

Private Sector Funding and Economic Growth in Nigeria

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Abstract

The motivation behind this study is to experimentally look at the connection between private sector funding and economic growth in Nigeria. The paper looked at data from the Central Bank of Nigeria quarterly information from 1981Q1 to 2017Q4 with the E-views programming bundle (variant 9.0). The Vector Auto Regression (VAR) procedure was utilized to investigate the information, while hypothesis testing depended on the Block Exogeneity Wald test. The predetermined models included stationarity tests, diminished structure VAR gauge and primary examination. The Augmented Dickey Fuller Test demonstrates that the examination factors are fixed at first contrast or $I(1)$. The VAR establishes plot corresponding to unit circle demonstrates that our predetermined diminished structure VAR models are steady. The Lagrange Multiplier (LM) symptomatic tests demonstrate that our predetermined VAR models are effectively indicated. The p -esteem shows that private sector funding proportion is critical in clarifying varieties in economic growth ($p = 0.0205$). It is suggested that the Central Bank of Nigeria should persuade deposit money banks to reduce the current interest rate margin by reducing the lending rate and increasing the deposit rates. This would significantly reduce the current high financial exclusion rate as cost of borrowing would decrease while the level of domestic savings would increase.

Keywords: *Capital Market Development, Volume of Stock, Market Capitalization, Banking System Capitalization and Economic Growth*

INTRODUCTION

Background to the study

Financial resources are basic ingredients for the growth of an economy provided they are not idle. These resources become active through financial intermediation. Financial intermediation is the process whereby financial resources are mobilized by banks in the form of savings and transformed into credit. It is the root institution in the savings-investment process (Clorton and Winton, 2002).

Mostly banks act as conduit for financial intermediation and they are regarded as financial intermediaries but there are other institutions that perform the activities of financial intermediation such as pension fund scheme, insurance firms, investment banks etc.

Onoh (2002) observed that, the Nigerian financial sector comprises various segments including the 'regulatory and. supervisory authorities for banks and non-bank financial institutions, others are the money market and its institution, the capital market and its players. Sulaiman, Migiro and Yeshihareg (2015) opine that financial intermediaries play a significant role within a nation's financial system by mobilizing funds from the surplus economic units and channeling to the deficit economic units of the economy.

Financial intermediaries, all over the world play crucial roles in the development and growth of the economy. An economy is made up of fund suppliers and fund suppliers. Financial intermediaries are those institutions in financial

market that mediate between the fundraisers and the fund hers. They carry out intermediation between surplus and deficit units of economy (Efayena, 2014).

One of the activities of financial institutions (banks.) involves, intermediating between the surplus and deficit sectors of the economy. According to Bencivenga and Smith (1991 as cited in Chinweoke et al 2014), the basic activities of banks are acceptance of deposits and lend 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 mating or reducing the need for self-financing of investments.

Financial intermediation efficiently managed contributes greatly to a vibrant financial system, increased output levels, employment, and income (Agbada Osuji, 2013). Greenwood and Jovanovic (1990) recognize that financial intermediation allows capital to earn a higher rate of return - thus enhancing economic growth. According to Acha (2011), Despite the advantages liberalization and similar policies have enjoyed, economists remain divided in their opinions concerning the relationship between financial institutions and economic growth. An investigation into the different sheds of opinions in this regard reveals a long and contentious history. Bagehot (1873) and Hicks (1969) argued that the financial system played a critical role in igniting industrialization in England by facilitating the mobilization of capital.

In line with this thinking, Schumpeter (1934) contends that well-functioning banks spur technological innovations by identifying and funding entrepreneurs assessed to have brighter chances of successfully implementing innovative products and production processes. Several empirical studies support the position that financial factors play important role in economic growth. They categorically state that a first order relationship exists between financial development and economic growth (McKinnon,

1973; Shaw, 1973; King & Levine, 1993a&b, Levine, 1997; Montiel, 2003).

Considering the important growth role ascribed to financial institutions in many developing countries including Nigeria, the dissenting views that banks do not cause economic growth cannot be overlooked. That is why this study investigates the causal link between financial intermediation activities of banks and economic growth.

Statement of the problem

Studies into the relationship between private sector funding and economic growth has in the past decades attracted momentous attention from finance and development experts and has also been the subject of academic discuss by researchers. This discussion presents its form in four main theoretical propositions which include the supply-leading hypothesis (McKinnon, 1973; Shaw, 1973; Neusser & Kugler, 1998), demand-pulling hypothesis (Robinson, 1952; Patrick, 1966; Ireland, 1994), the endogenous growth theory (Greenwood & Smith, 1997; Blackburn & Hung, 1998) and the Stern-Lucas proposition (Kuznets, 1955; Meir & Seers, 1984; Lucas, 1988; Stern, 1989).

To make for a sound and vibrant financial system, certain financial reforms had in one time or the other been initiated by different regimes in Nigeria. In 1987 for instance, as part of the Structural Adjustment Programme (SAP) which includes the deregulation of foreign exchange market, interest rates, rationalization of credit controls, licensing of new banks as well as institutional and regulatory changes were carried out (Ikhide and Alawode, 2002).

More recently, more in-depth financial restructurings have been initiated which includes the restructuring of pension fund administration in 2004, bank recapitalization and consolidation policy in 2005, insurance recapitalization and restructuring in 2007, introduction of micro finance banks as well as capital market reforms. These financial reforms

were expected to bring about an efficient financial system that would encourage domestic savings and investment and consequently lead to economic growth and development.

These expectations however, seems to be far-fetched evidenced by decreasing economic indices including the economic recession experienced by the country in 2018. Adeoye and Adewuyi (2005) laid credence to this assertion by acknowledging that the major concern now in Nigeria is that financial institutions (mostly banks) seem not to have performed to expectations in terms of mobilizing savings for financing long-term development projects in the real sector. Furthermore, there is no apparent and substantial contribution of financial deepening to economic growth in the post-SAP era (Ayadi, Adegbite and Ayadi, 2008 and Ayadi, 2009). However, Nzotta and Okereke (2009) noted that some studies on private sector funding and economic growth in Nigeria relied mostly on money market indicators (Ogun, 1986; Oyejide, 1986; Edo, 1995; Ndebbio, 2004; and Akinlo and Akinlo, 2007), thereby neglecting the contributions of the capital market and established a positive and significant relationship between private sector funding and economic growth.

Furthermore, some of these studies have assumed either theories or methodologies that omit some of the direct (credit supply and broad money supply) and indirect (market capitalization) channel(s), or models that ignore the short run effects. The Nigerian economy has not really experienced impressive performance such as attraction of foreign investment and halting of capital flight. The banking sector seems not to have made a significant effort in addressing the financial gaps in the system.

This is evident to the fact that neither domestic savings nor investments in the country have increased appreciably as the sector still remained largely oligopolistic and

uncompetitive, with few large banks controlling the greater segment of the market in terms of total assets, total liabilities and total credit in the banking system. It becomes imperative therefore to ascertain the effectiveness of these reforms by looking at the effects they have made in terms of contributing to economic growth.

Interestingly enough, specific studies on the finance-growth nexus in Nigeria is still flawed with major controversies ranging from conflicting results and inappropriate methodologies to inadequate inclusion of private sector funding variables and indicators which makes the results unreliable. It is against these backgrounds that this study seeks to investigate the relationship between private sector funding and economic growth in Nigeria using quarterly data for the period (1981Q1-2017Q4) which gives a wider range of observations and of course a more reliable result based on larger number of observations which is lacking in other studies.

The study assumes a Vector Auto-regressive (VAR) and Vector Error Correction (VECM) framework. The advantages of these techniques are that it makes it possible to differentiate between the short-run and long-run causality if the variables are co-integrated and minimizes endogeneity problem since it treats all variables as potentially endogenous.

Finally, it models relationships among macroeconomic variables in a dynamic manner since it is common for macroeconomic variables to be affected by their own past values. Thus, it enables us study the impact of unanticipated shocks on the endogenous variables (impulse response functions). The relative importance of each variable in explaining the variations in the endogenous variables can also be examined (variance decomposition analysis).

Objectives of the Study

The objectives of this study include (1) To determine the relationship between credit to private sector ratio and economic growth in Nigeria. (2) To determine the relationship

between credit to core private sector ratio and economic growth in Nigeria. (3) To determine the relationship between credit to private sector ratio to non-oil GDP and economic growth in Nigeria.

Research Questions

The research questions for this study include (1) What is the nature of the relationship between credit to private sector ratio and economic growth in Nigeria? (2) What is the nature of the relationship between credit to core private sector ratio and economic growth in Nigeria? (3) What is the nature of the relationship between credit to private sector ratio to non-oil GDP and economic growth in Nigeria?

Research Hypotheses

- Ho₁:** There is no significant relationship between credit to private sector ratio and economic growth in Nigeria
- Ho₂:** There is no significant relationship between credit to core private sector ratio and economic growth in Nigeria
- Ho₃:** There is no significant relationship between credit to private sector ratio to non-oil GDP and economic growth in Nigeria

LITERATURE REVIEW

Conceptual Framework

Concept of Economic Growth

Economic development can be viewed as the increment in the limit of an economy to deliver labor and products throughout some undefined time frame. It is achieved by the increment in the useful limit of a country. In the perspectives on Antwi, Mills and Zhao, (2013), monetary development can be characterized as the development in a country's genuine GDP (an increment in a country's yield of labor and products) or the actual extension of the country's economy. Financial development can likewise be clarified as a positive change in the yield of a country's assembling labor and products which stretch throughout a specific time frame as indicated by (KanuandOzurumba, 2013).

Being a total proportion of absolute monetary creation of a country, it along these lines address the market worth of every single last great and administrations including individual utilization, private inventories, government buys, paid-in development costs just as unfamiliar exchange adjusts. The most satisfactory proportion of financial development is the Real Gross Domestic Product (RGDP) which is considered as the broadest marker of monetary yield and development.

It is intended to gauge the worth of creation of those exercises which falls inside the limit of the public bookkeeping framework. Gross domestic product estimates financial development in money related terms. Gross domestic product can be communicated either in ostensible terms which incorporate expansion or in genuine terms which adapts for swelling. Transient GDP addresses the yearly rate change in genuine public yield, while Long term GDP addresses the expansion in pattern or expected GDP. In near examinations including various nations of various populace sizes, GDP per capita is commonly used.

Private Sector Funding and Economic Growth

Financial intermediation roles are commonly performed by the financial sector, which basically channels savings into productive investments. Deposit taking institutions in particular are well known for carrying out the vital role of sourcing funds to facilitate private sector consumption and investment in Nigeria. Credit to private sector denotes financial resources provided to the private sector, such as loans and advances, purchases of non-equity securities, trade credits and other account receivables, which institutes a claim for repayment. Following this therefore, credit can be viewed from two perspectives; which includes trade or commercial credit and banking system credit.

Freear (1980) sees trade credit as transactions which involve the supplier handing over goods

or rendering services without receiving instant payment. In recent times, private sector credit and economic growth relationship have been in the front burner in economic discourse all over the world and supporting empirical literature have been inconclusive on this issue.

Nevertheless, balance of evidence seems to suggest a positive relationship between private sector credit and economic growth. This credence has led the Nigerian government through the instrumentalities of the Central Bank of Nigeria to continue to build a healthy and inclusive financial system to expedite economic growth.

Theoretical Review

The Financial Repression Theory

This theory was postulated by McKinnon and Shaw in (1973). The theory holds that financial deregulation in a financially repressed economy would prompt higher savings, increase credit supply, boost investment and as a result lead to economic growth. This is because according to McKinnon's model (1973), investment in a typical developing economy is mostly self-financed, and because of its lump-filled nature, investment cannot take place unless adequate saving is amassed in the form of bank deposits.

Shaw (1973) also hypothesized that financial intermediaries boost investment by raising output growth through borrowing and lending. Conversely, they hold that interest rate regulation largely lead to low and occasionally negative real interest rate which daunts savings and subsequently shorten potential investments. Hence, investment is inadequate due to low savings mobilization. The main assumption of the complementary hypothesis of McKinnon-Shaw is that savings responds to interest rate, hence higher savings rate following an better interest rate would finance a greater level of investment. Thus they concluded that when the financial sector is repressed, it only responds reflexively to the real sector, and the converse would be the case if the financial sector is liberated.

Nevertheless, the separate and independent work of McKinnon (1973) and Shaw (1973) are not without some grave criticisms, specifically from current theoretical and empirical studies on the causality between financial development and economic growth. Fundamentally, two foremost literatures have developed as the pioneer divide of the confirmation that styled the supply-leading hypothesis and the demand-following hypothesis, while other theorists that could not fall in line with these strong theoretical divide, especially researchers from development economics settled for a group known in finance-growth literature as the Neo-Structuralist school.

Empirical Review

Private Sector Funding and Economic Growth

Agbaeze and Onwuka (2014) investigate the effects of financial liberalization on investment using the generalized least square model to evaluate the investment model and the firm level performance following the financial liberalization. The study also used the cumulative sum and the cumulative sum square to test for structural stability. The results show that private sector investment has not been enhanced following financial liberalization due to unfavourable macroeconomic environment. The study then suggests that government should encourage monetary stability, ensure favourable macroeconomic environment and provide basic infrastructure that will enable private investment bloom in the economy.

Emecheta and Ibe (2014) examine the relationship between bank credit and economic growth in Nigeria. The study used the reduced Vector Auto-regression approach adopting annual data for the period 1960-2011. The study found a significant positive relationship between bank credit and economic growth during the period under review.

Cappiello *et al* (2010) study the effect of bank credit on economic growth in the Euro area using panel data methodology. The study found that the supply of credit, as it relates to volumes

and credit standards applied on loans to enterprises, have significant effects on real economic activity. This means therefore that a positive change in loan growth will have a positive and statistically significance on Gross Domestic Product.

Chang *et al.* (2008) examine bank fund reallocation and economic growth in China. The study use branch panel data and the result reveal a significant relationship between bank credit and economic growth.

Vazakidis and Adamopoulos (2009) examine the relationship between credit market development and economic growth for Italy for the period 1965-2007. The study use Vector Error Correction Model (VECM). The result reveals a positive and significant relationship between credit and economic growth for the period under review.

Were *et al.* (2012) examine the effects of bank credit to the different sectors of the economy through a sectorial panel data analysis for Kenya. The study reveal that bank credit had positive and significant impact on sectorial gross domestic product measured in terms of real value added.

King and Levine (1993) carried out a cross country analysis as well as a pooled cross country, time series study which utilized Barros endogenous growth models to study the link between financial development and economic growth. The measures of financial development utilized include ratio of liquid liabilities of banks and non-bank institutions to GDP(M2/GDP), ratio of bank credits to the sum of bank and central bank assets, ratio of private credits to domestic credits and ratio of private credits to GDP. The study found out that the average level of financial development for the period 1960-1989 was very strongly associated with growth.

Okafor et al (2016) investigated causality and impact study on financial deepening and economic growth in Nigeria for a-33-year period covering 1981–2013 using Granger

causality test . The study found out that there is a long run relationship between economic growth, broad money supply and private sector credit, with high speed of adjustment towards long run equilibrium.

RESEARCH METHODS

Research Design

This study adopts an ex-post facto research design approach for the data analysis. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables.

Nature/Sources of Data

To examine the effects of private sector funding on economic growth in Nigeria, secondary data consisting of quarterly time series data are used covering the period from 1981Q1 to 2017Q4. Hence, the data comprising of a total of 148 observations is considered rich enough to produce reliable results. The data are all sourced from secondary sources from the Central Bank of Nigeria database.

Method of Data Analysis

The common vector auto-regressive (VAR) methodology is employed. VAR models are mostly appropriate for modeling the dynamic behaviour of most macroeconomic and financial time series data. It is also used for forecasting (Ouliaris, Pagan & Restrepo, 2016). The use of VAR as a modeling system of auto-regressive time series has several advantages which includes its flexibility nature (Brooks, 2008), forecast generated is highly reliable (Ouliaris, Pagan & Restrepo, 2016), and VAR models provide window for analyzing causal impacts of policy shocks through impulse response function, variance decomposition and Granger causality. This is consistent with the aim of this study which is to examine the effect of capital market development on economic growth.

Empirical Model Specification

Model 4: Private Sector Credit and Economic Growth

$$RGDPG = f(CPS, CCPS, CPNO) \quad (3.1)$$

Where;

RGDPG = Real Gross Domestic Product

CPS = Credit to Private Sector Ratio to GDP

CCPS = Credit to Core Private Sector to GDP

CPNO = Credit to Private Sector Ratio to Non-Oil GDP

The econometric representation of the above functional model is given by:

VAR Model:

$$RGDPG_t = \gamma_{01} + \gamma_{11}RGDPG_{t-1} + \gamma_{21}CPS_{t-1} + \gamma_{31}CCPS_{t-1} + \gamma_{41}CPNO_{t-1} + \omega_{1t} \quad (3.2)$$

$$CPS_t = \gamma_{02} + \gamma_{12}RGDPG_{t-1} + \gamma_{22}CPS_{t-1} + \gamma_{32}CCPS_{t-1} + \gamma_{42}CPNO_{t-1} + \omega_{2t} \quad (3.3)$$

$$CCPS_t = \gamma_{03} + \gamma_{13}RGDPG_{t-1} + \gamma_{23}CPS_{t-1} + \gamma_{33}CCPS_{t-1} + \gamma_{43}CPNO_{t-1} + \omega_{3t} \quad (3.4)$$

$$CPNO_t = \gamma_{04} + \gamma_{14}RGDPG_{t-1} + \gamma_{24}CPS_{t-1} + \gamma_{34}CCPS_{t-1} + \gamma_{44}CPNO_{t-1} + \omega_{4t} \quad (3.5)$$

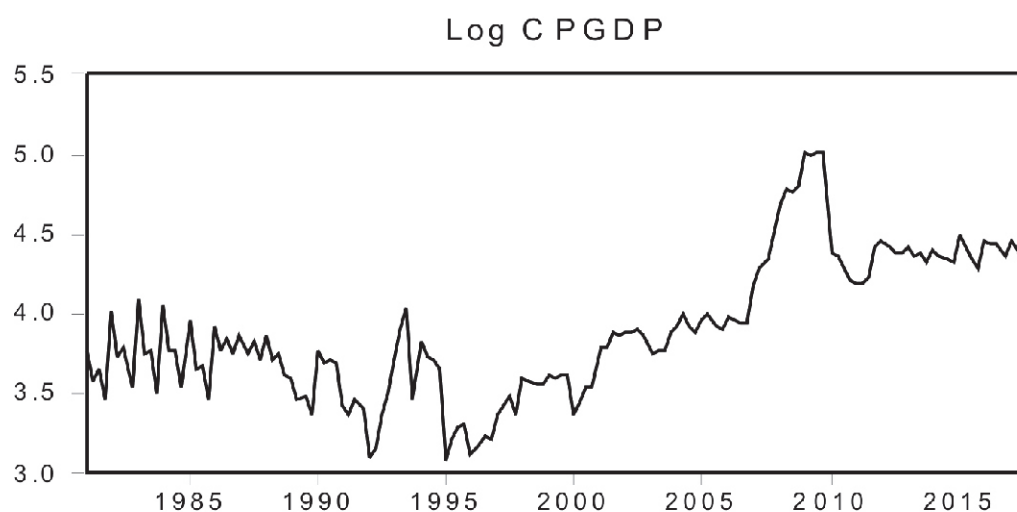
Apriori Expectations

Model 4: $RGDPG = f(CPS, CCPS, CPNO)$

Credit to private sector ratio to GDP, credit to core private sector ratio to GDP and credit to private sector ratio to non-oil GDP all are measures of private sector development and thus, expected *apriori* to have a positive relationship with real GDP.

RESULTS AND DISCUSSION

Figure 4.1 shows the time series graph for credit to private sector ratio to Gross Domestic Product, credit to core private sector ratio to GDP and credit to private sector non-oil ratio to nominal GDP, all in logarithmic form, from 1981Q1 to 2017Q4.



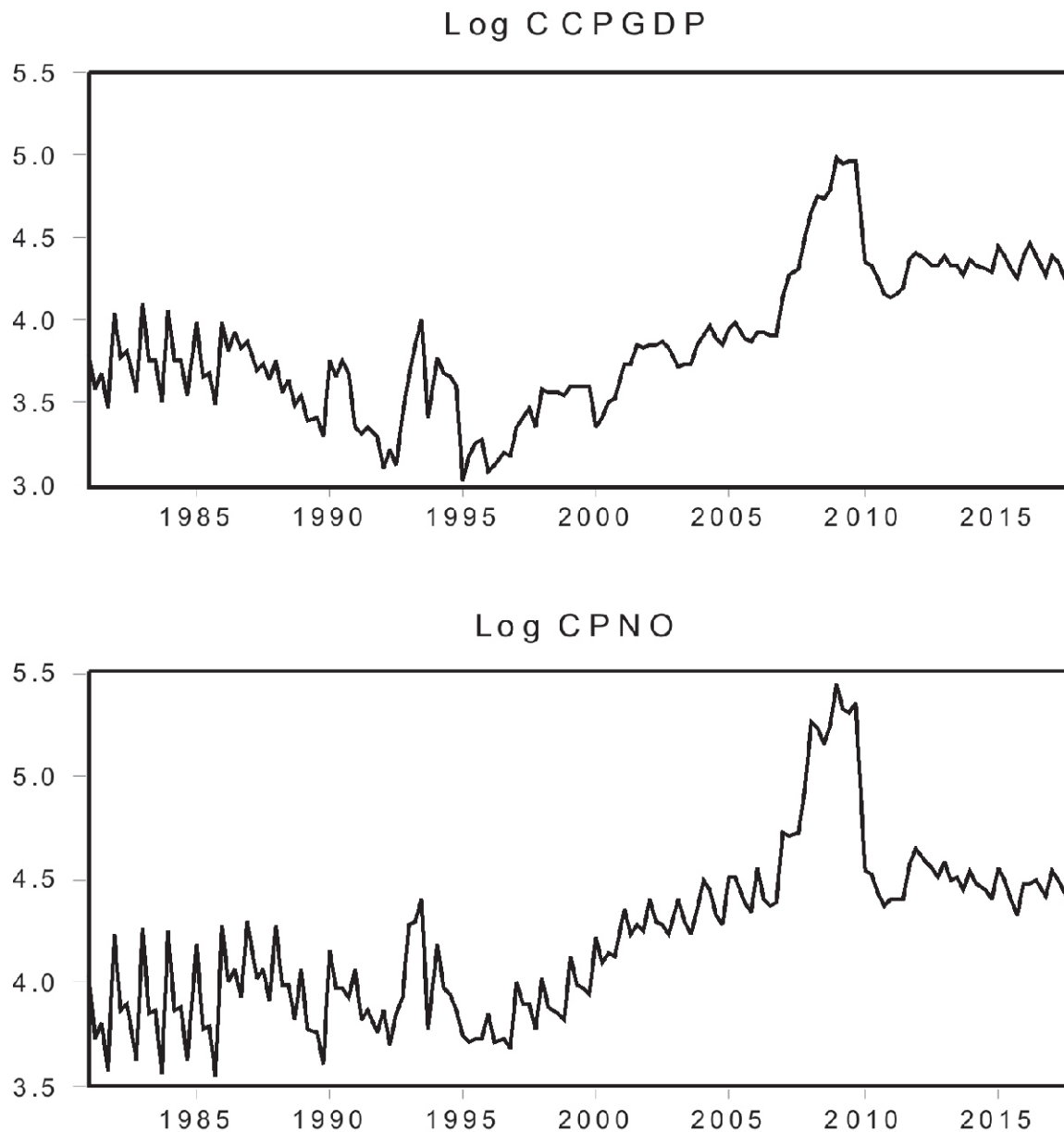


Figure 4.1: The time series plots of the log of CPGDP, CCPGDP and CPNO (1981Q1 - 2017Q4)

Source: EViews output based on Research Data

From figure 4.1, we can see that the variables;

Credit to Private Sector, Credit to Core Private Sector and Credit to Private Sector Non-oil, all show similar behaviour, showing an upward trend but like a random walk over the period under study. This shows that they are not generated by a stationary process. The descriptive statistics for these variables are shown in table 4.1

Table 4.1: Descriptive statistics for CPGDP, CCPGDP and CPNO (1981Q1 – 2017Q4)

Statistic	CPS	CCP	CPNO
\bar{x}	54.05592	52.72221	74.08322
Max	150.6464	146.7853	230.6225
Min	21.57992	20.70331	34.52815
σ	26.47390	25.62274	36.43491
s	1.572278	1.577067	2.247374
k	5.769059	5.861212	8.815039
JB	108.2615	111.8331	333.1075
P-Value (JB)	0.000000	0.000000	0.000008

Source: EViews output based on research data

From table 4.1, Credit to Private Sector Non-oil ($\bar{x} = 74.08, \sigma = 36.43$) has the highest mean and the highest variability followed by Credit to Private Sector ($\bar{x} = 54.04, \sigma = 26.46$) and then by Credit to Core Private Sector

($\bar{x} = 52.72, \sigma = 25.62$). The skewness ($s > 0$) and kurtosis ($K < 0$) coefficients indicate that the three variables all have a positively skewed and leptokurtic distributions. The JB statistic is also associated with a zero probability, showing that the normal distribution assumption is rejected for all series. Therefore, the logarithm of these variables would be used for empirical analysis in order to obtain meaningful results.

Empirical Analysis and Hypotheses Testing

Estimation and Analysis of Empirical Model

Stationarity Test

The model seeks to establish whether economic growth in Nigeria can be explained by private sector credit, credit to private sector as a ratio of nominal GDP, credit to core private sector as a ratio of nominal GDP and credit to private sector as a ratio of non-oil GDP, both expressed as a ratio of nominal GDP. The results of the ADF test for these variables are shown in table 4.2

Table 4.2: ADF tests for the RHS variables in the model

Variable	tau-statistic		Conclusion
	Level	First difference	
CPGDP	-2.4228 (0.3663)	-17.9314 (0.0000)	Difference Stationary I(1)
CCPGDP	-2.4308 (0.3622)	-17.9077 (0.0000)	Difference Stationary I(1)
CPNO	-3.5115 (0.0419)	–	Level Stationary I(0)

Source: EViews output based on research data; parenthesis contains p-values

From table 4.2, the ADF tau-statistic is not significant at all standard levels for Credit to Private Sector/GDP (p-value = 0.3663) and Credit to Core Private Sector/GDP (p-value = 0.3622), but significant at 5% level for Credit to Private Sector Non-oil (p-value = 0.0419). Thus, while the level data on both Credit to Private Sector/GDP and Credit to Core Private Sector/GDP are nonstationary, the level data on Credit to Private Sector Non-oil is stationary. On the contrary, however, the test on the first different data is highly significant for both Credit to Private Sector/GDR (p-value = 0.0000) and Credit to Core Private Sector/GDP (p-value = 0.0000), indicating that both variables are stationary at first difference. Therefore, while the unit root assumption is supported for both credit to private sector ratio to GDP and credit to core private sector ratio to GDP, it fails for credit to private sector ratio to non-oil GDP. The implication of these results is that both Credit to Private Sector/GDP and Credit to Core Private Sector/GDP would enter our VAR model in their level form, Credit to Private Sector Non-oil and Real Gross Domestic

Product would be modelled in their first difference form.

Reduced Form VAR Estimation for Model 4

Tables 4.3 and 4.4 present the VAR lag length selection and the residual diagnostic test for reduced form VAR for the empirical model 4. Again, the VAR order selection is based on AIC, SIC and HQC, and the decision rule is to select the lag order that corresponds to the minimum value of each information criterion. Also, a rebase dummy variable, DUMREBASE, is included in the model to capture the effect of the structural break observed in the first quarter of 2010 real GDP growth plot in figure 2. Further, as in the previous cases, we report the reduced form VAR estimation results for model 4 in the Appendix, since it is not easy to interpret, due to too many lags that are included.

Table 4.3: VAR order selection

Lag	AIC	SIC	HQC
0	11.68628	11.77073	11.72060
1	9.164142	9.586369	9.335724
2	9.026095	9.786103	9.334942
3	8.969917	10.06771	9.416030
4	8.370312	9.805882	8.953690
5	7.779975*	9.553326*	8.500617*
6	7.897002	10.00813	8.754910
7	7.982871	10.43178	8.978044
8	7.956896	10.74359	9.089334

Source: EViews output based on research data; *indicates the selected lag order

Table 4.4: VAR LM serial correlation test

LM statistic	p-value
17.55242	0.3507

Source: EViews output based on research data

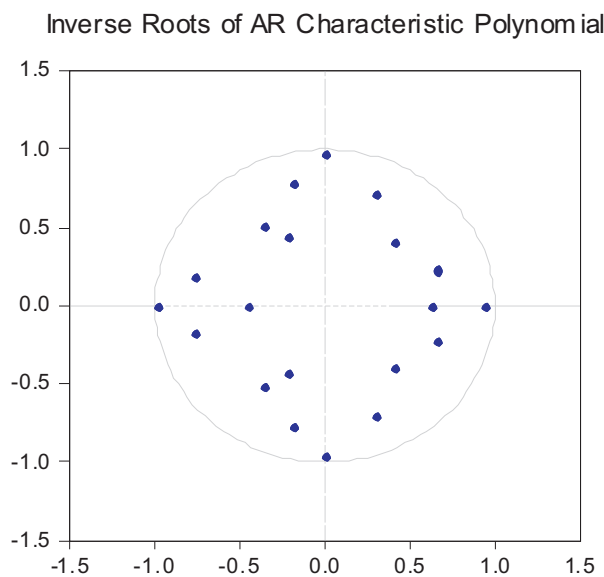


Figure 4.2: VAR roots plot in relation to unit circle
Source: EViews output based on research data

From table 4.4, as indicated by the asterisk (*), the value of the three information criteria; AIC, SIC and HQC, each is minimized at lag 5, showing that a VAR(5) specification would be appropriate for the relationships in our empirical model 6.

From table 4.4, the probability of the LM statistic is high at 0.3507, indicating that the test is not significant. Thus, we fail to reject the null hypothesis that the fitted VAR residuals are serially correlated and conclude that the fitted VAR (5) model is not wrongly parameterized.

Figure 4.2, which plots the inverted roots of the estimated VAR(5) in relation to unit circle, shows that all the roots lie inside the unit circle. Thus, the estimated coefficients are stable. This therefore implies that a structural analysis can be conducted to meaningfully interpret the fitted VAR results and test the relevant hypotheses.

Structural Analysis

Figures 4.3 and 4.4 show the impulse response function (IRF) and variance decomposition for real GDP growth for the model. The IRF helps to evaluate the impact on the Nigerian economy of unexpected changes in private sector credit, measured by credit to private sector ratio, credit to core private sector ratio and credit to private sector ratio to nominal GDP. The variance decomposition shows the contribution of each these factors to the variation in real gross domestic product. Again, six periods are used. Table 4.4 shows the VAR Granger causality/blocked exogeneity Wald test for joint significance of lags of each endogenous variable in our estimated VAR(5) model.

Response to Cholesky one S.D innovations ± 2 S.E

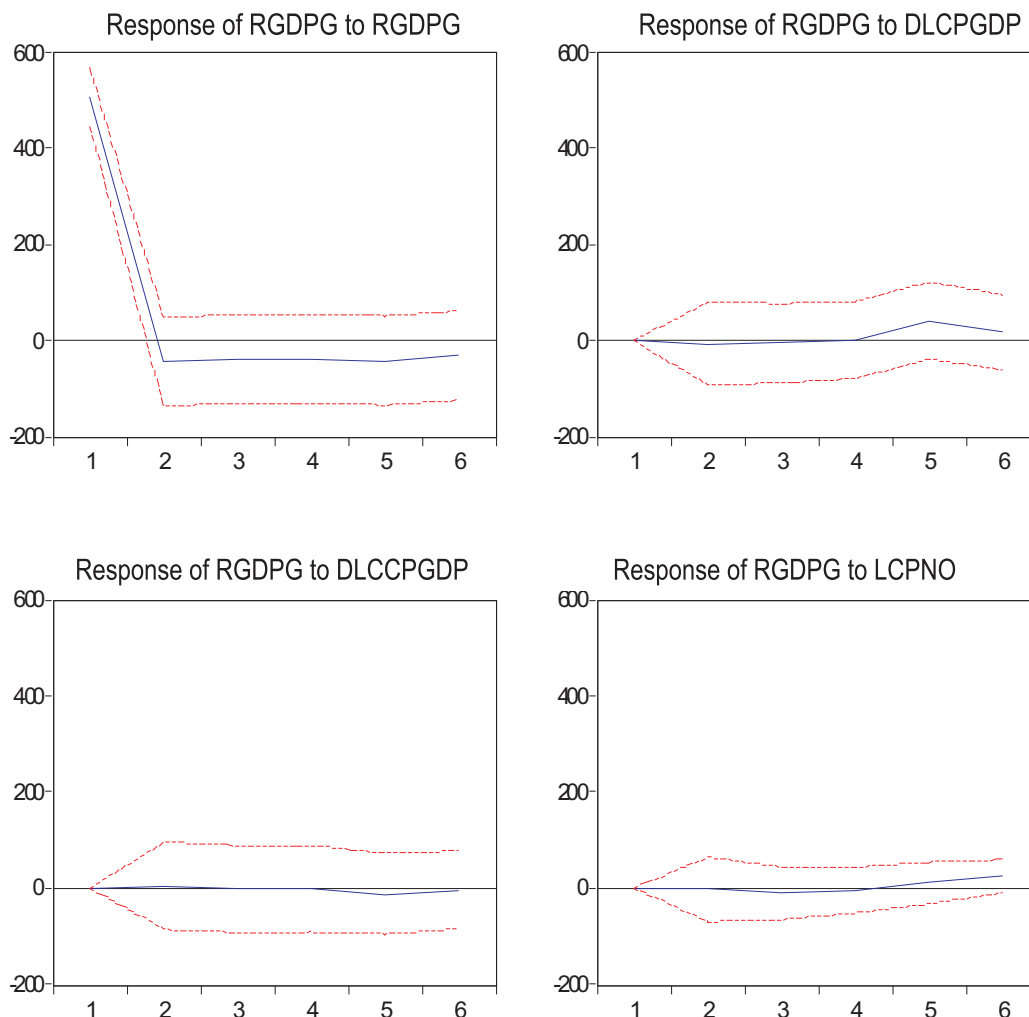


Figure 4.3: IRF for RGDPG for the model
Source: Eviews output based on research data

Variance Decomposition $\pm 3S.E$

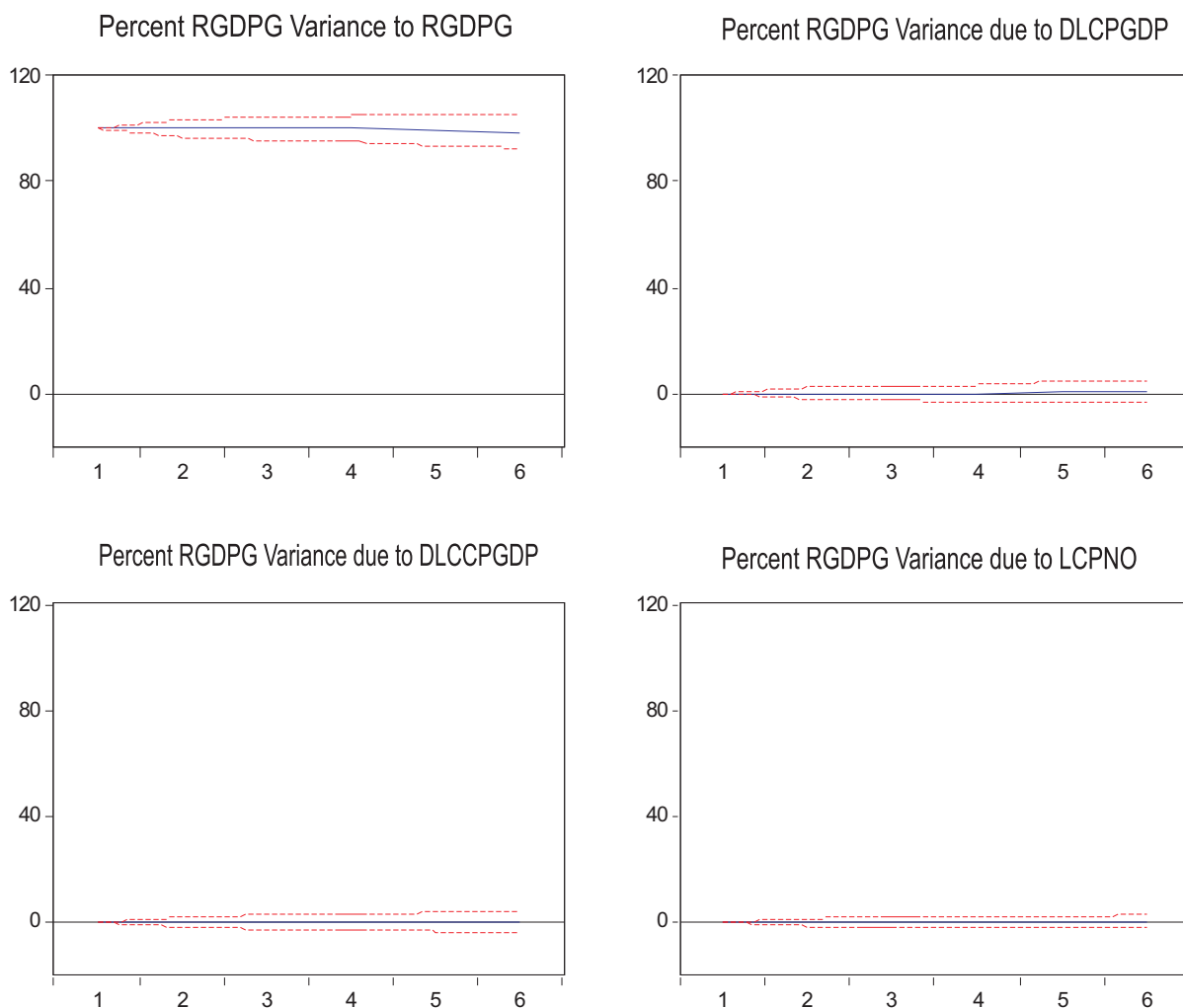


Figure 4.4: Variance decomposition of RGDPG for the model
 Source: EViews output based on research data

Table 4.5: VAR Granger causality Wald test for the model

Excluded	Chi-sq.	p-value
CPGDP	0.189062	0.9992
CCPGDP	0.150058	0.9996
CPNO	9.759288	0.0824
All	11.99973	0.6790

Source: EViews output based on research data

From figure 4.3, own shock initially has large positive effect on Real Gross Domestic Product, but the effect becomes negative at the second period and tends to zero after the sixth period. However, we can see that there is no immediate response of Real Gross Domestic Product to shock to private sector credit, with Credit to Private Sector/GDP, Credit to Core Private Sector/GDP and Credit to Private Sector Non-oil all having almost zero effect even after the fourth period.

From figure 4.4, just as own shock is the main source of variation in real GDP growth in all previous cases, most of the variations in real GDP growth in the case of model 6 is also caused by its own shock. Specifically, own shock contributes almost all the error variance in real GDP growth in all periods considered.

Testing of Hypothesis

From table 4.5, the Wald test statistic is not significant for both Credit to Private Sector/GDP (p-value = 0.9992) and Credit to Core Private Sector/GDP (p-value = 0.9996) at all conventional levels, but significant at 10% level for (p-value = 0.0824) for Credit to Private Non-oil. This implies that while changes in both credit to private sector ratio to GDP and credit to core private sector ratio to GDP have no causal impact on real GDP growth, changes in credit to private sector credit ratio to non-oil GDP has a weak causal impact on the real GDP growth.

Summary And Conclusion

This study presents an empirical examination of the causal effect of private sector funding and economic growth using Nigerian data. Private sector-growth link has been well researched, but to date no attempt has been made to provide a comprehensive analysis of this relationship from the perspective of a financial system that is still at the developing stage. Besides, the determinants of financial development are empirical questions still begging for answers. For this reason, the researchers decided to provide further insights by specifying an

empirical model focusing on private sector funding.

The VAR framework was employed and an empirical model was specified. The specified models were estimated using the EViews software package version 9. Diagnostic tests were conducted on the estimated models and the hypotheses were tested. The hypotheses testing were based on the Block exogeneity Wald test, which tests the joint significance of the lags of all explanatory variables in the model to determine its causal impact on economic growth.

When the model was estimated, the results show that private sector credit as a share of GDP, which is a major measure of financial deepening, has insignificant impact on economic growth in Nigeria. Credit to private sector ratio to GDP, credit to core private sector ratio to GDP and credit to private sector ratio to non-oil GDP. However, individually, there is a weak causality running from credit to private sector ratio to non-oil GDP. We, therefore, conclude that the Nigerian financial sector is not deepened enough to drive economic growth, and this low level of financial depth is caused by high rate of non-performing private sector loans. The results are robust and do not suffer from endogeneity or serial correlation problem as all the specification and diagnostic issues were addressed. Further, the study provides answers to all its questions and achieves all its objectives. Therefore, the motivation for conducting the study has been justified.

The study recommends that financial intermediaries should key into the current economic diversification programmes of the Federal Government by reducing the share of oil sector credit and extending more private credit to other productive sectors especially, manufacturing, agricultural, construction, real estate and energy and power sectors. This would further deepen the financial sector and boost economic growth.

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