
Causal Relationship between Selected Financial Development Indicators and Economic Growth in Nigeria from 1985-2016

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Abstract

The study examines the causal relationship between selected financial development indicators and economic growth in Nigeria. The study used quarterly data from the statistical bulletin of the Central Bank of Nigeria from (1985Q1-2016Q4). The study employs Granger causality test and Vector Autoregressive (VAR) estimation techniques. The findings show a bidirectional causality between money supply to gross domestic product on real gross domestic product. There is also unidirectional relationship between private debt to total debt securities (domestic) on real gross domestic product while there is no causality between lending-deposits spread and liquidity ratio on RGDP. The study therefore recommends that government should further undertake financial reforms; build a robust infrastructure, legal system and an enabling business environment capable of attracting quality investments, promote real sector growth and development as well as job creation and economic growth. Government should also introduce policies aimed at enhancing financial inclusion and boosting financial access in Nigeria. Attention should be given to the money supply in the economy to ensure that the money in circulation is within the growth target in order to achieve price stability and accelerated growth.

Keywords: Financial development; economic growth; causality; Nigeria

1. Introduction

A well-developed financial sector is a significant determinant of economic growth. It is also a pre-requisite for efficient allocation of resources and exploitation of the growth potentials of an economy. As economic activities require capital (liquid or fixed) to start up enterprises, and for retained profits to be used for economic expansion, the financial sector ensures interactions of various stakeholders (savers and investors) and selecting the most appropriate ways of achieving higher returns. The financial sector through the banking system and stock market creates money and channels it to productive and innovative uses. Inherent in these activities are internal and external shocks which are volatile in nature. The volatilities could lead to higher risk if not well managed and negatively impact on economic growth. For example, the existence of excessive stock market volatility may hinder the stock market from playing its intermediary role properly (Izunobi, Nzotta, Ebiringa, Akujuobi, & Chigbu, 2017). Also, stock market volatility could influence investors' investment decisions, which may lead to a decline in long term capital flow from foreign and domestic investors (Petros, 2011).

It is in the realization of the importance of the stock market and financial system that the Nigerian government implemented the financial sector reforms of 1986, 2004, 2009 and the recent Economic Recovery and Growth Plan (ERGP) to strengthen the Nigerian financial system, reflate the economy and make it competitive among global economies. However, despite these reforms, the financial market has suffered from weak capital base, lack of ethics and professionalism, poor corporate governance practices, insufficient regulations, policy mismatch amongst others. The combined effect of these contributed to slow growth, low capital inflow, exchange rate crisis and dwindling confidence in the financial sector. The question is, does financial sector development granger cause economic growth in Nigeria?

In Nigeria, several studies have been conducted on the relationship between financial development and economic growth. However, the focus of these have been limited to financial depth indicators (M_2/GDP and/or ratio of private sector credit to GDP) as proxy for measurement of financial development (Nkoro & Aham, 2013; Nnachi & Nnamani, 2017; Odeniran & Udejaja, 2010; Odo, Ogbonna, Agbi & Anoke, 2016). It has been argued by the World Bank (2012) that limiting the measurement criteria to only financial depth indicator will not provide sufficient basis for measurement financial development. The World Bank (2012) developed the Global Financial Development Database a comprehensive yet relatively simple conceptual 4x2 framework to measure financial development around the world. This framework identifies four sets of proxy variables characterizing a well-functioning financial system: financial depth, access, efficiency, and stability.

Literature has also been less consensual on nexus between financial development and economic growth which this study seeks to address. Ndako (2010) who attempted a combination of stock market volatility, financial development and economic growth appears close to the focus of this study even though the study was cross sectional (Nigeria and South Africa), out-of-date, and made use of only one financial development indicator (bank credit to private sector) as proxy for measurement of financial development without holistically capturing the effects of financial access, efficiency and stability.

It is against this backdrop, that this study seeks to examine the causal relationship between selected financial development indicators and economic growth in Nigeria by capturing the four buckets of financial development measurement indicators (financial depth, access, efficiency and stability) using quarterly data and employing Granger causality test to ascertain the direction of such relationship. The content of this paper is outlines into sections. In section one, a precise introduction was given, section two reviewed relevant literature. Section three theoretical framework. Section four detailed the methodological approach applied. Section five results and discussion of findings from data analysis and section six conclusion and policy implication of the study.

2. Literature Review

Nouren (2009) defines financial development as the policies, factors and the institutions that lead to the efficient intermediation and effective financial markets. Financial development is the process that marks improvement in quantity, quality and efficiency of financial

intermediary service. This process involves the interaction of many activities and institutions and possibly associated with economic growth (Ugwuanyi, Odo & Ogbonna, 2015).

The concept of financial development refers to the increased provision of financial services with a wider choice of services geared to all levels of society. It also refers to the improvement or increase in the ratio of money supply to Gross Domestic Product (M_2/GDP) which ultimately postulates that the more liquid money is available in the economy, the more opportunities exist in that economy, for continued and stable growth (Iorember, 2016).

Financial development is the progress in financial sector in terms of depth, efficiency, accessibility and stability (World Bank, 2012). Financial sector development occurs when financial instruments, markets, and intermediaries ease the effects of information, enforcement, and transactions costs and therefore do a correspondingly better job at providing the key functions of the financial sector in the economy. A good measurement of financial development is crucial to assess the development of the financial sector and understand the impact of financial development on economic growth.

The World Bank (2012) developed the Global Financial Development Database a comprehensive yet relatively simple conceptual 4x2 framework to measure financial development around the world. This framework identifies four sets of proxy variables characterizing a well-functioning financial system: financial depth, access, efficiency, and stability. These four dimensions are then measured for the two major components in the financial sector, namely the financial institutions and financial markets as shown in table 1

Table 1. Measurement of Financial Development

	Financial Institutions	Financial Markets
Depth	<ul style="list-style-type: none"> • Private Sector Credit to GDP • Financial Institutions' asset to GDP • M_2 to GDP • Deposits to GDP • Gross value added of the financial sector to GDP 	<ul style="list-style-type: none"> • Stock market capitalization and outstanding domestic private debt securities to GDP • Private Debt securities to GDP • Public Debt Securities to GDP • International Debt Securities to GDP • Stock Market Capitalization to GDP • Stocks traded to GDP

Access	<ul style="list-style-type: none"> • Accounts per thousand adults (commercial banks) • Branches per 100,000 adults (commercial banks) • % of people with a bank account (from user survey) • % of firms with line of credit (all firms) • % of firms with line of credit (small firms) 	<ul style="list-style-type: none"> • Percent of market capitalization outside of top 10 largest companies • Percent of value traded outside of top 10 traded companies • Government bond yields (3 month and 10 years) • Ratio of domestic to total debt securities • Ratio of private to total debt securities (domestic) • Ratio of new corporate bond issues to GDP
Efficiency	<ul style="list-style-type: none"> • Net interest margin • Lending-deposits spread • Non-interest income to total income • Overhead costs (% of total assets) • Profitability (return on assets, return on equity) • Boone indicator (or Herfindahl or H-statistics) 	<ul style="list-style-type: none"> • Turnover ratio for stock market • Price synchronicity (co-movement) • Private information trading • Price impact • Liquidity/transaction costs • Quoted bid-ask spread for government bonds • Turnover of bonds (private, public) on securities exchange • Settlement efficiency
Stability	<ul style="list-style-type: none"> • Z-score • Capital adequacy ratios • Asset quality ratios • Liquidity ratios • Others (net foreign exchange position to capital etc) 	<ul style="list-style-type: none"> • Volatility (standard deviation / average) of stock price index, sovereign bond index • Skewness of the index (stock price, sovereign bond) • Vulnerability to earnings manipulation • Price/earnings ratio • Duration • Ratio of short-term to total bonds (domestic, int'l) • Correlation with major bond returns (German, US)

Source: World Bank, 2012

There are a large number of factors affecting financial development and various literatures group them in different ways. Voghouei, Azali, and Jamali (2011) suggest the following categories of determinants: legal traditions, institutions, financial liberalization, openness policy, political economy factors and other factors like (Inflation, income, investment, and economic growth).

According to Iyoha (1999), economic growth is defined as a persistent rise in the national income over a range of time of not less than five years. From Wikipedia, economic growth is the increase in the amount of the goods and services produced by an economy over time. It is conventionally measured as the percentage of increase in real gross domestic product.

3. Theoretical Framework

3.1 Demand Following and Supply Leading Hypotheses:

Patrick (1966) stated that the causal nature of the relationship between financial development and economic growth has not been fully explored either theoretically or empirically. In finding out the direction of this relationship, Patrick (1966) undertook a study on the possible direction of causality between financial development and economic growth entitled it as the supply leading and the demand following hypothesis. Supply-leading hypothesis implies that a proactive creation of financial institutions and markets will advance real growth by increasing the supply of financial services. As a result of this, financial development affects economic growth positively. The hypothesis asserts that financial development leads economic growth exogenously. This assertion has been supported by many other works like McKinnon (1973), Shaw (1973), and King and Levine (1993). In a cross-sectional study of King and Levine (1993) show that the countries that have less developed financial systems grow slower than the countries that have more developed financial systems. On the contrary, the demand-following hypothesis posits a causal relationship running from economic growth to financial development. It implies an increase in economic growth enhance the demand for financial services. As a consequence of this, economic growth leads financial development. Robinson (1952) and Goldsmith (1969) findings supports the demand-following hypothesis.

3.2 McKinnon's Complementary Hypothesis

McKinnon and Shaw (1973) analyzed the benefits of (if not eliminating) Financial Repression, at least reducing its impact on the domestic financial system within developing countries. Their analyses- (sometimes referred to as the Complementarity Hypothesis)- conclude that, alleviating financial restrictions in developing countries by allowing market forces in determining real interest rates can exert a positive effect on growth rates as interest rates rises to its competitive market equilibrium.

McKinnon advocated the complementarity between money and physical capital in the process of economic growth. Therefore, following McKinnon's complementarity hypothesis, one can postulate the money demand function as follows:

$$\frac{M}{P} = f(Y, I/Y, R) \quad f_i > 0, \forall i$$

Where M/P is the real (broad) money stock; Y is real output; I is gross investment; and R is the real deposit rate. The argument is that financial liberalization (a rise in R) is necessary, much as an increase in I/Y is important, for financial development and thereby economic growth. As

investment rises, the demand for money to supplement physical capital also increases; hence $f_2 > 0$.

3.3 Empirical Review

The relationship between financial development and economic growth was ascertained by King and Levine (1993) using cross sectional analysis during the period 1960-1989. The measures of financial development used were; the ratio of liquidities of banks and non-bank institutions to GDP, ratio of bank credit to the sum of bank and central bank credit, ratio of private credit to domestic credit and ratio of private credit to GDP. The study found that, the level of financial development predicts future economic growth and future productive advances. The authors have interpreted it as evidence of causal relationship that runs from financial deepening to economic growth.

Hassan, Sanchez and Yu (2011) focused more on the low- and middle-income countries from 1980 to 2007. This study comprises 168 countries, which were classified by geographic regions, and uses the panel estimation techniques. The study came up with two important findings. These include; a strong long-run linkage between financial development and economic growth and two- way directional causality exists between financial development and economic growth among the Sub-Saharan African countries, the East Asian countries, and the Pacific countries. This study emphasized the need for the adoption of long-run policy measures. Ndebbio (2004) examined the relationship between financial development and economic growth using Ordinary Least Squares regression. The author measures the degree of financial depth by the degree of financial intermediation and the degree of growth rate in per capita real money balances. Broad money supply (M2) was used as numerator in both measures. The result indicates that lack of growth of output is caused by shallow finance or due to the insufficiency of financial assets that properly enhance financial deepening.

Kularatne (2001) use South African time series data for the year 1985-1992 in his analysis of financial development and economic growth. Financial development indicators used are ratio of private credit extensions to GDP and value-added ratio which measures the level of stock market liquidity. Per capita GDP is used as the economic growth indicator. The effect is evaluated with two different models using the Johansen Vector Error Correction Model (VECM). In the first model, the effect of financial sector on economic growth is determined by direct and indirect effects. The direct effect is the effect of financial development on economic growth and the indirect one is from financial development to growth through investment. The second model tries to examine the feedback effect between financial development and real sectors. The results show that there is a positive indirect effect between the two indicators and it is found that there exists a feedback effect between finance and growth. Abu-Badr and Abu-Qarn (2008) also obtained similar results for Egypt using annual data from 1960 to 2001 and applied a multivariate VAR method. Their results reveal bidirectional causality for all the four measures of financial development employed. Wolde-Rafael (2009) applied multivariate VAR and Modified Wald test (MWALD) for Kenya on annual data for the periods 1966 to 2005. He established bidirectional causality between financial development and economic growth in three out of four measures of financial development used.

Ogiriki and Andabai (2014) examined financial development and economic growth using vector autoregressive (VAR) found that a long-run equilibrium relationship exists between economic growth and financial development and the result also confirmed about 96% short-run adjustment speed from long-run disequilibrium.

Torruam, Chiawa and Abur (2013) concludes that financial development has a positive impact on economic growth in Nigeria. Similarly, the study by Omankhanlen (2012) on financial sector reforms in the Nigerian economy and its impacts on economic growth also found that financial sector developments that were experienced in Nigeria had significant positive effect on the activities of the Nigerian economy.

Akingunola, Olusegun, Oluwaseyi and Olusoyi (2013) examined the relationship between financial liberalization and economic growth in Nigeria and found that financial development had insignificant impact on economic growth between 1960 and 2008. Similarly, Nzotta and Okereke (2009), basing their argument on two stage least square analytical framework for the period 1986-2007 concluded that, financial development does not support economic growth in Nigeria.

Odeniran and Udejaja, (2010) examined the relationship between financial sector development and economic growth in Nigeria. It tests the competing finance-growth nexus hypothesis using Granger causality tests in a VAR framework over the period 1960-2009. Four variables, namely; ratios of broad money stock to GDP, growth in net domestic credit to GDP, growth in private sector credit to GDP and growth in banks deposit liability to GDP were used to proxy financial sector development. The empirical results suggest bidirectional causality between some of the proxies of financial development and economic growth variable. Specifically, financial development Granger cause output even at 1per cent level of significance with the exception of ratio of broad money to GDP. Additionally, net domestic credit is equally driven by growth in output, thus indicating bidirectional causality. The variance decomposition shows that the share of deposit liability in the total variations of net domestic credit is negligible, indicating that shock to deposit does not significantly affect net domestic credit.

Nkoro and Aham (2013) empirically examined the financial sector development-economic growth nexus in Nigeria by employing cointegration/Error Correction Mechanism (ECM) with annual dataset covering the period, 1980-2009. Five variables, namely; ratios of broad money stock to GDP, private sector credit to GDP, market capitalization-GDP, banks deposit liability to GDP and Prime interest rate were used to proxy financial sector development while real gross domestic product proxy growth. The empirical results show that there is a positive effect of financial sector development on economic growth in Nigeria. However, credits to private sector and financial sector depth are ineffective and fail to accelerate growth.

Nnachi and Nnamani (2017) investigated the causal relationship between financial development and economic growth in Nigeria from 1970 to 2012 used the ratio of broad money to GDP ($M2/GDP$) or financial depth; the ratio of domestic investment to GDP (INV/GDP), the ratio of private sector credit to GDP (PSC/GDP) or financial depth, the ratio of domestic saving to GDP (DS/GDP), real interest rate (r) as proxy for financial development indicators/

variables and GDP as proxy for economic growth. Johansen cointegration and Granger causality were employed to test the long run equilibrium of the series and to determine the direction of causality between financial development and economic growth. The result also shows a uni-directional causal relationship between financial development and economic growth.

Odo, Ogbonna, Agbi and Anoke (2016) examined the causal relationship between financial development and economic growth in Nigeria and South Africa by employing co integration test, VECM and Granger causality test using the data of annual time series for the period 1980 – 2014. The study used ratio of broad money supply to GDP (M2GDP), ratio of domestic credit to private sector to GDP (DCPSGDP) both representing financial depth, real interest rate (RLINTR) and economic growth (GDPPC). The result of Granger causality indicates a unidirectional causality running from financial development (DCPSGDPN) to economic growth in Nigeria and a bidirectional causality from financial development (DCPSGDPS) to economic growth in South Africa validating the Supply leading hypothesis of financial development by Hugh Patrick (1966). This study therefore concludes that supply – leading phenomena (Finance – led growth) is evident in both Nigeria and South Africa economies.

4. Methodology

The study obtained quarterly data from the statistical bulletin of the Central Bank of Nigeria from (1985Q1-2016Q4). The study adopts and modified King and Levin (1993) empirical model tested in the literature where they studied the relationship between financial development and economic growth in United States.

Where;

$$X_{it} = \alpha + \beta[FD]_{it} + \lambda[Other]_{it} + \varepsilon_{it} \text{-----}1$$

Where FD stands for a number of financial development variables, others stands for non-financial development (control) variables and X stands for economic growth.

To capture the various measurement of financial development in an economy the model was modified to: $RGDP=f(M2GDP, PTDS,LDS,LR)$ -----2

$$RGDP = a_0 + a_1M2GDP_{sit} + a_2PTDS_{sit} + a_3LDS_{sit} + a_4LR_{sit} \text{.....}3$$

$$RGDP = a_0 + a_1\log M2GDP_{sit} + a_2\log PTDS_{sit} + a_3\log LDS_{sit} + a_4\log LR_{sit} + e_{it}$$

.....4

Where RGDP represents real gross domestic product, M2GDP represents money supply to gross domestic product ((financial depth variable); PTD ratio of private debt to total debt securities (Financial access variable); LDS leading-deposit spread (financial efficiency variable); LR liquidity ratio (financial stability variable).

5. Results and Discussion

Table 2: Descriptive statistics results

Variable	Observations	Mean	Standard deviation	Min	Max	Skewness	Kurtosis
RGDP	128	3451444	1809447	1495391	6902393	0.69484	1.98535
		0	4	3	0	0	4
M2GDP	128	14.5094	3.83785	9.20000	21.5400	0.59194	1.78822
		5	5	0	0	4	4
PTDS	128	0.49321	0.25996	0.16368	0.86839	-0.37332	1.40737
		4	6	3	3		1
LDS	128	45.7734	8.10603	29.1000	65.0000	-	2.72563
		0	5	0	0	0.21215	0
LR	128	22.4984	5.29793	11.0000	45.3000	0.54196	5.40488
		4	2	0	0	2	9

Source: Computer analysis using E-views 10.0

Table 2 presents the descriptive statistics results for the entire sample of the study. We observed that for the full sample, the mean (or standard deviation) values real gross domestic product, ratio of private debt to total debt securities, leading-deposit spread and liquidity ratio are around 34514440, 14.50945, 0.493214, 45.77340 and 22.49844 (or 18094474, 3.837855, 0.259966, 8.106035 and 5.297932), respectively. The maximum and minimum values for the five variables are found to be between 69023930 and 0.163683, respectively. The skewness has both negative and positive values, which shows a negatively and positively skewed distribution.

The variables for the analysis were subjected to unit roots test to determine whether there are unit roots or stationary series. In conducting this test, the Augmented Dickey-Fuller (ADF) unit root test with intercept would be employed to determine the stationarity of data. The unit root test in table 3 shows that the variables are stationary at second difference which allow for ascertaining the cointegration relationship.

Table 3: Result of ADF Unit Root Test at 2nd Diff

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
RGDP	-16.75912 (0.0000)**	-3.483312	-2.884665	Stationary
M2GDP	-11.83590 (0.0000)**	-3.483312	-2.884665	Stationary
PTDS	-11.03760 (0.0000)**	-3.483312	-2.884665	Stationary
LDS	-11.08105 (0.0000)**	-3.483312	-2.884665	Stationary
LDR	-14.90193 (0.0000)**	-3.483312	-2.884665	Stationary

Source: Author's Computation

Table 4. Presentation of Johansen co-integration result

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.306987	84.50314	69.81889	0.0022
At most 1	0.139133	39.39827	47.85613	0.2447
At most 2	0.112356	20.97096	29.79707	0.3594
At most 3	0.049346	6.311252	15.49471	0.6588
At most 4	0.000705	0.086773	3.841466	0.7683

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The co-integration test is used in the determination of the long-run relationship that exists between variables. Table 4 shows that long-run relationship (co-integration) exists among the variables. There is one cointegrating equation in the model. This is reflected in the trace statistic of Table 4 which shows a value greater than that of the 5% critical value respectively. With the existence of long run relationship, there is need to analyze normalized long run coefficients based on Johansen test. The result of the normalized coefficients shown in Table 5 shows a long-run effect between financial development and economic growth in Nigeria.

Table 5. Normalized long-run coefficient based on Johansen test

Dependent variable RGDP				
RGDP	M2GDP	PTDS	LDS	LR
1.000000	-692358.5	-52098505	-1040823.	8700.192
	(755432.)	(9564182)	(159649.)	(305243.)
	[-0.91650]	[-5.44725]	[-6.51945]	[0.02850]

Source: Output Data from E-views 10.0

Note: Standard errors in () and t- statistic in []. ** implies significant at 1% level of significant. In long run M2GDP, PTDS and LDS have positive effect on economic growth while LR has negative effect on RGDP. The coefficients of PTDS and LDS are statistically significant at the 1% level. Conclusion: The null hypothesis of no cointegration is rejected against the alternative of cointegrating relationship in the model. The nonstationary of data series and the cointegration of the vector variable in the equations lead to the execution of the second phase of Vector Autoregression Estimates (VAR).

Short Run Relationship

Table 6: Results of Vector Autoregressive Estimates Normalised on RGDP

Parameters	Coefficient	Standard Error	t-statistic
RGDP(-1)	1.837222	0.05549	33.1080

M2GDP(-1)	78264.03	46992.0	1.66547
PTDS(-1)	1232540	766973.	1.60702
LDS(-1)	9195.907	7430.54	1.23758
LR(-1)	-8350.070	6932.98	-1.20440
C	-288749.9	185585	-1.55589

Source: Output Data from E-views 10.0

Adjusted R-squared = 0.99

F-Statistic = 111090.1

The result from Table 6 shows that RGDP, M2GDP, PTDS and LDS have positive effect on RGDP while LR has negative effect on RGDP. A one percent change in one-year lag of RGDP, M2GDP, PTDS and LDS will result to a positive change in RGDP by 1.84 percent, 783percent, 123 percent, and 919 percent respectively. On the other hand, a one percent change in one-year lag of LR will results to negative change in RGDP by -8350 percent. On the performance of the individual variables, the results reveal that only one-year lag of RGDP are statistically significant given the high value of the t-statistics.

The adjusted R-squared value of 0.99% indicates that, about 99% of the variations in RGDP is explained by the combined effect of the independent variables. It also implies that the model has good fit in explaining the relationship. Similarly, the F-statistic which measures the overall significance of the model showed a high value of 111090.1 which indicates that the effect of financial development on Nigeria economic growth is statistically significant in Nigeria.

Table 7. Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
M2GDP does not Granger Cause RGDP	126	3.70347	0.0275
RGDP does not Granger Cause M2GDP		9.37203	0.0002
PTDS does not Granger Cause RGDP	126	0.36002	0.6984
RGDP does not Granger Cause PTDS		3.65862	0.0287
LDS does not Granger Cause RGDP	126	1.09616	0.3374
RGDP does not Granger Cause LDS		0.01843	0.9817
LR does not Granger Cause RGDP	126	0.76774	0.4663
RGDP does not Granger Cause LR		0.28048	0.7559

Source: Output Data from E-views 10.0

There exists a bilateral causality between M2GDP and RGDP since the probability value is less than 5% significance the result indicates that M2GDP granger causes RGDP and RGDP granger causes M2GDP. Table 7 shows a unilateral causality between RGDP and PTDS with causality moving from RGDP to PTDS.

6. Conclusion and Policy Implication

This research work examined the causal relationship between selected financial development indicators and economic growth in Nigeria using quarterly data from 1985Q1 to 2016Q4. It

employed robust techniques such as Vector Autoregressive (VAR) models and Granger Causality test. The descriptive statistics of the model variables was examined using mean, standard deviation, minimum and maximum values as well as Jaque Bera statistics test of normality. The Augmented Dickey Fuller test was used to examine the unit root properties of the series and the result indicates that all the variables became stationary only after second differencing. This led to the use of Johansen cointegration test in testing for the long-run relationship or cointegration which revealed cointegrating equations. Further, the econometric results reveal that the major determinants of economic growth measured by real GDP in Nigeria include past real GDP, M_2/GDP (financial depth), P/TDS (financial access), LDS (financial efficiency), and LR (Financial stability). The study came up with mixed findings – bidirectional causality supporting both supply-leading and demand following hypotheses and unidirectional causality supporting either supply leading hypothesis or demand following hypothesis. The study therefore concludes that; financial development is crucial for the growth of the Nigerian economy.

Since the result of the study confirmed that there is causal relationship between financial development and Nigeria economic growth, as such the study makes the following recommendations, it is desirable to further undertake financial reforms and take advantage of the supply leading hypotheses. Thus, to grow the Nigerian economy, priority should be focused at developing a financial system build on a robust infrastructure, legal system and an enabling business environment capable of attracting quality investments, promote real sector growth and development as well as job creation and economic growth. The study also, recommends that government should introduce policies aimed at enhancing financial inclusion and boosting financial access in Nigeria and enhance capital accumulation, credit creation, economic activities, investment and growth. There should be strengthening of the forward-looking approach to regulation and supervision of Banks and Other Financial Institution in Nigeria to ensure that bank's consistently maintain liquidity ratio that is adequate and above the regulatory threshold. Adequate liquidity would enhance banks' capacity to meet their financial obligations to their customers promptly, withstand short-term pressures, boost trust and confidence in the banking system, effectively intermediate between the deficit and surplus units, and thus maintain financial system stability. Given that the causation between financial development and economic growth is found to be bidirectional that is supporting both supply leading and demand following hypotheses, the study recommends that attention should be given to the money supply in the economy to ensure that the money in circulation is within the growth target in order to achieve price stability and accelerated growth. In addition, attention should be given to economic growth determinants such investment, human capital development, research and development among others which indirectly affect financial development so as to simultaneously achieve both economic growth and financial development.

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