
Financial System Development and Economic Growth in Nigeria

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ABSTRACT

The purpose of this paper is to examine the relationship between financial system development and economic growth in Nigeria between 1981 and 2016. The impact of financial system development on the growth with particular emphasis on the value added of the financial sector to growth in Nigeria was also determined. Ordinary Least Square (OLS) multiple regressions was applied on a set of data to determine the impacts and the relationship of financial system development on economic growth in Nigeria. The empirical results show that financial system development has a positive impact on economic growth in Nigeria. The long run results shows that one percent change in interest rate (ETR), financial deepening (DFP), private sector credit ratio (SPC), stock market capitalization (MSC) and value added of the financial sector (VFS), will lead to increase in Nigerian output growth by 1.09%, 29%, 2%, 19% and 28% respectively. It should be noted from the analysis that the bank deposit liability has a negative and insignificant impact on the real GDP growth of the Nigerian economy. It shows that 1% increase in bank deposit liability will lead to reduction in real GDP by 0.08%. The findings offer policymakers some useful insights that more attention may need to be paid to the investors by providing more investment opportunities/encouragement/incentives through central bank of Nigeria.(CBN). This paper is different from most of the previous studies as it does not only cover pre and post SAP era but also used value added of the financial sector to economic growth and extend the study to 2016 as most studies stopped their analysis in the year 2014 in Nigeria.

Keywords: Economic growth, financial development, valued added and investors

1. INTRODUCTION

One of the fundamental questions that are often asked by the researchers concerns the reasons why countries are growing at different rates. Some of the given reasons responsible for such are: The presence of resource endowment, macroeconomic stability, international trade, level of educational attainment, legal system, ethnicity and diversity of religion. The answers to the question in the literatures continue to expand on daily basis (IMF, 2000). The vital roles played by financial system of any economy in allocation of resources from surplus sections to deficit sections of the economy (among others) cannot be over emphasized. The financial system development has been linked to economic development through a theoretical submission that a liberalized financial system ensures certain basic functions are carried out to increase efficiency of intermediation by reducing information, transaction, and monitoring costs. The theory has been traced back to the study of financial liberalization by McKinnon (1973) and Shaw (1973).

The study submitted that the liberalized financial sector can stimulate economic growth by efficiently allocating resources. Since then, idea of financial liberalization has been recognized by policymakers, and many countries around the world have begun to reform their economies in order to develop their financial system. Although, it has to be stated from the onset that scholars have dichotomy opinion on the importance of financial intermediations on economic growth in both short and long run. For instance while Waqabaca, (2004) submitted that there exist negative relationship between financial system development and growth, other studies Schumpeter (1911), Gurley and Shaw (1955), were of contrary opinion. The composition of financial system development generally depends on the economy but generally we have money market, the capital market, institutions (banks and other financial institutions in Nigeria) and channels that facilitate the smooth intermediation of financial transactions in the economy; Also, Central bank of Nigeria (CBN,2014) specifically included banking system, and the securities, insurance and pension sub-sectors .

The importance of money and finance in economic growth has been viewed by researchers from different dimensions and with varying degrees of emphasis (Ndebbio, 2004). The work of Gurley and Shaw (1967) and Goldsmith, (1969) state the importance of financial intermediation by both banks and non-banks in the saving and investment process, where money, whether defined narrowly or broadly, forms part of a wide spectrum of financial assets in the portfolio of wealth holders (Ndebbio, 2004). Thus, a developed financial system should exhibit certain vital features like technological innovations and Long term capital known to be crucial for economic development as evidenced by the positive relationship between long term capital and economic growth (Demirguc and Levine, 1996); Economic growth through the provision of financial services and resources to entrepreneurs who have the highest probability of implementing innovative products and processes (Schumpeter, 1911 cited in Oriavwote and Eshienake, 2014).Therefore, financial system helped in facilitating the business transactions and economic development which in turn leads to economic growth.

Jhingan, (2005) explained economic growth as a gradual and steady change in the long-run which comes about by a general increase in the rate of savings and population. When an economy is growing, it means that it increases its productive level which later results to higher production of goods and services (Jhingan 2003).Therefore, growth is said to be a positive change in the level of production of goods and services by a country over a certain period of time. Economic growth is measured by the increase in the amount of goods and services produced in a country. It is brought about by technological innovation and positive external forces. It has also been regarded as an effective yardstick not only for raising the standard of living of the people but also means of reduction of inequalities of income distribution. In short ,financial system of any economy has been regarded as an engine of growth that could greatly assist in the promotion of rapid economic transformation (Oluyemi,1995).

1.1 Nigeria Financial System Overview

The Central Bank of Nigeria Annual Report and Statement of Account (2015) categorically stated the composition of Nigerian financial system and are divided into two sectors namely; the formal and Informal sector .The formal financial system is made up of the capital and money market institutions and these comprise of the banks and non-banks financial institutions. These institutions trade in financial instruments such as domestic currency, foreign currency, stocks, bonds and derivatives. While informal sector comprises of the local money lenders, the thrifts and savings associations, etc. Although, this sector plays a significant role in the nation's financial system but it has not been integrated into the formal system, it is also limited in reach and poorly developed.

The activities of financial system in Nigeria are being regulated basically by the Central Bank of Nigeria (CBN), and the Nigerian Deposit insurance Corporation (NDIC). There has been various regulations and major restructuring especially on banks in Nigeria in the last twenty years; for example there was a reduction in the number of banks in Nigeria from 89 to 25 between 2004 and 2006 and further reduction as a result of consolidation. Also, the activities of community banks are also monitored by the CBN. Community banks were licensed by CBN to operate within the community both in the rural and urban areas to complement the activities and programmes of People's Bank of Nigeria (Aderibigbe 2004), and are now converted to microfinance banks since 2007. They are to provide financial services to poor or low-income clients, including consumers and the self-employed. Those who promote microfinance generally believe that such access will help poor people out of poverty. Development finance institution and or specialized financial institutions are established to contribute to the development of specific sectors of the economy, most especially the manufacturing and agricultural sectors. They include the Bank of Industry (BOI), Bank of Agriculture (BOA).

The series of financial restructuring have been carried out by different government and institutional innovations in the financial sector with the ultimate goal of ensuring financial stability so as to influence the growth of the economy. Prior reforms, the Nigeria's financial system were dominated by a banking sector that was preoccupied with theoretical practices with the resultant negative impact on the growth of the economy. The link between the financial sector and the growth of the economy has been said to be weak, stressing that the real sector of the economy, often referred to as the driver of economic growth were not well serviced by the financial sector (Adekunle, Salami and Adedipe 2013). Thus, banks were declaring billions of profit at the end of each year yet, the real sector continues to weaken, thereby reducing the productivity level of the economy. With the shift in policy from an era of financial regulation to a liberalized financial system serious restructuring of the financial sector was embarked upon both at institutional and regulatory levels to avoid the weaknesses and uncertainties that characterized the system (CBN, 2007).

The emergence of oil revenues in 1980s in Nigeria like in other oil-exporting countries relying greatly on financial markets and changes therein. But, the main objective of such reform is to stimulate economic growth. Thus, The impact of manufacturing sector had not only showed a vital role in the output growth but has also improved exports and reduced unemployment and poverty level of every economy (Osisanwo, 2017). However, studies in this field show that financial development does not necessarily lead to economic growth. The relationship between financial development and economic growth depends on the degree of development of each country (Patrick, 1966).

Also, the roles financial intermediation through the banking system involved a pivotal role in economic development by affecting the allocation of savings, thereby improving productivity, technical change and the rate of economic growth. The adoption of the Structural Adjustment Programme (SAP) in 1986 which was expected to correct the structural imbalance in the economy and liberalize the financial system of Nigeria failed to have positive impact unlike other countries of the world. There is high cost of assessing funds which has discouraged investors from patronizing the banking system (Nnanna, Englama and Odoko, 2004) The Nigerian financial system still had been confronted with inherent difficulties which has been hindering its effectiveness and efficiency. For example most of the institutions, especially banks have not performed to expectations in terms of mobilizing savings for financing long-term development projects in the real sector (Adeoye and Adewuyi, 2005). Also, Ajayi, (2009) opined that there is no apparent and appreciable contribution of financial deepening to economic growth in the post-SAP era.

This means that much is needed to be done at improving financial sector of Nigerian economy. Without an efficient financial system, building a sustainable economic growth would be very difficult. Developed countries are growing faster as a result of their improved financial system (mostly banking) and the liquid of the stock markets tends to have positive impact on economic growth (Beck and Levine, 2004). However, the experience of the most nations of the world recently from the global economic recessions forced most of the affected governments to assist her financial system with more money (Nigeria government called it bail-out fund) with the hope that such step would revive the dying financial system and stimulate the economy which will eventually leads to economic growth. This analysis will be only be possible if there is positive relationship between financial system development and economic growth and if the causality is moving from financial development to economic growth.

There had been great debate in the literature on the relationship between financial development and economic growth; Studies continued to produce conflicting results without consensus. Also, the impact of financial development on economic growth has generated heated debate among economic researchers with different conclusions. While some concluded that financial development drives economic growth, such as Nieh, Chang, Russel and Hung (2009); and Shittu, (2012), others like Odhiambo, (2011); and Odeniran and Udejaja, (2010), have argued that economic growth drives financial development. There are studies, which have argued that a bi-directional causality exists between financial development and economic growth (Shittu, 2012). The non consensus of opinion had lend credence to the relevance of this study. Therefore, this study intends to make a modest contribution to the literatures. In particular, the impact of the manufacturers in the real sector that have been regarded as the engine of growth but are highly at disadvantaged due inadequate access to fund to operate efficiently in Nigerian economy.

1.2 Statement of problem

Prior to the introduction of Structural Adjustment Programme (SAP) in Nigeria in 1986, Nigeria financial system was characterized with financial repression and heavy regulatory regimes. After SAP, the economic ills of financials repression was thought to be corrected but it looked worsen despite the aims and objectives of the programme. The financial system development was characterized by underdeveloped features which made economy continuing struggling not only difficult to speed up economic growth but also, found it difficult to reduce poverty level. poor macroeconomic management and political corruption, together giving rise to bank insolvencies, low savings rates and inefficient resource allocation.

The real sectors were finding it difficult to obtain and access loan; Manufacturers found it difficult to operate, little production were not enough to satisfy the masses not to talk about exports. Many factories that cannot coupe closed down while others were operating on high interest loan or goes bankrupt. Thus, the link between the financial sector and the growth of the economy has been weak. This means that Nigerian banks concentrated on short term lending as against the long term investment which should have formed the bedrock of economic transformation. When adequate money (finance) is not made available and on timely basis and at a low rate, capital formation would be aversely affected. Thus, economic growth depends on the rate of capital formation (Hashim, 2014). Efforts have however been made by central bank of Nigeria to correct the anomalies. Nigeria has embarked on a strategic Plan and reforms (through CBN) with the objectives of strengthening the financial sector's role of financial intermediation to grow its economy to be among the 20 largest economies in the world by the year 2020 but from all indications there is still a wide gap between the financial development and economic growth in Nigeria compared to other developed economies.

1.3 Objectives of the study

The broad objective of this study is to investigate the impacts of the Nigerian financial system on the growth of the economy; while the specific objective is to determine the relationship that exists between Nigerian financial system and economic growth.

Also, the hypothesis of this study is that there is no significant relationship between financial system development and economic growth.

2. THEORETICAL AND EMPIRICAL LITERATURE

There has been numerous literature of conflicting submission on the relationship between financial system development and economic growth in Nigeria. It should be cleared that most of the studies are based on endogenous growth theory, which showed that economic growth can continuously increase due to endogenous forces, such as technological progress, human capital accumulation, research and development. Most literatures stated McKinnon (1973) and Shaw (1973) argued that policies that lead to financial repression reduce the incentives to save. McKinnon-Shaw thesis therefore, suggests that a low or negative real interest rate discourages savings and hence reduces the availability of loanable funds, constrains investment, and in turn lowers the rate of economic growth. They posited that an increase in the real interest rate may induce the savers to save more which will enable investment to take place. Economists such as Hicks and Schumpeter have laid emphasis on the development of financial markets and the views that such markets are the driving force and an integral part of the process of economic growth. Besides, experiences of different countries and a list of empirical assertions that the development of the financial sector has had a positive and significant effect on savings, capital formation, and economic growth.

The financial system enhances the productivity of investment, reduces transaction costs and affects savings; therefore the financial sector will increase economic growth. The Robert Solow neo-classical growth model submitted that growth depends on capital accumulation, leading to increase in the stock of capital goods so as to expand productive capacity, and the need for sufficient saving to finance increased allocation of resources towards investment. Literatures confirmed that nations with well developed financial institutions tend to grow faster, particularly, the size of the banking system and the liquidity of the stock market tend to have strong positive impact on economic growth. The financial services extended to other sectors are the main drivers for innovation and economic growth.

Yan, Xiaoyu, Hussein and Collins (2015) Examined the relationship between financial development and economic growth in China between period of 1978 to 2013. The authors used Ordinary Least Square (OLS) multiple regressions and the results showed that financial development has a negative effect on economic growth in general, but on the growth of the tertiary industry in particular. By contrast, it was found that financial development has no significant effect on the primary and secondary industries. Also, Ebiringa and Duruibe (2015) studied the relationship between financial system development and economic growth in Nigeria. They employed vector autoregressive. The results of the findings showed that there is no long run causality from financial system development indicators to growth. Mba (2015) investigates the impact of financial liberalization on economic growth in Nigeria between the periods of 1986 and 2011 using long-run estimates from Ordinary Least Square method. Using credit to private sector as a ratio of GDP to proxy financial liberalization, the findings showed that financial liberalization has negative impact on output growth in Nigeria.

Chekwube, Maduka, Chibuike and Chukwunonso (2014) empirically investigated the impact of financial system development on economic growth in Nigeria during the period 1986 – 2012. Ordinary Least Squares (OLS) techniques and Granger causality test. was used. The empirical results revealed that financial development affects economic growth negatively in the long run. However, the short run impact of financial system development on economic growth is positive.

Singh (2014) also provide evidence on the threshold relationship between finance and economic growth using panel data for 87 countries over the period 1980 to 2010. They show that the threshold value is 88% when the proxy of financial development is the ratio of private sector credit to GDP, and the threshold value is 91% when the proxy of financial development is the ratio of illiquidity liability to GDP. This means that finance can have a negative effect on economic growth when the ratio of credit to the private sector exceeds 88%, or when the ratio of illiquidity liability of GDP exceeds 91% (Law and Singh, 2014).

Oriawote and Eshenake (2012) examined the implications of financial system development on economic growth in Nigeria, using time series data for the period of 1990-2011. The study applied the co-integration analysis with its error correction mechanism; the variables included Real Gross Domestic Product, Financial deepening (ratio of money supply to GDP, liquidity ratio, interest rate and the credit to private sector). The findings show that financial sector development has not significantly improved private sector development, while the capital base and liquidity ratio has improved the level of economic growth in Nigeria.

Odeniran and Udejaja (2012) used the Granger causality tests in a variance autoregressive framework to verify the competing finance-growth nexus hypothesis between the periods, 1960-2009. The study used the broad money stock as a ratio of GDP, growth in net domestic credit to GDP, growth in private sector credit to GDP and growth in banks deposit liability to GDP to measure financial sector development while growth in GDP per capita to measure economic growth. Shittu (2012) also examined the impact of financial intermediation on economic growth in Nigeria using co-integration tests and error correction techniques. The results show that financial intermediation has a significant impact on economic growth.

Fowowe (2011) using a heterogeneous panel Granger causality framework found bi-directional Causality in a sample of 17 countries. Besides the multiplicity of outcomes in panel assessments, it is arguably dubious to infer any specific policy thrust from panel regression estimates. Since they suggest responsiveness of the dependent to specific independent variables in the average panel member, there is really little that individual countries can gather as policy lessons. It can be stated that the similar countries examined were too small for the analysis as only two was added to the previous study. The study of Adedokun, (2010) empirically investigated financial system development and economic growth in Nigeria, using Ordinary Least Squares (OLS). The result showed that financial sector development has a substantial positive effect on economic growth in Nigeria.

Nzotta and Okereke, (2009) studied financial deepening and economic development in Nigeria. Using data covering the period between 1986 and 2007, the study found that financial deepening did not support economic growth in Nigeria. Apergis, Filippidis, and Economidou (2007) analyzed data for 15 OECD countries and 50 Non-OECD countries over the period 1975-2000. They argue that the policies for stimulating financial system development also have a positive effect on economic growth and vice versa. The study was carried out successfully but failed to state separately the outcome of the two groups examined.

Akimov, Wijeweera and Dollery (2009), used panel data for 27 transition economies, which have transformed from planned-economy to market economy, over the period 1989-2004.

They found that there is a significant positive correlation between financial system development and economic growth. They argued that those countries have already experienced long-term transition of their economies. This means apparently that their financial system can be more efficient in allocating resources based on the supply and demand of goods. Handa and Khan (2008) investigated 13 countries to determine whether the causality relationship exist at the different stages of economic development using data from 1960 to 2002. They found that India and four high-income countries have a bi-directional causal relationship between financial development and economic growth, and other low-income and middle-income countries have unidirectional causality running from economic growth to financial development Eita and Jordan (2007) using data on the same country showed that regardless of the financial development indicator adopted ,finance caused growth but causality in the other way was absent

Lee and Wong (2005) examined the inflationary effect of financial system development on economic growth for Japan over the period 1970-2001. They argued that the relationship between financial system development and economic growth has been influenced by the inflationary level in Japan. The financial system development has a positive effect on economic growth when inflation is lower than 2.5%, and has a negative effect on economic growth when inflation is more than 2.5%. People therefore, would prefer to hold real assets rather than monetary assets as monetary assets value may be affected negatively by inflation. Akinboade (2000) analyzed annual data for Tanzania during 1966-1996. The study found that financial system development has no influence on economic growth during 1966-1981, and thus has little positive influence on economic growth during 1981-1996 because the financial system does not operate efficiently over the period 1966-1981, as it is mainly controlled by the government; and from 1980s, the financial system became more liberalized because of the pursuance of financial reform. Akinboade (2000) therefore argued that financial development has a positive influence on economic growth since the financial reform in Tanzania has taken a better shape.

3. METHODOLOGY

The time series data were sourced from the World Developed Index (WDI) and Central Bank of Nigeria (CBN) Statistical Bulletin 2017 .The study decided to use secondary data and the time frame for this study covers the period of Pre Structural Adjustment Programme (Pre-SAP), Structural Adjustment Programme (SAP) and Post Structural Adjustment Programme (Post-SAP) era in the Nigerian economy within 1981 to 2016 fiscal year.

To investigate the relationship between financial system development and economic growth in Nigeria , this study follows the work of Odeniran, and Udejaja (2010) and Osisanwo,(2017).This study adapted and modified the model of Odeniran, and Udejaja (2010) to investigate the relationship between financial system development and economic growth in Nigeria between 1981 -2016. The study has decided to use real GDP per capita to measure real growth rates. However, value added of financial services to GDP needs to be included, therefore, instead of a single proxy; three measures were adapted from the work of Odeniran, and Udejaja (2010) as cited and adapted in Osisanwo,(2017) likewise, one additional measure was introduced in so as to make the study and the results more robust . M2-to-GDP ratio as a measure of financial deepening; The ratio of bank deposit liabilities to GDP; Private sector credit to GDP; interest rate and the Value added of financial sector to GDP .is the only additional variable detected and is included; $RGDP = f(VFS, ETR, DBP, SPC, DFP, MSC).....(1)$

Where RGDP is the real gross domestic product(dependent variable), VFS is the value added of the financial sector to gross domestic product ,ETR is the interest rates ,DBP is the bank deposit liability, SPC is the private sector credit ratio, DFP is the financial deepening and MSC is the stock market capitalization. The above model can be written in mathematical form as;

$$RGDP = f(VFS + ETR + DBP + SPC + DFP + MSC) \dots \dots \dots (2)$$

While the transformation of the model in the form of an econometric model to include the error term is re-stated as ;

$$RGDP = \alpha_0 + \alpha_1 VFS + \alpha_2 ETR + \alpha_3 DBP + \alpha_4 SPC + \alpha_5 DFP + \alpha_6 MSC + u \dots \dots \dots (3)$$

In econometric time series ,it is important to test for non-stationarity of the unit root in time (Engle and Granger, 1987).This is due to the problems that may arise in non stationary data for inferences especially when employed generally the acceptable techniques like Ordinary Least Squared (OLS),because, Ols may sometimes produce wrong or spurious results when applied to unit root data. One of the basic functions of OLS is to estimate the common trend and not the underlying relationships between two or more variables. Inadequately accounting for unit roots can lead to estimates that appear to be significant and meaningful but in reality are meaningless and insignificant (Hamilton, 1994). This study therefore, employed both Augmented Dickey Fuller (ADF) and Phillips-Perron Methods of unit roots test Johansen co integration test to determine the Trace and Maximum-Eigen value for our co integration test., thereafter post-estimation diagnostic tests will be carried out to determine thee reliability and normality of thee variables and results : the Normality test (Jargua Bera Test), the residual diagnostic test, Breuseh Godfrey serial correlation test and White Noise test to check the presence of heteroskedasticity test. All the data are in growth rate.

4. EMPIRICAL REVIEW

Table 1: Descriptive Statistics

	LNDBP	LNDFP	LNETR	LNMSC	LNRGDP	LNSPC	LNvfs
Mean	23.71156	12.803018	13.006371	15.648484	32.84118	16.010595	13.385791
Median	23.66715	12.830055	13.060583	15.698166	32.64927	15.965010	13.285955
Maximum	27.12902	13.637586	13.586016	19.243185	33.76434	19.748527	14.101399
Minimum	9.877015	12.151762	12.302585	10.916291	22.12031	12.148268	12.982461
Std. Dev.	2.522785	0.302807	0.292539	2.926803	0.532005	2.603035	0.331248
Skewness	-0.052347	0.341528	0.756274	0.208870	0.306954	0.034002	0.964354
Kurtosis	1.551201	3.920100	3.323053	1.636749	1.658706	1.635138	2.706849
Jarque-Bera	3.164968	1.969726	3.588246	3.049440	3.263929	2.801208	5.708775
Probability	0.205464	0.373490	0.166273	0.217682	0.195545	0.246448	0.057591
Sum	493.6160	100.9087	108.2294	203.3454	462.2825	216.3814	121.8885
Sum Sq. Dev.	222.7555	3.209214	2.995262	299.8162	9.906032	237.1527	3.840392
Observations	36	36	36	36	36	36	36

Source; Author's computation 2018

The table 1 above shows the result of descriptive statistic ; The average growth value of real gross domestic product (RGDP) stood at 32.8%, which reveals that the national output of the Nigerian economy grow at an average level of 32.8%. In addition, growth rate of bank deposit liability (LNDBP), financial deepening (LNDFP), interest rate (LNETR) stock market capitalization (LNMSC) private sector credit ratio and valued added of the financial sector to GDP (LNVFC) stood at 23.7%, 12.8%, 13.0%, 15.6% ,15.0%and 13.3% respectively indicating their annual growth rate. The probability value of the Jarque-Bera statistics for all variables shows their distribution level at mean zero and constant variance. Other statistical values presented in the table are minimum, maximum and standard deviation.

Table 2: Correlation Matrix

	LNDBP	LNDFP	LNETR	LNMSC	LNRGDP	LNSPC	LNVFS
LNDBP	1.000000						
LNDFP	0.560329	1.000000					
LNETR	0.476993	-0.087616	1.000000				
LNMSC	0.692802	0.501440	0.500452	1.000000			
LNRGDP	0.971819	0.602573	0.412933	0.961527	1.000000		
LNSPC	0.596933	0.545229	0.475966	0.688008	0.974004	1.000000	
LNVFS	0.441830	0.370534	0.134118	0.380203	0.520102	0.487200	1.000000

Source; Author's computation 2018

Table 2 above shows the correlation coefficients of the variables employed for analysis. All the independent variables have weak relationships with the dependent variable, where financial deepening (LNDFB), private sector credit ratio (LNSPC), value added of financial sector to output (LNVFS) and stock market capitalization (LNMSC), bank deposit liability (LNDBP) depicted negative correlation values. The independent variables also demonstrate different level of association among themselves.

Table 3: Unit Root Test using Augmented Dickey Fuller (ADF) Technique

Variables	Level		First Difference		Order of Integration
	Constant	Constant, Linear Trend	Constant	Constant, Linear Trend	
LNRGDP	0.045303	-5.021327	-3.887327*	-5.021327*	I(1)
LNDBP	-0.971224	-3.045479	-0.628751*	-3.112809*	I(1)
LNETR	0.816649	-2.832696	-5.813182*	-6,181758*	I(1)
LNMSC	1.897612	-0.909546	-3.805603*	-4.891322*	I(1)
LNSPC	2.187067	-1.670200	-2.263121*	-4.019697*	I(1)
LNDFP	0.009616	-2.236456	-5.422436*	-5.263747*	I(1)
LNVFC	0.706448	-1.228084	-5.883899*	-5.846807*	I(1)
CRITICAL VALUES:					
1%	-3.632900	-4.262735	-2.634731		
5%	-2.948440	-3.552973	-1.951000	-4.262735	
10%	-2.612874	-3.209642	-1.887323	-3.552973	
				-3.209642	

Note: (**) *** implies 1% (5%) 10% significance level.

Source; Author's computation 2018

The results in the table 3above presents the results of the unit root test using Augmented Dickey-Fuller (ADF) test with and without a trend term. The results shows that all the variables were non-stationary at level without a trend term at level. However, the results of the unit root test with a trend term indicated that all the variables were stationary at first difference at 1% level and non-stationary at level at 5% level, We can therefore concluded that all the variables were integral order of one, I (1) series by considering a unit root test with a constant, linear trend.

Table 4: Unit Root Test using Phillips-Perron

Variables	Level		First Difference		Order of Integration
	Constant	Constant, Linear Trend	Constant	Constant, Linear Trend	
LNRGDP	0.258924	-2.746859	-4.272598	-4.206939	I(1)
LNDP	-0.813611	-2.746859	-2.867528**	-2.894057*	I(1)
LNETR	-2.924122	-2.732534	-7.814725*	-8.140474*	I(1)
LNMSC	-1.225920	-0.909546	-5.071447*	-5.171388**	I(1)
LNSPC	-0.384317	-1.670200	-4.002548	-3.931382*	I(1)
LNDP	-1.930711	-2.345885	-5.534776*	-5.402230	I(1)
LNVFS	-0.381799	-0.950313	-5.889175*	-9.311463*	I(1)
CRITICAL VALUES:					
1%	-3.632900	-3.639407	-3.639407	-3.639407	
5%	-2.948404	-2.951125	-3.951125	-2.951125	
10%	-2.612874	-2.614300	-4.252879	-2.614300	

Note: * (**) *** implies 1% (5%) 10% significance level.

Source; Author's computation 2018

Table 2 above also presents the results of the unit root test using Phillips-Perron (PP) technique with and without a trend. Without a trend term, only one variable (stock market capitalization was stationary at 5% level of significance at first difference for both with and without a trend term while others were at 1% level of significance also at first difference. Also, all the variables are both I(1) series and this confirm the reliability of the results given by the earlier tests(ADF).

Having confirmed the order of integration of our series, we determine the number of long-run equilibrium relationships or Co integrating vectors between the variables so as to ascertain whether the variables can move together (co-movement) in the long run. All the variables are found to be integrated of the same order, I(1) as depicted in the above tables. This therefore implies that an equilibrium relationship exists among the variables. Since the main focus of the study is to examine the relationship and the impact between financial development and economic growth in Nigeria, we conduct a Co integration test in line with Johansen test as shown in the table below:

Table 5: Johansen Maximum likelihood test for Cointegration

Hypotheses	Trace Test	5% Critical values	Max-Eigen Statistic	5% Critical values
R = 0	175.7540*	125.6154	71.20755*	46.23142
R ≤ 1	104.5465*	95.75366	38.60117	40.07757
R ≤ 2	65.94531	69.81889	22.17024	33.87687
R ≤ 3	43.77506	47.85613	15.25562	27.58434
R ≤ 4	28.51945	29.79707	13.04160	21.13162
R ≤ 5	15.47785	15.49471	9.731994	14.26460
R ≤ 6	5.745852	3.841466	5.745852	3.841466

* Denotes rejection of the hypothesis at 5% significance level. both Trace and Max-Eigen indicates 4 co-integrating equation(s)

Source; Author's computation 2018

The result of trace statistics shows that there are only two cointegrating vectors and Eigen values Shows only one and it should be note that the hypotheses of no co integration were rejected at 5% level for both test using Mackinnon-Haug Michelis (1999) p-values as shown in table above

Table 6.: Result for Long-run Estimates (RGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.69543	1.451731	7.367361	0.0000
LNDDB	-0.088761	0.162298	-0.546901	0.5886
LNETR	1.099512	0.101835	0.977188	0.3366
LNDFF	0.295491	0.108871	2.714131	0.0111
LNSPC	0.029457	0.143521	0.205249	0.8388
LNMSC	0.192179	0.081441	2.359746	0.0252
LNVS	0.287317	0.125269	2.293597	0.0013
R-squared	0.964912	Mean dependent var		12.84118
Adjusted R-squared	0.957652	S.D. dependent var		0.532005
S.E. of regression	0.109479	Akaike info criterion		1.413503
Sum squared resid	0.347584	Schwarz criterion		1.105596
Log likelihood	32.44305	Hannan-Quinn criter.		1.306035
F-statistic	132.9152	Durbin-Watson stat		1.748135
Prob(F-statistic)	0.000000			

Source; Author's computation 2018

The long-run estimates using the ordinary least square (OLS) method for the model is presented in Table 7. The result shows that all the indicators except bank deposit liability (DBP) have positive impact on the economic growth measured by the growth rate of real gross domestic product in Nigeria. All the indicators were in tandem with the apriori expectation except the rate of interest. In magnitude, it indicates that a one percent change in interest rate (ETR), financial deepening (DFP), private sector credit ratio (SPC), stock market capitalization (MSC) and value added of the financial sector (VFS), will lead to increase in Nigerian output growth by 1.09%, 29%, 2%, 19% and 28% respectively. The partial significance level reported by the t-statistics indicated that all the indicators are significant at 0.05 critical value. It should be noted from the analysis that the bank deposit liability has a negative and insignificant impact on the real GDP growth of the Nigerian economy. It shows that 1% increase in bank deposit liability will lead to reduction in real GDP by 0.08%. The overall test shows that financial development has significant impact on the economic growth of Nigeria.

The correlation of determination shows that all the financial system development indicators were able to explain 95.7% changes in the real GDP growth of Nigeria. The Durbin-Watson and adjusted R-squared tests indicate that the model is not spurious as shown by the computed analysis.

4.1 Post Estimation Analysis

This section examines the usefulness and reliability of the estimated models by conducting diagnostic tests. Basic diagnostic tests such as serial correlation test, heteroskedasticity test and normality test were conducted. The model's probability values for the Jarque-Bera statistic is statistically insignificant which reveals that the estimated residual series are normally distributed with zero mean and constant variance. Both correlation tests and heteroskedasticity tests are also not statistically significant which shows the reliability of the result

Table 7: Residual Normality Test

Residual Normality Test			
Jarque-Bera	66.08	Prob(JB)	0.71

Source; Author's computation 2018

Table 8: Breusch-Godfrey Serial Correlation LM Test:

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	3.579780	Prob. F(2,27)	0.2418
Obs*R-squared	7.545302	Prob. Chi-Square(2)	0.1230

Source, Author, 2018

Table 9: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Heteroske	2.539940	Prob. F(6,29)	0.0423
Obs*R-squared	12.40125	Prob. Chi-Square(6)	0.0536
Scaled explained SS	5.726072	Prob. Chi-Square(6)	0.4546

Source, Author, 2018

5. CONCLUSION AND RECOMMENDATION

The relationship between financial system and economic growth in Nigeria has been the main focus of this study between 1981 and 2016. From the results of the stationarity tests that was carried out, it was discovered that all the variables were stationary at first difference, which can be said that the time series variables trend with time. Also, the study went ahead to carry out co integration test to determine the co-movement of the variables in the long run using Johanson co-integration which indicated a long run relationship between financial system development and economic growth in Nigeria. This result is in line or in agreement with most of the previous studies such Mba (2015), and Ngogang (2015) etc.

Sequel to the results given by the stationarity test, in which all the variables were stationary at first difference using augmented dickey fuller test and Philips Perron test, the study goes ahead straight to least square analysis. The results in OLS show that all the indicators of financial development except bank deposit liability (DBP) have positive impact on the economic growth in Nigeria. This supports the findings of Odeniran and Udeaja (2012), and Ebiringa and Duruibe (2015). The implication of this finding is that financial system played critical role in the output growth of the real sector. The negative impact of bank deposit liability shows that investors are not encouraged to save and are not having access to loan /cash from bank; investors failed increase growth due to stringent access and high interest on loan as reported in the study. It also implies that credits are tailored toward unproductive activity like buying and selling rather than investing in the development of local industries. The study therefore suggests that for the country to experience finance-led growth, the apex bank must ensure that investors are encouraged to have access to loan and to participate en-mass in the newly cashless policy so as to reduce the risk and boost productivity in Nigeria.

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