Economic Impact of Financial Deepening in Nigeria

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Abstract: ***This research work focused on the economic impact of financial deepening in Nigeria. Obtained data spanning from 1997 to 2016 was presented and analysed in a line chart and with Two-staged Least Squares Regression method respectively. After subjecting the hypothesis under testing, result showed that financial deepening has significant impact on economic growth. Observations from data presentation also revealed that financial deepening has been increasing marginally. It was recommended that the tightened access to credit facilities in the country should be loosened up so as to ensure increased financial deepening.***

Keywords: Financial Deepening; Financial System; Economic Growth

1. Introduction

Financial deepening has been acknowledged as one of those stratagems whose application can accelerate the pace of development of the Nigerian economy(Onwumere , Ibe, Ozoh, & Mounanu, 2012). However, the impact of this strategy needs to be determined and examined from time to time particularly for developing economies with particular bias to Nigeria. Financial deepening improves economic performance viaimproved competitive efficiencywithin financial markets thereby indirectly benefiting non-financial sectors of the economy.An ideal measure of financial deepening must comprise of the total amount of banking and non-banking financial assets including local credit to the private sector, liquidity liabilities, stock and bond market capitalization, Treasury bill (Ndebbio, 2004). The roles played by Financial deepening in ensuring the improvement of an economy includes the widening of resource base and provision of the capital required in encouraging savings and credit investments. The planning and execution of effective mediations and programs in the Nigeria banking sector and stock market have seen to a continued improvement in financial assets, with a direct contribution from financial intermediaries(Nwanna & Chiwudu, 2016).The formal and informal sectors are the two divisions of the Nigerian financial sector. The informal sector which is poorly developed and not incorporated into the formal financial system has no official institutional agenda, no formal structure of rates and consist of the local money lenders, thrifts, savings and loans associations and co-operative societies. The exact size of this sector and its effect on the Nigerian economy remain relatively unknown. The formal sector; the Nigerian banking sector where a small number of large banks control the greater portion of the financial market in terms of total assets, total liabilities and total credit has failed to induce economic development because of the level of uncompetitiveness evident in the sector(Torruam, Chiawa, & Aburr, 2013). The Federal Ministry of Finance, the Central Bank of Nigeria as the highest institution in the money market, the Securities and Exchange Commission (SEC) as the highest institution in the capital market, Nigerian Deposit Insurance Corporation, (NDIC), National Insurance Commission (NAICOM) and the National Pension Commission (PENCOM) are the regulators of all the institutions that make up the Nigerian financial systems.Economic development specialists do use the term financial deepening to refer to a condition of sufficient liquidity and smooth financial intermediation. The critical role of financial system in economic growth and financial development cannot be over emphasised as it has been recognised globally that financial system is very important to the development of any economy as it provides enormous support to economic activities.Nzotta & Okereke, (2009) stated that the financial system functions as a promoter of economic development through various institutional structures. The system energetically seeks out and attract the pool of savings and non-performing funds and channel same to entrepreneurs, businesses, households and government for investments projects and other important undertakings with a view of returns (profit). This actually is the foundation for economic development.Furthermore, financial systems aids in the reduction of risks organisations and businesses encounter in their day to day productive processes. It also provides connexions for the diverse segments of the economy and encourages a high level of specialization expertise and economies of scale. financial system offers the essential setting for the execution of various economic policies of the government which is aimed at achieving non-inflationary growth, stability in exchange rate, balance of payments equilibrium, foreign exchange management and high levels of employment(Nzotta & Okereke, 2009).The Nigerian financial system has undergone many reforms in the past decade and this reforms have had positive impacts on the growth of the Financial Systems. The year 2009 saw the system moving from a simple system at inception to a more advanced sector with diversified financial assets, diverse institution and operators and improved regulatory strategies. The reforms so witnessed also attempted to address the financial gaps seen in the system, remove inflexibilities in the scheme of credit allocation and control and attain positive real interest rates and greater efficiency by the market operators in the intermediation process. This process of financial system reform involves the transition from an earlier condition of precise interest rates, under developed money and securities market and under-developed banking system, to a situation of bendable interest rates, an expanded role for market forces in resource allocation, increased self-sufficiency for the central bank and a deepening of the money and capital marklets. The Nigerian financial sector has been unsuccessful in attracting foreign investment or halting capital flight which financial deepening is meant to address showing that the Nigerian financial deepening activities performance are unimpressive. Also the financial gaps noticed in the Nigerian banking sector have not been addressed by the financial deepening activities of the Nigerian banking sector largely because internal savings and investments have not increased appreciably and also uncompetitive Nigerian banking sector(Nzotta & Okereke, 2009).Little emphasis has been placed on the nature of financial deepening and economic expansion in Nigeria considering the recent recession in the financial market and how it upset the real sector of the economy and this have created a lot of arguments which in turn creates the need for further studies to be undertaken on the nature of the relationship between the financial sector and economic growth(Sulaiman, Oke , & Azeez, 2012).

Research Objectives

1) To determine the trend of financial deepening in Nigeria.
2) To establish if financial deepening in Nigeria has any significant effect on

2. Theoretical framework

There exists two important theories that explains the concept of financial deepening in afinancial system. The supply leading hypothesis developed by Schumpeter (1911) and the demand leading hypothesis developed by Goldsmith (1967) (Agu and Chukwu, 2008)

a) Supply leading hypothesis: The hypothesis stresses that financial development has a positive effect on economic growth. It further posits that the effect stretches from financial development to economic growth which is triggered byan improvement in the efficiency of capital accrual or a growth in the rate of savings as wellas the rate of investment. The most significant effect of the supply-leading tactic is that,as businesspersons have new access to the supply-leading funds, their expectations are increased and new busness prospects are opened up, thereby making the business person to react to the new access appropriately (Agu & Chukwu, 2008).
b) Demand leading hypothesis: this postulates that financial markets grow and improve as a result of an increased request for their services from the developing real economy. Advancements in the financial markets is simply seen as a passive response to a developing economy. As the real sector expands and develops, the growing real sector will create bigger new demands for financial services which in turn will apply and deepen pressures to launch larger and more sophisticated financial institutions to satisfy the new demand for these services and in this way, financial deepening is merely a by-product or an outcome of growth in the real sector of the economy (Agu and Chukwu, 2008).

3. Financial Deepening and Economic Growth

Experts in the field of Economic development frequently use the word financial deepening to denote a condition of abundant liquidity and smooth financial intermediation even as a consensus that financial deepening stimulates growth has been reached by almost all researchers. It is also claimed that financial deepening is simply an upshot of growth in the real sector of the economy which could be apportioned to more valuable purposes in the early stages of growth (Odiambho, 2004 and Wadud, 2005). Over the years, it has been observed that the monetary authorities in Nigeria have implemented various measures that aims at deepening the financial system and reducing to the barest minimum, the level of financial repression in the Nigerian financial system (Adelakun, 2010). These financial reforms which have been a consistent feature of the Nigerian financial system have advanced in response to the callanges posed by developments in the Nigerian financial system which include systemic crisis, globalization, technological innovation, and financial crisis (Ibrahim and Shuaibu, 2013). The reforms often seek to act proactively to strengthen the system, prevent systemic crisis, strengthen the market mechanism, and ethical standards (Nkoro and Uko, 2013). Financial sector reforms also aims at developing an effective strategy for financial management (Okoli, 2010). This incorporates efforts to support operational abilities of the banking system, foster efficiency in the money and securities markets, over-haul the payments system and guarantee greater independence to the central bank inarticulating and executing macroeconomic policies (Odhiambho, 2004). Going by the above, there is the need todeepen the financial sector and reposition it for growth and integration into the globalfinancial system in conformity with international best practices becausein terms of flow of funds, the banking system, clearly dominate and has an important impact on the level of economic development (Audu and Okumoko, 2013). One of the most important policy concerns in most countries and in Nigeria is the effect of consolidation of financial institutions on financial system growth and development (Omotor, 2007). Consolidation alters the credit allocation of the financial system by nurturing the creation of larger banks having better access to the funds market as seen in the Nigerian case (Micheal, 2012) where consolidation affected the ease of use and pricing of loans in reaction to changes in the market dynamics and the level of economic development.Economic development means the growth in a nation's real gross domestic product (an increase in a nation's output of goods and services) or the physical expansion of the nation's economy (Azege, 2004) while increase in financial assets of an economy is financial deepening. Simply put, the totality of all the measures of financial assets gives us the estimated size of financial deepening in a financial system. This means that the widest range of such assets as broad money, value of shares in the stock market, money market funds will have to be included in the measure of financial deepening. In his work, Ndebbio (2004) stated that in the event that increase in the supply of financial assets is small, financial deepening in the economy will be shallow thus impeding economic growth. Developed economies are characterized by high financial deepening and that is the reason for significant growth and improvement noticed in their financial systems. Financial sector is the platform on which financial deepening is manifested.

4. Empirical Framework

Nzotta and Okereke (2009) carried out an empirical study which observed financial deepening and economic development in Nigeria from the year 1986 to year 2007. Theirwork made use of secondary data obtained for a period of 22 years. They specified nine explanatory variables for their study based on hypothetical substructures. In their work, they sought to establish a relationship between the variables they specified and financial deepening index. They used two stages least square analytical framework in their analysis and also trend analysis was applied in the study. At the end of their study, they observed that financial deepening index is low in Nigeria over the years. They discovered also that the nine explanatory variables, as a whole were useful and had a statistical relationship with financial deepening. They also found out that four of the variables specified in their study; lending rates, financial savings ratio, cheques/GDP ratio and the deposit money banks/GDP ratio had a significant relationship with financial deepening. They concluded that the financial system has not sustained an effective financial intermediation, especially credit allocation and a high level of monetization of the economy which led them to recommend that the regulatory structure should be reorganised to guarantee good risk management, corporate governance and lessening systemic crisis in the system.

Okafor, Onwumere, and Ezeaku(2016) carried out a causality and impact study on financial deepening and economic growth in Nigeria within the years 1981 to 2013. Their study adopted the Phillips-Peron test for unit root toestablish if the variables are static or not. To determine if the data set for the study was normally distributed, they employed the VEC residual normality test and theHistogram-Normality test. They also carried out test for a long run relationship with the aid of the Johansen cointegrationtest. They also used Error Correction Model alongside the Granger causality test in their study. Their findings showed that there exists a long run relationship between economic growth, broad moneysupply and private sector credit, with high speed of adjustment towards long run equilibrium. Their results also revealed that while broad money has positive and non-significant impact on economicgrowth, private sector credit has negative and non-significant effect on growth. The Granger causality test results showed that neither broad money supply nor private sector credit is granger causal for economic growth and vice versa. The researchers recommended that government should implement privatesector friendly policies by ensuring that investors do not only have access tocredit but at affordable interest rates.

Nwanna and Chiwudu, (2016) carried out a research work to examine financial deepening and economic growth in Nigeria from 1985 to 2014 by focusing on the effects stock market and bank deepening variables such as money supply, market capitalization, private sector credit and financial savings have on economic growth of Nigeria. Their study adopted the supply leading hypothesis and also annual time series data for 1985 to 2014 obtained from the Central Bank of Nigeria statistical bulletin. They also used ordinary least square (OLS) econometric in which variations in the dependent variable, economic growth, measured by gross domestic product growth rate were regressed on money supply ratio to gross domestic product, private sector credit ratio to grossdomestic product, market capitalization ratio to gross domestic product and financial saving ratio to grossdomestic product using time series data from 1985 to 2014. The result of the analysis reveals that both bank based and stock market financial deepening proxies has significant and positive effect on economic growth and that the banking sector and stock market in Nigeria has each an important part to play in the process of economic growth. They recommended that improvements should be effected in the stock market sector to encourage more participation and restrictions (especially in the areas of international capital and entry) in the stock market should be eased to ensure that more companies are listed in the Nigerian stock market.

Onwumere, Ibe, Ozoh and Mounanu (2012) in their study examined the impact of financial deepening on economic growth in Nigeria. Adopting the supply-leading hypothesis using variables such as broad money velocity, money stock diversification, economic volatility, market capitalization and market liquidity as proxies for financial deepening and gross domestic product growth rate for economic growth they discovered that broad money velocity and market liquidity promote economic growth in Nigeria while money stock diversification, economic volatility and market capitalization did not within the period studied (1992-2008). Government policy should therefore be geared towards strategically increasing money supply and promoting efficient capital market that will enhance overall economic efficiency, create and expand liquidity, mobilize savings, enhance capital accumulation, transfer resources from traditional sectors to growth inducing sectors (such as manufacturing and industry, agriculture and the services sectors) and also promote competent entrepreneurial response in various sectors of the economy.

Karimo and Ogbonna (2017) in their work 'Financial Deepening and Economic Growth Nexus in Nigeria: Supply-Leading or Demand-Following?'examined the direction of causality between financial deepening and economicgrowth in Nigeria for the period 1970–2013. Their study adopted the Toda–Yamamoto augmentedGranger causality test and the results they got showed that the growth-financial deepening nexus in Nigeriafollows the supply-leading hypothesis. This they say means that it is financial deepening that leads to growthand not growth leading to financial deepening. They recommended thatpolicy efforts should be channelled towards removing hindrances that weaken the growth of credit tothe private sector, and also the confidence of people in stock market activities must be restored through appropriate policy formulations.

5. Research Methodology

The research design employed by the researcher is ex post-facto research which aims at determining or establishing or measuring the relationship between one variable and another or the impact of one variable on another. The nature of data for analysis of this study is secondary and was obtained from the Central Bank of Nigeria Statistical Bulletin, 2016. A regression model has been employed, the essence of regression is to use a mathematical equation to express the nature of the relationship existing between variables and ultimately to use this equation to predict the of value one variable given a specific value of the other variable (Ugbam, 2001).

The following is a multiple regression model
$Y = b_0 + b_1X_1 + b_2X_2\ \mu$.
Where
Y = the variable we are trying to predict; b_0 = the intercept; b_1 = the slope; X_1, X_2 = the variables used to predict Y; μ = the error term.

The intercept (b_0) is the value of the dependent variable when the independent variable is equal to zero while the slope of the regression line (b_1) represents the rate of change in Y as X changes. Because Y is dependent on X, the slope describes the predicted values of Y given X.

The above model can thus be applied in this study as
$\blacktriangle GDP = b_0 + b_1M2GDP + b_1CPSGDP + \mu$ …… Eqn. (1)
Where
▲GDP – Percentage change in GDP/GDP growth rate
M2GDP – Money Supply to GDP
CPSGDP – Credit to GDP

Techniques of Data Analysis
The Techniques of data analysis employed by the researchers is the Two-staged least square regression with the aid of Statistical Package for Social Sciences (SPSS) version 22.0. The aim of using this method is because two-staged least squares minimizes the squares of the residuals, the formulas for obtaining the estimates of the beta coefficients, standard errors are all based on this principle. The aim of using this method is to minimize the error in our prediction of the dependent variable, and by minimizing the residuals, error will be minimized. By using the "squares" the researcher is precluding the problem of signs thereby giving positive and negative prediction errors the same importance.

6. Data Analyses and Interpretation

Table 5.1: Necessary Variables for Analysis from 1997 to 2016

Year	GDP	GDP%	M2/GDP	CPS/GDP
1997	4111.641	8.798514	10.05147	7.690533
1998	4588.99	11.6097	10.63733	7.669579
1999	5307.362	15.65424	11.85056	8.123968
2000	6897.482	29.96067	12.73591	7.689375
2001	8134.142	17.92914	15.60486	9.40433
2002	11332.25	39.31713	13.28918	8.211023
2003	13301.56	17.37789	14.6819	8.243662
2004	17321.3	30.22004	12.3075	8.207608
2005	22269.98	28.56993	11.84515	8.255015
2006	28662.47	28.70452	13.25046	7.991697
2007	32995.38	15.11704	15.53975	11.15335
2008	39157.88	18.67685	20.45106	17.72666
2009	44285.56	13.09488	21.25097	20.65553
2010	54612.26	23.31844	20.20598	18.59843
2011	62980.4	15.32281	19.32743	16.92602
2012	71713.94	13.86707	19.37614	20.42738
2013	80092.56	11.6834	18.92846	19.66704
2014	89043.62	11.17588	19.85464	19.23741
2015	94144.96	5.729041	20.07681	19.83693
2016	101489.5	7.801301	21.29056	20.7733

Source: Computed from CBN Statistical Bulletin, 2016

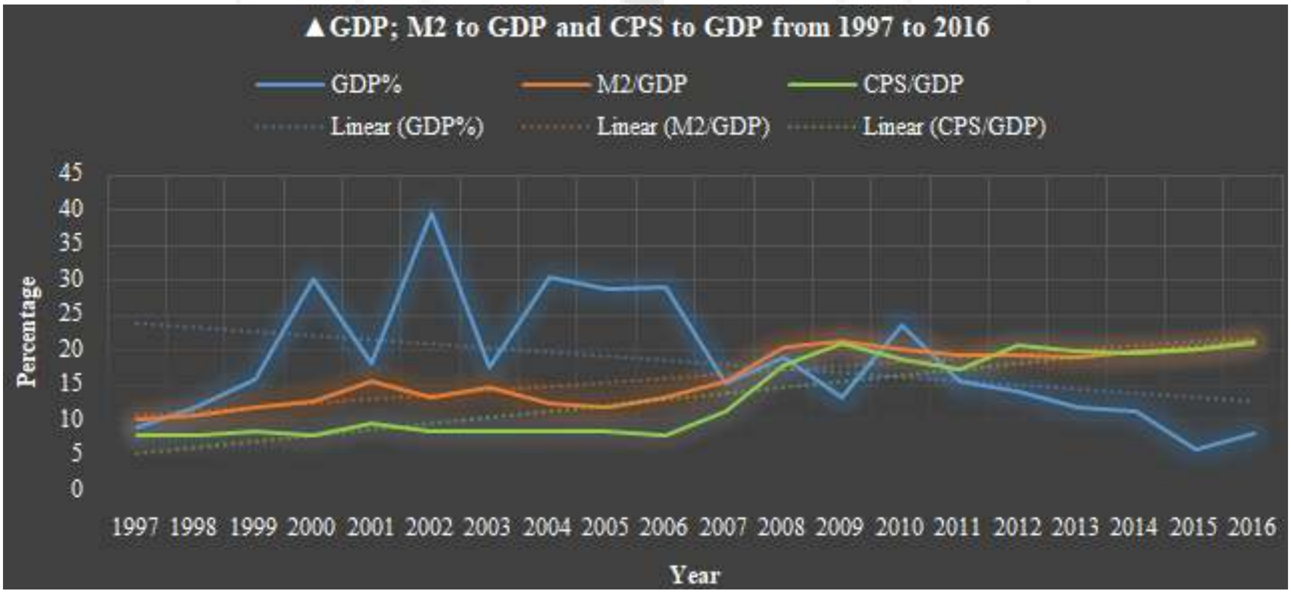

Figure 5.1: Financial Deeping Indices and Percentage Change in GDP from 1997 to 2016

Whereas GDP growth rate has been declining marginally within the years under review, financial deepening indicated by percentage of M2 to GDP and CPS to GDP has been increasing marginally. This means that marginal increase in financial deepening is not sufficient enough to spur marginal growth in economic growth, *ceteris paribus.* The cyclical movement of the GDP line diagram reflects the unsteadiness in the economic system of Nigeria occasioned by oil price shocks of 2014/2015.

6.1.1 Model Summary

Equation 1	Multiple R	.606
	R Square	.367
	Adjusted R Square	.292
	Std. Error of the Estimate	7.549

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6.1.2 ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Equation 1	Regression	561.315	2	280.658	4.925	.021
	Residual	968.850	17	56.991		
	Total	1530.165	19			

6.1.3 Coefficients

		Unstandardized Coefficients				
		B	Std. Error	Beta	t	Sig.
Equation 1	(Constant)	14.160	11.466		1.235	.234
	M2GDP	2.099	1.448	.922	1.450	.165
	CPSGDP	-2.238	1.005	-1.416	-2.226	.040

Coefficient Correlations

			M2GDP	CPSGDP
Equation 1	Correlations	M_2GDP	1.000	-.953
		CPSGDP	-.953	1.000

The multiple R of .606 shows that the relationship between the dependent variable (▲GDP) and independent variable (M_2GDP; CPSGDP) is fairly positive. The R of .367 shows that 36.7% of the variation in the dependent variable can be explained by the independent variables. The Adjusted R-square of .292 shows that only 7.5% of the variation in the dependent variable can be explained by other variables not included in the model – representing a small variation in prediction. The standard error of estmate of 7.549 represents a small variation of the model. The ANOVA table shows that the model fit is good for prediction as it is statistically significant (Sig. = .021 < .05). The coefficient for M_2GDP (2.099) is not significantly different from 0 because its p-value is 0.165, which is larger than 0.05. The coefficient for female (-2.238) is significantly different from 0 because its p-value is 0.040, which is smaller than 0.05. When you. If the regression equation is replaced with its values from the SPSS output, we will have ▲GDP = b_0 + 2.099GDP – 2.238CPSGDP+ 7.549.

H_0: Financial deeping has no significant impact on economic growth in Nigeria

The p-value on which basis to reject the null hypothesis that financial deeping has no significant impact on economic growth in Nigeria is .021 < .05. Hence we reject the null hypothesis and state alternately that financial deepening have significant impact on economic growth in Nigeria.

The slope of 2.099 and -2.238 for M2 deepening and CPS deepening respectively shows that there exists a positive causal relationship between M2 deepening and economic growth at a statistical non-significance while there is a negative causal relationship between CPS deepening and economic growth at a statistical significance. But however, both variables were found to be generally significant in explaining the variation in economic growth.

7. Conclusion and Recommendation

Given revealed findings, we conclude that contribution of the financial sector to economic growth of country cannot be overlooked. The financial sector remains one of the most vital sectors of every economy and as such determines to a large extent the economic-path of the country.

We recommend however that

There should be loosened access to credit in Nigeria so as to induce increased growth of the economy. This will go a long way to strengthen the financial sector and at the same time increased economic activity.

Savings should be encouraged so that banks significantly impact on economic growth in Nigeria, much still needs to be done. The interest rate policy in Nigeria should be adjusted to encourage savings in order to make more funds available to banks to execute their intermediary role to investors seeking funds. Moreso, the lending rate should be adjusted to a reasonable rate so as not to daunt investors' interest in borrowing to execute investment projects.

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