (GDP) at 5% level of significance (Table 2).

At the same level of significance, we observed that there exists no causality flow (either way) between: gross fixed capital formation and private sector credit, lending rate and private sector credit, loan-to-deposit ratio and private sector credit, lending rate and gross fixed capital formation, loan-to-deposit ratio and gross fixed capital formation, as well as between lending rate and loan-to-deposit ratio. Thus, there exists no causality between private sector credit and any of its explanatory variables, except with economic growth where causality flows from private sector credit to economic growth. It must be stated that this does not in any way imply independence between private sector credit and its indicators (i.e. economic growth, gross fixed capital formation, lending rate, and loan-to-deposit ratio). The implication of this condition in the short run is that none of these indicators can be exclusively used to accurately forecast credit disbursed to the private sector in the short run, which means that other factors such as ability of the borrower to meet the banks' requirements, credit policies of Deposit Money Bank's (DMB's), turnaround time, and competitive intelligence, among others are important in forecasting the volume of credit disbursed to the private sector.

**Table 3: Result of Long Run Granger Causality Test**

Pairwise Granger Causality Tests			
Date: 02/08/14 Time: 14:30			
Sample: 1970 2011			
Lags: 6			
Null Hypothesis:	Obs	F-Statistic	Prob.
LOGPSC does not Granger Cause LOGGDP	36	2.56414	0.0475
LOGGDP does not Granger Cause LOGPSC		1.65062	0.1786
LOGLER does not Granger Cause LOGCAF	36	2.17468	0.0831
LOGCAF does not Granger Cause LOGLER		1.12421	0.3794
LOGLDR does not Granger Cause LOGCAF	36	0.61007	0.7198
LOGCAF does not Granger Cause LOGLDR		0.59118	0.7340
LOGLDR does not Granger Cause LOGLER	36	1.65355	0.1778
LOGLER does not Granger Cause LOGLDR		0.46197	0.8291
LOGCAF does not Granger Cause LOGPSC	36	0.64541	0.6932
LOGPSC does not Granger Cause LOGCAF		2.10224	0.0923
LOGLER does not Granger Cause LOGPSC	36	0.71195	0.6436
LOGPSC does not Granger Cause LOGLER		2.51479	0.0509
LOGLDR does not Granger Cause LOGPSC	36	1.14240	0.3700
LOGPSC does not Granger Cause LOGLDR		0.22700	0.9637

Source: Authors' Computation (2014)

Table 3 shows that there is unilateral flow of causality from credit disbursed to the private sector (PSC) to economic growth (GDP) in the long run. That is, private sector credit granger-causes economic growth (GDP) at 5% level of significance. This is because we reject the null hypothesis that credit disbursed to the private sector does not granger-cause economic growth (GDP) at 5% level of significance.

The results obtained in the long run causality test are similar to what obtains in the short run. For instance, we observe that there exists no causality flow (either way) between: loan-to-deposit ratio and gross fixed capital formation, lending rate and gross fixed capital formation, loan-to-deposit ratio and private sector credit, lending rate and private sector credit, gross fixed capital formation and private sector credit, as well as between lending rate and loan-to-deposit ratio. The implication of this condition in the long run is that none of these indicators can be exclusively used to accurately forecast credit disbursed to the private sector in the long run, which means that other factors such as ability of the borrower to meet the banks' requirements, credit policies of DMB's, turnaround time, and competitive intelligence, among others are important in forecasting the volume of credit disbursed to the private sector in the long run.

These results indicate that credit disbursed to the private sector “granger-causes” economic growth both in the short and long run. Therefore, injection of private sector credit into the economy is a veritable way of increasing rate of economic growth in the short and long run. The above results corroborate the theory of finance-led growth championed by Schumpeter (1911), Mckinnon (1973), Shaw (1973) and King and Levine (1993).

## 5.0 Conclusion and Recommendations

This study appraises the bank credit, economic growth nexus in Nigeria, using granger causality analysis. Overall, it emerges that private sector credit “granger-causes” economic growth. Thus, it can be concluded that growth in bank credit influences economic growth. Therefore, any policy embarked upon either by the government and/or the Central Bank of Nigeria aimed channeling more credit to the private sector would invariably promote financial intermediation and directly enhance economic growth in Nigeria. Apart from enriching the extant literature on finance-growth nexus, this study fills the gap in existing knowledge by revealing that the bank credit, economic growth nexus in Nigeria is “supply-leading”.

Based on the findings from this study, we put forward the following recommendations:

- i. The Central Bank of Nigeria (CBN) should prescribe and enforce rules on sectoral allocation of credit between the private sector and public sector with a higher proportion skewed in favour of productive private sector investments rather than household consumption. This should also be well diversified. When greater emphasis is given to the firms rather households, economic growth would be accelerated as Nigerian economy is import-dependent.
- ii. The CBN should intensify supervisory and oversight roles on Deposit money Banks (DMB’s) with a view to leveraging credit disbursement as a tool for economic growth.
- iii. The CBN should ensure continual improvement in the quality of bank lending in order to achieve faster growth. This is to forestall deterioration in credit quality that always attend rapid credit growth as banks’ management and operational processes are progressively strained by increased volume of banking business.
- iv. Loan beneficiaries and DMB’s should ensure judicious use of credits in order to drive the desired level of economic growth, which would also engender increased income for individuals and firms.

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## References

- Ademu, W. A. (2006). “The Informal Sector and Employment Generation in Nigeria: The Role of Credit.” *Employment Generation in Nigeria*. Selected Papers for the 2006 *Annual Conference* of the Nigerian Economic Society, in Calabar, August 22nd to 24th.
- Ajayi, S.I. and O.O. Ojo (2006): *Money and Banking – Analysis and Policy in the Nigeria Context*. Second Edition. Daily Graphics Nig. Ltd.
- Bencivenga, V. R. and Smith B. D. (1991). Financial Intermediation and Endogenous growth.
- Boyreau-Debray, G. (2003), “Financial Intermediation and Growth –Chinese Style” Policy Research Working Paper 3027, the

- World Bank. Review of Economics Studies. Vol. 58, P. 195-209
- Boyd, J. H., & B.D. Smith (1997), "Capital Market Imperfections, International Credit Markets, and Non-convergence," *Journal of Economic Theory*, 73: 335–64.
- Cappiello, L., A. Kadareja, C.K. Sørensen and M. Protopapa, (2010). "Do Bank Loans and Credit Standards have an effect on Output? A Panel Approach for the Euro Area", European Central Bank Working Paper Series, No 1150 / January
- Central Bank of Nigeria (2003). CBN Briefs. Abuja: Research Department.
- Demetriades O. P., and A.K. Hussein (1996). Does Financial Development Cause Economic Growth? Time Series Evidence from 16 Countries. *Journal of Development Economics*, 51(2), 387-411.
- Ekpo, A.H. (2013) Promoting Inclusive Growth in Nigeria. A Public Lecture Paper Presented at the University of Lagos on 13th June organized by Economics Department.
- Gurley, J., & Shaw, E. (1967). Financial Structure and Economic Development. *Economic Development and Cultural Change*, 15(3), 257-268.
- Dey, M.K. & S. Flaherty (2005), "Stock Exchange Liquidity, Bank Credit, and Economic Growth". Paper presented at the Max Fry Conference on Finance and Development, University of Birmingham, The Business School University House, Birmingham
- Goldsmith, R. W. (1969). *Financial Structure and Development*. New Haven CT: Yale University Press.
- Ianchovichina, E. and L. Galbe (2012) "What is Inclusive Growth Process?" World Bank, Washington D.C., USA,
- Ekpo A., (2013) Promoting Inclusive Growth in Nigeria. A Distinguished Public Lecture Paper Presented at the University of Lagos on 13th June.
- Jhingan, M.L. (2005) *The Economics of Development and Planning*. Vrinda Publications (P) Ltd. Delhi.
- Jhingan, M. L. (2006). *The Economics of Development and Planning* (38th Ed). Delhi: Virnda Publication (P)Ltd.
- Kasekende, L. (2008). "Developing a Sound Banking System". A Paper presented at IMF Seminar, Tunisia.
- Khan, M.S. and A. S. Senhadji, (2000) "Financial Development and Economic Growth: An overview" IMF working Paper, WP, 00/209, December.
- King, R. G., & Levine, R. (1993) Finance and Growth: Schumpeter Might Be Right. *Quarterly Journal of Economics*, 108, 717-738.
- Korkmaz, S. (2015) Impact of Bank Credits on Economic Growth and Inflation. *Journal of Applied Finance & Banking*, vol. 5, no. 1, 2015. Science press Ltd .
- Levine, R. (2002), "Bank-based or Market-based Financial System: Which is better" *Journal of Financial Intermediation*, 11 (4) 398-428.
- Levine, R., (1997), "Financial Development and Economic Growth: Views and Agenda". *Journal of Economic Literature*, 35: 688-726.
- Mamman, A. and Hashim, Y.A. (2014) Impact of Bank Lending on Economic Growth in Nigeria. *Research Journal of Finance and Accounting* Vol.5, No.18, 2014. Accessed at [www.iiste.org](http://www.iiste.org) on 2nd November, 2015.
- Mishra, P. K.; K.B. Das & B.B. Pradhan (2009). "Credit Market Development and Economic Growth in India", *Middle Eastern Finance and Economics*, ISSN: 1450-2889, Issue 5
- McKinnon, R. (1973). *Money and capital in Economic Development*. Washington: The Brookings Institute.
- Nnanna, O. J., Englama, A., and Odoko, F. O. (Eds.) (2004). *Financial Markets in Nigeria*. Abuja: Kas Arts Service.
- Nurkse, R. (1955) *Problems of Industrialisation of Eastern and South-Eastern Europe* in Aggarwal and Singh.
- Nwanyanwu, J. (2010) *An Analysis Of Banks' Credit On The Nigerian Economic Growth (1992- 2008)*. *Jos Journal Of Economics*, Vol.4, No.1.
- Odedokun, M. O. (1989). "Causalities between Financial Aggregates and Economic Activities: The Results from Granger Test" *Savings and Development*, 23 (1), 101- 111.
- Olomola, S.A. (1995). "Cointegration, Error-Correction and Causality: Exploring the Relationship between Financial Deepening and Economic Growth in Nigeria, 1962-1992", *Ife Journal of Economics and Finance*, 2 (2).
- Oluitan, R.O. (2012) *Bank Credit and Economic Growth: Evidence from Nigeria*. Canadian Research & Development Center of Sciences and Cultures. PP 101- 110.
- Robinson, J. (1952). *The Generalization of the General Theory*. In *The Rate of Interest, and Other Essays* (67-146). London: McMillan.
- Schumpeter, J. A. (1911). *The Theory of Economic Development*. Cambridge, Mass: Harvard University Press.
- Shaw, E.S. (1973). *Financial Deepening in Economic Development*. New York: Oxford University Press.
- Spencer, H. M. (1977) *Contemporary Macroeconomics* (3rd Ed). New York: Worth Publishers.
- World Bank (2013) *Reaction Trails World Bank's Economic Rating of Nigeria* Available at [www.vanguardngr.com/2013/05](http://www.vanguardngr.com/2013/05)