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Original Research Paper | Vol. 04 Issue 04 April - 2021 | Manuscript ID: #0397

FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA: THE CASE STUDY OF NIGERIA

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ABSTRACT

The study analyzed the effect of financial development on economic growth in Nigeria using time series data on the annual growth rate of gross domestic product, real interest rate, the ratio of gross domestic savings to GDP, the ratio of domestic credit to the private sector to GDP over the period 1980 and 2019. While the variables real interest rate, the ratio of gross domestic savings to GDP, the ratio of domestic credit to the private sector to GDP served as an explanatory variable, the annual growth rate of gross domestic product was used as the dependent variable. The results indicated that two of the variables (real interest rate, gross domestic savings) are inversely related to the dependent variable (GDP annual growth rate) when combined while domestic credit to the private sector is positively related to the dependent variable with the coefficient of multiple determination showing that the model is of a high good fit with approximately 93% of the gross domestic product being explained by the variables included in the model, while the remaining 7% are factors inducing growth but were not captured in the model. Thus, the study, therefore, concluded that there is the need to adequately deepen the financial system through innovations, adequate and effective regulation and supervision, efficient mobilization of funds and making such funds available for productive investment, and improved services to propel economic growth.

KEYWORDS

Financial system, capital base, economic growth, interest rate, banking system.

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Introduction

It is widely acknowledged that financial development is a multidimensional concept and constitutes a potentially important mechanism for long run economic growth. It plays fundamental roles in the development and growth of the economy. The effectiveness and efficiency in performing these roles, particularly the intermediation between the surplus and deficit units of the economy, depend largely on the level of development of the financial system.

A well-developed financial system enhances investment by identifying and funding good business opportunities, mobilizes savings, enables trading, hedges and diversifies risks, and facilitates the exchange of goods and services, thereby resulting to increase in the growth of economic activities in the country. These functions result in a more efficient allocation of resources, rapid accumulation of physical and human capital, and faster technological progress, which in turn results in economic growth (Adelakun, 2011). Therefore, to achieve a smoothly operating economic system and stainable growth, a well-functioning financial system is necessary. Though, the financial sector on its own cannot determine economic growth, it plays a pivotal role in stimulating industrial as well as economic development. It also provides reliable and accessible information that lower transaction costs which in turn strengthen resource allocation and economic growth (World Bank, 2013).

According to Nzotta (2004), financial institutions channel resources from surplus economic units to deficit units for investment purposes. This consists of the provision of loans and advances to the private and public sectors for the growth of domestic output and promotion of the export trade, agricultural production and provision of infrastructure. The success of the financial system all over the world in providing its developmental roles has been predicated on the initiation of financial sector reforms such as the introduction of market-based procedures for monetary control, the promotion of competition in the financial sector, and the relaxation of restrictions on capital flows. The aim of initiating these reforms is to create a more efficient and stable system, which will facilitate optimum performance in the economy. This means providing a foundation for implementing effective stabilization policies and successfully mobilizing capital and putting it to effective use, will lead to achieving higher rates of economic growth (Johnston and Sundararajan, 1999).

Many countries have experienced successful financial sector reforms which have been accompanied by improvements in economic growth and efficiency of the financial system, while other countries have faced financial crises and disruptions to economic growth. Given the financial crisis experienced since 1986, many emerging economies, including Nigeria, embraced financial sector reforms (Iganiga, 2010). In the early seventies in Nigeria, as a result of the prevailing economic paradigm at that period, the sector was highly regulated with government holding major shares in most of the banks. For

instance in 1986, the liberalization of the banking industry was a major component of the Structural Adjustment Programme (SAP) which government put in place to drive the economy from austerity measure to prosperity measures. In 2004, consolidation exercise in banking sector played a role in the National Economic Empowerment and Development Strategy (NEEDS) which was used to drive the economic agenda of the ruling government then. The purpose of creating reforms is to create a more efficient and stable system which will facilitate optimum performance in the economy. This provides foundation for implementing effective stabilization policies and successfully mobilizing capital and putting it to effective use, thus, leading to the achievement of higher rate of economic growth (Johnson and Sundarajan, 1999).

However, the Nigeria's financial system is not effectively providing its development roles as such and is currently not in a position to fulfill its potential as a propeller of economic growth and development. The formal financial system is -datively shallow and a relatively low level of credit to the private sector prevail. A parallel World Bank review of financing for Rural Micro and Small-Scale Enterprises has also revealed that the absence of efficiently operating rural financial markets in Nigeria has become a serious constraint on sustainable rural development. Both the formal and informal financial sectors in Nigeria are not currently in a position to effectively support a strong expansion of the real sector and maximize their contribution to economic growth and development. Besides, in spite of the reforms, Nigeria's major productive sectors have considerably shrunk in size since 1980s.

Poverty is also becoming entrenched in Nigeria with the threat that the children of the poor are also likely to end up poor. Income distribution is so skewed that the country is one of the most unequal societies in the world, with 50% of the population having only 8% of the national income (Soludo et al, 2007) which runs contrary to the aim of financial sector development.

> Studying the relationship between financial development and economic growth is critical for Nigeria, considering the fact that it is a country whose financial industry has witnessed many reforms in a relatively short time. The CBN has been trying to ensure that the financial sector plays its role in the achievement of growth and development in Nigeria through several reforms implemented. The reformation exercise led to the increase in the minimum capital requirements for the commercial banks, and micro-finance banks respectively. This brings to bear the existence of twenty five commercial banks. In the post consolidation era, there are fewer banks now with improved minimum capital requirement of N25 billion each, but unfortunately, the fear of systemic risk lingers, the supply of credit to investors is still Questionable, while economic growth relatively stable.

Problem Statement

The low capital base, dominance of a few banks, over-dependence on public sector deposits and weak corporate governance among others have necessitated banking reforms in the last few years in Nigeria with the major objectives of ensuring price stability and facilitate rapid economic development (Abdullahi, 2007). As part of the reform agenda, the Central Bank of Nigeria (CBN) mandated all licensed banks to increase the minimum paid up capital from N2billion to N25 billion with effect from January 1, 2006. The consolidation exercise that resulted from the pronouncement brought the number of banks to 24 groups of banks in 2006 (Obamuyi and Olorunfemi, 2011). In spite of these reforms however, the Nigerian financial sectors are thin, and experience difficulty in mobilising domestic savings attracting foreign private capital when compared to other developing countries in Taiwan Malaysia, Singapore to mention just a few.

In fact, the financial sectors are mostly uncompetitive while credit allocation often subject to government intervention. However, most economists argue that growth depends on financial sector development. In fact, a large body of literature, both empirical and theoretical, which has examined this issue, still remains inconclusive. While some studies find that financial institutions development has been instrumental in accelerating economic growth, others have suggested that it has not been very significant. According to Beck et al (2000), Bekaert et al (2005), there exist a causal association between finance and economic growth. La Porta et al (2000) argues that well developed capital markets, especially those imbued with rights that protect investors, promote the efficient allocation of capital to projects with high rates of return, in turn stimulating savings, investments and economic growth. Evidence from both single country (Guiso et al, 2004) and cross-country Levine, 2006Demirguc-Kurt and Levine, 2001) studies suggest that economies with more developed financial markets begin to grow earlier, attain higher growth rates, and achieve higher levels of per capita income than economies with less developed financial markets. The relationship between financial sector development and economic growth in Nigeria will therefore have to be empirically determined which is the kernel of this research work.

Research Questions

In view of the perceived problem, the study was guided by the following research questions:

i. Can financial development lead to economic growth?

ii. To what extent has the Nigerian financial sector contributed to economic growth?

iii. Is there significant difference in the financial sector performance before and after financial reforms in Nigeria?

iv. What other components of the financial sector aside banks need to be considered?

Conceptual Review

Financial Development and Growth: Theory

Endogenous growth theory models services like risk diversification, savings mobilisation and liquidity generation offered by financial intermediaries. The theory proposes that through these services there is an implied positive relationship between financial intermediation and economic growth (Ghali, 1999). However it is important to note that this relationship can be affected negatively by intense government intervention in financial institutions. According to Ghali, 1999 government intervention through direct interventions such as interest rate ceilings and direct credit programs on the banking system restricts financial sector development, thus reducing economic growth.

However, one of the oldest debates in economics has remained the relationship between financial development and economic growth. Its root can be traced to Schumpter (1912), when he posits that finance is paramount for economic growth. However, Robinson (1952) argues that economic growth promotes financial development. Financial markets provide an economy with vital services comprising, for example, the management of risk and information, and the pooling and mobilization of savings (Gries et al, 2011). Theoretically, the linkage between finance and economic growth may take different forms. On the one hand, the financial sector may affect growth through the accumulation channel and the location channel. The accumulation channel emphasizes the finance-induced growth effects of physical and human capital accumulation (Pagano, 1993). The allocation channel focuses on the financed-induced efficiency gains in resource allocation that enhances growth (King and Levine, 1993). Following these considerations, causality runs from finance to growth (supply-leading hypothesis). On the other hand, financial development may also be stimulated by economic growth. For instance, in a growing economy, the private sector may demand new financial instruments and an improved access to external finance. Financial activities then simply expand in step with general economic development (Robinson, 1952), positing the so-called demand- lowing hypothesis. Additionally, finance and growth may be mutually dependent. The real sector may provide the financial system with the funds necessary to enable financial deepening, eventually allowing for a capitalization on financial economies of scale which in turn facilitates economic development (Berthelemy and Varoudakis, 1996).

Financial Reform in Nigeria

Financial reforms in Nigeria dates back to 1952 when the Banking Ordinance was enacted. The deregulation of banking in 1986 provided the impetus for the Structural Adjustment Programme. The 1986 reform of the financial system saw a policy shift from direct control to a market based financial system, especially as regards monetary management, risk management and asset holding capabilities

of the institutions. A number of other reforms followed including the consolidation policy in banking 2005 and insurance 2007. In the same vein, the capital market has also experienced a lot of reforms over the years, especially as regards the capital requirements of the operators, the operational and ethical standards of the institutions and the modalities of the market mechanism (Nzotta and Okereke, 2009).

> Apparently, the series of reforms in the banking and financial sector were geared towards positioning banks and other financial institutions to play their primary and very crucial role of financial intermediation in the economy as the driving force for generating high savings and investments. The reforms in the system impacted positively on the growth of the financial system. The system moved from a rudimentary one at inception to a more sophisticated one in 2009 with diverse institutions and operators, diversified financial assets and an enhanced regulatory framework. The reforms have also tried to address the financial gaps in the system, remove rigidities in the system of credit allocation and control and achieve positive real interest rates and greater efficiency by the market operators in the intermediation process.

Undeniably, Ibi-Ajayi (2007) has argued that while the reforms have been a catalyst for growth in the banking industry in Nigeria, they have not actually engendered development to the extent that there is "inflexibility inherent in the banking system, loans and advances are not easily given even when the strict collateral condition is met. While banks in developed countries encourage people to take advantage of their lending facilities, our banks specialise in scaring away potential customers by requiring them to meet impossible conditions. In Nigeria, in most cases, withdrawing money or carrying out simple operations like foreign exchange transaction can take half of the day." This state of affairs exist because the economic and banking reform measures adopted by successive administrations in Nigeria did not incorporate institutional and regulatory reforms, a key reason that minimal success has been achieved in engineering. The improved financial environment stimulates the level of investment and income, on one hand, and enhances manufacturing capacity utilisation, on the other hand. The ultimate effect is to reduce poverty, increase per capita income, and by extension lead to economic growth.

The reforms in the financial system in Nigeria which heightened with the 1986 deregulation, affected the level of financial deepening of the country and the level relevance of the financial system to economic development. According to Nnanna and Dogo (1998), the rapid globalization of the financial markets since then and the increased level of integration of the Nigerian financial system to the global system have generated interest on the level of financial deepening that has occurred.

Financial sector reforms seek to develop an efficient framework for monetarymanagement. This encompasses efforts to strengthen operational capacities of the banking system, foster efficiency in the money and securities markets, over-haul the payments system and ensure greater autonomy to the central bank in formulating and implementing macroeconomic policies. Thus, there is the need to deepen the financial sector and reposition it for growth and integration into the global financial system in conformity with international best practices.

One of the most important policy concerns in most countries is the effect of consolidation of financial institutions on financial system growth and development. The first major concern is the transmission mechanism. Consolidation could alter the credit allocation of the financial system by fostering the creation of larger banks having better access to the funds market. It also affects the availability and pricing of loans in response to changes in the market dynamics and the level of economic development (Nzotta and Okereke, 2009). The reforms in the system impacted positively on the growth of the financial system. The system moved from a rudimentary one at inception to a more sophisticated one in 2009 with diverse institutions and operators, diversified financial assets and an enhanced regulatory framework. The reforms have also tried to address the financial gaps in the system, remove rigidities in the system of credit allocation and control and achieve positive real interest rates and greater efficiency by the market operators in the intermediation process.

The Nigerian Financial System

The Nigerian financial system can be generally categorized into two broad segments: the informal and the formal. The informal sector includes the local money lenders, the cooperatives and a battery of savings associations. This segment is scantily developed, restricted in outlook and seemingly detached from the formal financial system. The formal financial system includes money and capital market institutions. Unlike the informal sector institutions, the formal institutions are regulated by various authorities (Adelakun, 2010).

Majorly, financial services companies are concentrated in Lagos and national companies dominate the various sub-sectors. Except for the banking industry, the majority of the operators in the financial services industry are small-sized companies. There is a dearth of long-term funds in the industry. While the banks, capital markets and investment management companies seems to be well capitalized, the insurance industry until recently was plagued by under-capitalization. Competition is high across all sub-sectors but more so in the banking sub-sector. Entry barriers are high for banking, moderate for insurance and low for investment management and capital market activities (Erdal et al, 2007). In the 1970s and 1980s the banking system was dominated by the big three banks- Union Bank, First Bank and United Bank for Africa and a few other local banks but with the deregulation of the

industry in 1986, the numbers of banks increased to over 100, many of the new entrants were characterized by weak capitalization and poor management quality. There was also weak regulatory supervision. All of these led to the collapse of some of the banks in an industry stake-out. By 2003, there were about 89 banks left, seven were appointed as settlement banks for the whole industry. The 'big three' plus other four of the stronger new generation entrants were comparatively smaller in size - the total capitalization of all the banks in the country was less than $46billion (Adelakun, 2010).

In July 2004, the Central Bank of Nigeria (CBN) announced banking sector reforms. The first phase of the reforms was designed to ensure a diversified, strong and reliable banking sector, which will ensure the safety of depositors money, play active developmental roles in the Nigerian Economy and become competent and competitive players both in the African and global financial systems, while the second phase involves encouraging the emergence of regional specialized banks. The consolidation plan raised minimum shareholders' Funds for banks in the country to N25bn (US $200million) from the former level of N2bn (US $15million). The plan provided incentives for banks in the country to consolidate through mergers and acquisitions and also sought to encourage banks to play active development roles in the Nigerian economy, while becoming competent and competitive players in African regional and global financial systems. Many banks recapitalized to meet the new minimum share-holders' fund requirement through private placements, right issues and public offers (Adelakun, 2010). .

As a result of the process, the number of banks operating in Nigeria has shrunk from 89 to 25. Industry consolidation has also been carried out in the insurance segment of the financial system. The financial sector has achieved significant profitability and growth than many other sectors of the Nigerian economy. The universal banking system currently operating in the country enables most banks offer a wide range of services covering core banking areas such as lending, treasury, trade finance, private banking and financial advisory service. Some of the products and services include: asset based finance leases, loan syndication, advances, bonds, guarantees, cash management, mutual funds, company floatation, capital reconstruction and restructuring, mergers and acquisitions, project finance, custodial service, and trust services among others (Adelakun, 2010). .

Other Financial institutions in Nigeria's financial system are finance and investment companies, Bureau de change, primary mortgage institutions and the Nigerian Social Insurance Trust Fund (NSITF). The pension reform law of 2004 also established a contributory pension system for the country. About twelve Pension Fund Managers have been licensed. The financial system is highly regulated by the following bodies. The Central Bank of Nigeria, Nigerian Deposit Insurance

Corporation, National Insurance Commission, Securities and Exchange Commission, and Federal Ministry of Finance.

Empirical Review on the Relationship between Financial Development and Economic Growth

Authors have used different econometric approaches to analyse the effect of financial intermediary development on economic growth. According to Nzotta (2004), financial institutions channel resources from surplus economic units to deficit units for investment purposes. This consists of the provision of loans and advances to the private and public sectors for the purpose and for the growth of domestic output and promotion of the export trade, agricultural production and provision of infrastructure. In a study of ten developing countries by Christopoulos and Tsionas (2004) they found long term Granger causality from finance to economic growth, but not of reverse causality. Similarly, in a study of Taiwan economy, Chang and Caudill(2005) found that financial development Granger cause growth.

Beck et al (2000) considered data for a subset of 74 countries. They invoked both cross section regressions and GMM dynamic panel estimators. They concluded that the panel and cross-sectional results are the same, that is, the exogenous element of financial intermediary development is positively linked with economic growth. The authors used two measures of financial intermediary development. First, the deposit money bank credit to the private sector divided by GDP compared to private credit. Second, the ratio of deposit money bank domestic assets to GDP. These measures proved that the exogenous part of financial intermediary development is positively and strongly linked to economic growth.

Agarwal (2001) argued that financial sector development facilitates capital market development, and in turn raises real growth of the economy. In his study, Tharawanji (2007) observed that countries with deeper capital market face less severe business cycle output contraction and lower chances of an economic downturn compared to those with less developed capital market. In a sample of 11 countries studied, Ben and Ghazouani (2007) reported that financial system development could have adverse effect on economic growth and therefore advocated for a vibrant financial sector. Nieuwerbugh et al (2005) investigated the long term relationship between economic growth and financial market development. The authors used a new set of stock market development indicators to argue that financial market development substantially affects economic growth. They found strong evidence that stock market development leads to economic growth in Belgium, especially in the period between (1973) and (1993). Similarly, scholars have examined the linkage between finance-growth nexus in Nigeria. Chukwu and Agu (2009) adopt multivariate VECM to investigate the causality between financial depth and economic growth from 1971 to 2008. Their results suggest that

financial depth and economic growth have a stable long-run relationship. They find evidence in support of demand-following hypothesis when financial depth is proxied by banking sector's private sector credit and real broad money supply and supply-leading hypothesis when loan deposit ratio and bank deposit liabilities are used as proxies for financial depth. Adam and Sanni (2005) examined the roles of stock market on Nigeria's economic growth using Granger- causality test and regression analysis and discovered a one-way causality between GDP growth and market capitalization and a two-way causality between GDP growth and market turnover. They also observed a positive and significant relationship between GDP growth turnover ratios. The authors advised that government should encourage the development of the capital market since it has a positive effect on economic growth.

METHODOLOGY

The Ordinary Least Square (OLS) Regression model is used to obtain the parameter of the variables. Coefficient of determination (R^2), T and F tests was also used to ascertain the validity of the estimated coefficients. Coefficient of determination gives the extent to which the independent variables explained the variation in the dependent variable. For the T-test and F-tests, the calculated values will be compared with the tabulated values to estimate the statistical significance of explanatory variables. They will also determine the acceptability or otherwise of the questions formulated and the standardize beta coefficients will be used to estimate the relative effectiveness of the explanatory variables.

Model Specification

The primary aim of this study is to find out the relationship between financial development and economic growth in Nigeria using econometric technique. In evaluating this, variable such as annual growth of the Gross Domestic Product (GY), real interest rate (R), the ratio of gross domestic savings to GDP (S) and the ratio of domestic credit to private sector to GDP (P). While the annual growth of the Gross Domestic Product (GY) serves as a dependent variable, real interest rate (R), the ratio of gross domestic savings to GDP (S) and the ratio of domestic credit to private sector to GDP (P) are used as explanatory variables. To establish the relationship between financial development and economic growth, we adopted a growth model which is in line with that applied by Eradaletal (2007) which was a modification of the growth model of Rata and Ram (1999). Thus, the methodological approach for this research work will follow the specification of a model which specifies annual growth of the Gross Domestic Product (GY) as a function of real interest rate (R), the ratio of gross domestic savings to GDP (S) and the ratio of domestic credit to private sector to GDP.

(P).

GY_t - $f(R_t, S_t, P_t,)$................................(1)

In a linear form, the model can be specified as;

$GY_t = \beta_0 + \beta_1 R_t + \beta_2 S_t + \beta_3 P_t + U_t$ ....(2)

Where;

GY_t = Annual growth of the Gross Domestic Product

R_t = Real Interest Rate

S_t = the ratio of Gross Domestic Savings to GDP

P_t = Ratio of Domestic Credit to Private Sector to GDP.

U_t = Error Term

β_o to β_3 are parameters.

The Logarithm format becomes:

$LnGY_t = \ln\beta_o + \ln\beta_1 R_t + \ln\beta_2 S_t + \ln\beta_3 P_t + U_t$ ....(3)

The logarithm format above becomes necessary due to the fact that it measures the general growth rate to de-emphasize the rising trend of each of the variables used in the model.

Other equations are stated thus:

$GY_t = \beta_0 + \beta_1 R_t + P_2 S_t + U_t$ ....(4)

$GY_t = \beta_0 + \beta_1 R_t + \beta_2 P_t + U_t$:..................(5)

$GY_t = \beta_0 + \beta_1 S_t + \beta_2 P_t + U_t$............(6)

While equation 2 combined all the variables together, equations 4, 5 and 6 are meant to ascertain how each of the included variables in turns affect economic growth and how their non-inclusion in the equation will affect the performance of the analysis.

Data Types and Sources

The estimation of the model in this study is done using time series data over the period 1980 to 2019. All the data used were sourced from various issues of Central Bank of Nigeria's publications and

National Bureau of Statistics and other scholarly reports on the study. The data shall be analyzed using multiple regression analysis.

Presentation of Result

In order to estimate the influence of financial development on economic growth in Nigeria, the Annual Growth of the Gross Domestic Product was regressed on the explanatory variables (Real Interest Rate, the ratio of Gross Domestic Savings to GDP and Ratio of Domestic Credit to Private Sector to GDP) over the periods 1980 to 2019. The result is thus presented below:

Table 1: EFFECT OF REAL INTEREST RATE AND GROSS DOMESTIC SAVINGS ON NIGERIA ECONOMIC GROWTH

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1980-2019

Included Observations: 39

Variable	Coefficient	Standard Error	t-Statistic	Prob.
Constant	4.214299	0.087250	40.27872	0.0000
LOG(R)	0.149754	0.091292	1.640379	0.1117
LOG(S)	0.077723	0.095918	0.810310	0.4244

R-squared = 0.931838 Adjusted R-squared = 0.876268

F-statistics = 133.2149 S.E. of Regression = 0.160385

Durbin-Watson stat =0.223145 Schwarz Criterion = -0.596006

Akaike info Criterion = -0.733418 Mean Dependent Var. = 4.677927

$$GDP = 4.214299 + 0.149754\, R + 0.077723S$$

In this model, real interest rate and gross domestic savings served as explanatory variables while the annual growth of the Gross Domestic Product is the dependent variable. The result of the model as indicated in table 1 showed that real interest rate and gross domestic savings are positively related to the dependent variable (Annual growth rate of GDP). The coefficient of multiple determination shows that the model is of high good fit with approximately 88% of gross domestic product being

explained by the variables included in the model, while the remaining 12% are factors influencing economic growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.223145 suggests that there is presence of serial correlation. The F-statistics indicate the joint significance of the explanatory variables and the positively related to the dependent variable. The coefficient of multiple determination shows that the model is of high good fit with approximately 81% of gross domestic product being explained by the variables included in the model, while the remaining 19% are factors influencing growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.213446 suggests that there is presence of serial correlation. The F-statistics indicate the joint significance of the explanatory variables and the high degree to which variations in the GDP are explained by variations in the explanatory variables.

Table 2: Effect of Real Interest Rate and Ratio of Domestic Credit to Private Sector on Nigeria Economic Growth

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1980-2019

Included Observations: 39

Variable	Coefficient	Standard Error	t-Statistic	Prob.
Constant	0.639428	0.143759	24.06413	0.0000
LOG(S)	0.223227	0.013915	16.04236	0.0000
LOG(P)	0.008098	0.040254	0.201180	0.8420

R-squared = 0.839755 Adjusted R-squared = 0.822842

F-statistics = 130.1461 S.E. of Regression = 0.162078

Durbin-Watson stat =0.145076 Schwarz Criterion = -0.575011

Akaike info Criterion = -0.712424 Mean Dependent Var. = 4.677927

GDP = 0.459428 + 0.223227R + 0.008098P

In this model, real interest rate and domestic credit to private sector served as explanatory variables while the annual growth rate of GDP is the dependent variable. The result of the model as indicated

in table 2 showed that real interest rate and domestic credit to private sector are positively related to dependent variable (annual growth rate of GDP). The coefficient of multiple determination shows that the model is of high good fit with approximately 82% of gross domestic product being explained by the variables included in the model, while the remaining 18% are factors influencing growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.145076 suggests that there is presence of serial correlation. The F-statistics indicate the joint significance of the explanatory variables and the high degree to which variations in the GDP are explained by variations in the explanatory variables.

Table 3: Effect of Gross Domestic Savings and Domestic Credit to Private Sector on Nigeria Economic Growth

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1980-2019

Included Observations: 39

Variable	Coefficient	Standard Error	t-Statistic	Prob.
Constant	2.457331	0.1444913	24.54800	0.0000
LOG(S)	0.012303	0.041613	0.295661	0.7696
LOG(P)	0.233850	0.015114	15.47289	0.0000

R-squared = 0.733052 Adjusted R-squared = 0.805676

F-statistics = 121.0800 S.E. of Regression = 0.167409

Durbin-Watson stat =0.213446 Schwarz Criterion = -0.510283

Akaike info Criterion = -0.647696 Mean Dependent Var. = 4.677927

$$GDP = 2.457331 + 0.012303S + 0.233850P$$

In this model, gross domestic savings and domestic credit to private sector served as explanatory variables while the annual growth rate of gross domestic product is the dependent variable. The result of the model as indicated in table 3revealed that gross domestic savings and domestic credit to private sector are positively related to the dependent variable. The coefficient of multiple

determination shows that the model is of high good fit with approximately 81% of gross domestic product being explained by the variables included in the model, while the remaining 19% are factors influencing growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.213446 suggests that there is presence of serial correlation. The F-statistics indicate the joint significance of the explanatory variables and the high degree to which variations in the GDP are explained by variations in the explanatory variables.

Table 4: Effect of Real Interest Rate, Gross Domestic Savings and Domestic Credit to Private Sector on Nigeria Economic Growth

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1980-2019

Included Observations: 39

Variable	Coefficient	Standard Error	t-Statistic	Prob.
Constant	3.485310	0.148115	23.53114	0.0000
LOG(R)	-0.148920	0.092872	1.603488	0.1200
LOG(S)	-0.009912	0.040557	0.244391	0.8087
LOG(P)	0.079042	0.097661	0.809350	0.0251

R-squared = 0.902047 Adjusted R-squared = 0.931552

F-statistics = 85.95035 S.E. of Regression = 0.163050

Durbin-Watson stat =0.026603 Schwarz Criterion = -0.489832

Akaike info Criterion = -0.673049 Mean Dependent Var. = 4.677927

$$GDP = 3.485310 - 0.148920R - 0.009912S + 0.079042P$$

In this model, real interest rate, gross domestic savings and domestic credit to private sector served as explanatory variables while annual growth rate of gross domestic product is the dependent variable. The result of the model as indicated in table 4 showed that two of the variables (real interest rate, gross domestic savings) are inversely related to the dependent variable (GDP annual growth rate) when combined together while domestic credit to private sector is positively related to the dependent Variable. The coefficient of multiple determination shows that the model is of high good fit with approximately 93% of gross domestic product being explained by the variables included in the model,

while the remaining 7% are factors growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.026603 suggests that there is presence of serial correlation.

The interest rate variable though significant was not properly signed. This could be largely due to the fact that investors in the system are very particular about their rates of returns on investment and the cost of the fund. Similarly the ratio of domestic savings to GDP is significant but not properly signed reflects the low saving culture, though, the little there contributes positively to growth. The ratio of credit to the private sector to GDP was significant and rightly signed but same would be more productive if channeled to productive investment, as the enabling environment such as steady power supply, good roads and other basic infrastructures were not provided by the government which might have undermined the potentials of the Nigerian private sector. This shows that if the quality of government expenditure is improved upon by directing it to productive channels, it would, ceteris paribus, stimulate economic growth as posited by Aregbeyen (2007) in his study of forty African countries, including Nigeria.

Policy Implication

From the analysis above, it is clear that all the variables are positively related to the dependent variable (annual growth rate of the GDP) when private investment which is at variance to the a-priori expectation. The implication of the above is that government fiscal policy should be refocused and redirected towards the production of goods and services so as to enhance GDP growth. This can be achieved by setting specific goals/targets for each state and for the Federal Government with attention focused on the real sector. Besides, government fiscal policies should be structured in such a way that priority attention is given/paid to capital and public investments by making them of higher proportion in gross government expenditure, thereby creating more jobs and enhancing the quality of public spending and the attainment of sustainable growth and development with emphasis placed on the development of basic infrastructure. Therefore, to sustain the existing relationship between economic growth and financial sector development, there is need to adequately deepen the financial system through innovations, adequate and effective regulation and supervision, efficient mobilization of funds and making such funds available for productive investment, and improved services.

CONCLUSION

This study attempted to analyze the relationship between financial development and economic growth in Nigeria using data on annual growth of the gross domestic product, real interest rate, the ratio of gross domestic savings to GDP and ratio of domestic credit to private sector to GDP. From the results of our analysis and findings, we conclude that there is the need to adequately deepen the

financial system through innovations, adequate and effective regulation and supervision, efficient mobilization of funds and making such funds available for productive investment, and improved services.

Policy Recommendations

The study proffers the following policy recommendations:

1. To sustain and enhance the existing relationship between financial sector development and economic growth in Nigeria, there is need to adequately deepen the financial system through innovations, adequate and effective regulation and supervision, a sound and efficient legal system, efficient mobilization of funds and making such funds available for productive investment, and improved services.

2. Policymakers should design the policies which will promote the financial and capital markets, remove the obstacles that impede their growth and strengthen the health and competitiveness of the banking system. They must introduce measures that increase accountability and autonomy of financial institutions as well as restructuring and recapitalization of financial institutions.

3. Attention should be given to the complimentary and coordinated development of financial reforms and changes in the real sector of the economy for the country to translate the positivity of the financial sector into the real sector to achieve economic growth.

4. Furthermore, on efficiency in resource allocation, regulatory authorities should provide a good legal and accounting as well as institutional environment. This will allow the easy circulation of information and the enforcement of contracts and permit financial institutions to better assess the risk they are taking and monitor their investments.

5. Attention should be given to the complimentary and coordinated development of financial reforms and changes in the real sector of the economy for the country to translate the positivity of the financial sector into the real sector to achieve economic growth.

References

Abdullahi, I.B. (2007) Banking sector reforms and bank consolidation in Nigeria: challenges and prospects. *Babcock Journal of Social And Management Sciences 6(1).* pp. 116-134.

Adamu, J.A. & Sanni, I. (2005). Stock market development and Nigerian economic growth. Journal of Economic and Allied Fields, 2(2), 116-132

Adelakun, O. J. (2011). Financial sector development and economic growth in *Nigena. International Journal Of Economic Development Research and Investment.* 1(1).pp.25-41.

Adelakun, O. J (2010) Financial sector development and economic Growth in Nigeria, *International Journal of Economic Development Research and Investment* 1,(1), 48-53

Agarwal, S. (2001). Stock market development and economic growth: Preliminary evidence from African countries. Retrieved, Aril, 2, 2012 from http://www.jsd-%20Stock%ARC%2020Market%20Development%20and%20Economic%20Growth.pdf

Ben Naccur, S. & Ghazouani, S. (2007). Stock markets, banks and economic growth: Empirical evidence from MENA region. Research in *International Business Finance,* 21(2), 297-315.

Berthelemy, J.C. & Varoudakis, A. (1996) Economic growth, convergence clubs, and the role of financial development. Oxford Economic Papers, 48, 300-28.

Blanco, L. (2009). "The Finance-Growth Link in Latin America", *Southern Economic Journal* 76(l): 224-248.

Beck, T., Levine, R., 2004 "Stock Markets, Banks, and Growth: Panel Evidence," *Journal of Banking & Finance.* 28(3), 423-442,

Beck, T., Levine, R. and Loayza, R. (2000). "Finance and Sources of Growth" *Journal of Financial Economics,* 58(1-2): 261-300.

Chang, T. and Caudill, S.B. (2005). "Financial Development and Economic Growth: the case of Taiwan", *Applied Economics,* 37(12): 1329-1335.

Christopoulos, D.K. and Tsionas, E.G. (2004). "Financial Development and Economic Growth: Evidence from panel unit root and co-integration tests" *Journal of Development Economics*, 73: 01-17.

Chukwu, J.O. and C.C. Agu, (2009).Multivariate causality between financial depth and economic growth in Nigeria. African Review of Money Finance and Banking, 7-21.

Demirguc-Kurt, A. and Levine, R. (2001)."Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation", *Journal of Money, Creditand Banking.* 36(2 & 3): 593-622.

Erdal G., Okan, V. S. and Behiye, T. (2007). Financial Development and Growth: Evidence from Northern Cyprus, *International Research Journal of Finance and Economics,* 8, 72-84

Ghali, K. H., 1999. Government size and economic growth: evidence from a multivariate cointegration analysis. *Applied Economics,* 31 (1): 975-987.

Gries, T., Kraft, M. and Meierrieks, D. (2011) Financial deepening, trade openness and economic growth in Latin America and the Caribbean. *Applied Economics*, 43(30), 4729-4739

Guiso, L., Paula, S. and Zingales, L. (2004). "Does Local Financial Development Matter?", *Quarterly Journal of Economics*, 119(3): 929-969.

Ibi-Ajayi, S (2007), "Growth in the Banking Industry of Nigeria", Domestic and International Banking Services, Vol. l,No.l

Iganiga, B.0(2010): Evaluation of the Nigerian Financial Sector Reforms Using Behavioral Models, *Journal of Economics*, 1 (2): 65-75

Johnston, R.B. and V. Sundararajan (1999): Sequencing Financial Sector Reforms: Country Experiences and Issues, IMF Washington, DC.

King, R. G. and Levine, R. (1993) Finance, entrepreneurship, and growth. *Journal of Monetary Economics.*32, 513-42.

La Porter, R., Florencia-Lopez, D. S., Andrei, S. and Robert, W.V. (2000). "Investor Protection and Corporate Governance", *Journal of Financial Economics,* 58(1-2): 3-27.

Levine, R. (2006). "Finance and Growth: The Theory, Evidence, and Mechanisms", in Handbook of Economic Growth, edited by Aghion, P. and Durlauf, S.: North Holland: Elsevier.

Nieuwerbugh, S, Buelens, F. & Cuyvers, L. (2005). Stock market development and economic growth in Belgium", NYU working Paper 05 -024

Nnanna, 0. J. and Dogo, M (1998), "Structural Reform, Monetary Policy and Financial Deepening: The Nigerian Experience", *Economic and Financial Review,* 36 (2)1-29.

Nzotta, S.M. (2004). Money, Banking & Finance: Theory and Practice, Owerri: Hudson-Jude Nigeria Publishers.

Nzotta, S.M and Okereke, E.J (2009), "Financial Deepening and Economic Development of Nigeria: An Empirical Investigation", *African Journal ofAccounting, Economics, Finance and Banking Research*, 5(5), 28-40.

Obamuyi, T.M. and Sola.O. (2011).Financial reforms, interest rate behaviour and economic growth in Nigeria. *Journal of applied finance and banking.*1(4), 39- 55.

Pagano, M. (1993) Financial markets and growth: an overview. *European Economic Review,* 37, 613-22.

Robinson, J. (1952) The Generalization of the General Theory, The Rate of Interest, and Other Essays. Macmillan, London.

Tharavaniji P. (2007). Capital market, severity of business cycles, and probability of economic downturn. MPRA paper No, 4953.

Schumpeter, J.A. (1912) TheoriederWirtschaftlichenEntwicklung. Leipzig: Dunker &Humblot, (The Theory of Economic Development, 1912, translated by R. Opie. Cambridge, MA: Harvard University Press)

Soludo et al (2007): Nigeria: Macroeconomic Assessment and Agenda for Reforms, USAID/Nigeria Macroeconomic Assessment Contract, African Institute for Applied Economics,

World Bank, (2013). Financial Sector Databank.[Accessed June 2020]. Available from: http://data.worldbank.org/topic/financial-sector