

# FINANCIAL SECTOR DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA

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## ABSTRACT

*One of the most unending debates in economics is whether financial development causes economic growth or whether it is a consequence of increased economic activity. The paper empirically examines the relationship between financial development and economic growth. In this study, the perceived relationship between financial development and economic growth is estimated econometrically using the Ordinary Least Square Estimation Method (OLSEM). The result showed that there is a substantial positive effect of financial development on economic growth in Nigeria. The Granger causality test showed that financial development promotes economic growth, but there is evidence of causality from economic growth to the development of financial intermediaries. Thus, advancement of the financial sector development, including diversification of financial instruments should be pursued to facilitate economic development in Nigeria.*

**Keywords:** *Financial Development, Granger Causality, Economic Growth*

## INTRODUCTION

The theoretical argument that supports the link between financial development and growth is that a well developed financial system performs several critical functions to enhance the efficiency of intermediation by reducing information, transaction, and monitoring costs. 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. 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.

An efficient financial system is one of the foundations for building sustained economic growth and an open, vibrant economic system. In the early neoclassical growth literature, financial services played a passive role of merely channeling household savings to investors. Nevertheless, Goldsmith (1969) and Mickinnon (1973) were among authors who offered a contrary view. They proposed a more role for financial services in promoting growth. Ever since, substantial volume of theoretical and empirical literature has emerged, analyzing the role of finance in growth and development.

The success of the financial system throughout the world has been predicted 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, which leads 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.

The objective of this paper is to examine the link between financial sector development and economic growth in a small open emerging market

of Nigeria during 1980 to 2008, using an error correction model and Granger causality test. In recent years, the Nigerian economy has been characterized by trends towards increased liberalization, greater openness in trade and higher degree of financial integration. The increase liberalization and openness in the late 1990s have led to enormous flow of cross-border capital. That has remarkable development particularly in the financial sector of Nigerian economy. Against this backdrop, Erdal et al. (2007) posit increase liberalization, particularly in the financial sector, whose development has been remarkable.

Nigeria is a veritable case for investigating the link between finance and growth for at least two reasons. First, there has been considerable increase in tempo in the activities of the financial market capitalization. Nigeria has achieved much in terms of both financial development indicators and real GDP growth rate, among the emerging markets, Obedokun (1996). This observation motivates us to explore the possible role of financial development in promoting the remarkable growth of the Nigeria economy. Second, Nigeria has an interesting history of financial sector reforms. A series of financial restructuring programs aimed at improving the financial system has been launched since 1990s. Immediately after the inception of democracy, a series of macroeconomic policy responses such as re-capitalization, mergers and acquisition, capital controls and deflationary policy has taken place (Erdal, Okan and Belye, 2007).

Nevertheless, there is little empirical evidence on this linkage between finance and growth to direct the policy makers on the real sectors. This study departs from earlier works in these respects; first, crystallize the structure of the Nigeria financial system. Second, this study uses annual data covering the period 1980 to 2008, during which financial deregulation and innovations have been prominent features in the Nigerian financial system. Among the important features are interest rate liberalization, the emergence of large banks (through re-capitalization and merger and acquisition) and non-bank financial intermediaries and the offering of new financial instruments in the financial system. Finally, besides focusing on long-run relationship between financial sector development and real growth using frameworks of an Error Correction Model (ECM), we also use the Granger Causality test to ascertain the direction in this analysis.

## 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.

Other distinct sub-sectors in the Nigerian financial system are banking, insurance, capital markets, investment management, and regulatory... 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. Major structural reforms are on-going in the following sub-sectors; banking, insurance, pension funds and capital markets. 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. The industry was deregulated 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.

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.

The reforms have led to a series of merger and takeovers as banks tried to build up sufficient financial reserves to escape sanctions. 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.

The main institutions in the capital market include the Securities and Exchange Commission (SEC), which is at the apex and serves as the regulatory authority of the market, the Nigerian Stock Exchange (NSE), the issuing houses and the stock broking firms. At present, there are six branches of the Nigerian Stock Exchange. Clearing, Delivery and Settlement: Clearing, Settlement and Delivery of transactions on the Exchange are done electronically by the Central Securities Clearing System Limited (CSCS), a subsidiary of The Stock Exchange.

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.

A substantial body of work on finance and growth assesses the impact of the operation of financial system on economic growth, whether the impact is economically large, and whether components of the financial system, e.g. banks and stock markets, play a particularly important role in fostering growth at certain stages of economic development. Theory focuses on particular functions provided by the financial sector-producing information, exerting corporate governance, facilitating risk management, pooling savings and easing exchange - and how these influence resource allocation decisions and economic growth.

Rousseau and Watchel (2005) retested the finance - growth hypothesis with data ranging from 1960 to 2003; they found that the relationship disappeared over the period of 1985-89 for the coefficient of M3 as a percentage of GDP and during 1990-94 for the coefficient on private sector credit. It was at this time that numerous developing states, especially in Latin America, went through rapid financial liberalization and opening to world economic market. Rousseau and Watchel (2005) findings on the breakdown of the empirical relationship between finance and growth, suggest that in the absence of stable financial institutions, financial liberalization may be counter productive and provide perverse incentives for banks to lead imprudently. Such activities may result in a several stained or collapsed domestic financial sector if imprudent lending leads to non-performing loans, illiquidity, insolvency and capital flight.

Patric (1966), in his work as cited in Levine, 1997 postulates a bi-directional relationship between financial development and economic growth. Ever since, a large empirical literature has emerged testing this hypothesis. Two trends in this respect have emerged in literature. The first, test the relationship between economic growth and financial development, adopting

a single measure of financial development and testing the hypothesis on a number of countries using either cross section or panel techniques (Erdal et. al, 2007). The second trend examined the hypothesis for a particular country using time series data/techniques, as done by Murinde and Eng, (1994) for Ghana; Odedokun (1998) for Nigeria; Agung and Ford (1998) for Indonesia; Wood (1993) for Barbados and James and Warwick (2005) for Malaysia. This paper further contributes to this second strand of literature by using the modified growth model of Erdal et. al (2007) for the case of Nigeria.

Recent work by King and Levine, (1993a and 1993b), Demetriades and Hussein (1996), Levine (1997), Demirgüçkunt and Maksimovic (1998), Wachel (2003), Demetriades and Andrianova (2004), structured on the works of Bagehot (1873), Schumpeter (1912), Gurley and Shaw (1955), Goldsmith (1969), Mickinnon (1973) employed different econometric methodologies and data sets to assess the role of the financial sector in stimulating economic growth. The mounting empirical research, using different statistical methods and data have produced remarkable results. First, results have shown that countries either with well-developed financial systems tend to grow faster, especially, those with (i) large, privately owned banks that channel credit of private to the private sector and (ii) liquid stock exchanges. The level of banking development and stock market liquidity exert positive influence on economic growth. Second, a well functioning financial system ease external financing constraints that obstruct firm and industrial expansion. This, access to external capital is one channel through which financial development matters for growth because it allows financially constrained to expand (Levine, 2003).

The endogenous growth literature has supported the fact that financial development positively affects economic growth in the steady state (Greenwood and Jovanovic (1990), Bencivenga and Smith (1991), Roubini and Sala-i-Matins (1992), Pagano (1993), King and Livine (1993b), Berthelemy and Varoudakis (1996), Greenwood and Smith (1997). However, over the last two decades, literature has shown a growing body of new empirical approaches to treating the causality pattern based on time series techniques (Gupta (1984), Jung (1986), Murinde and Eng (1994), Demetriades and Hussein (1996), Arestis and Demetriades (1997) and Kul

and Khan (1999). In these studies, the focus is on long run relationship between financial sector development and real growth using frame-works of bivariate and multivariate vector auto-regressive (VAR) models for different country samples. The outcome was that the causality pattern varies across countries given the success of financial liberalization policies implemented in each country and the level of development of the financial sector.

Modern growth theory identifies two specific channels through which the financial sector might affect long-run growth: through its impact on capital accumulation (including human as well as physical capital); as well as on the rate of technological progress. These effects occur from the intermediation role performed by financial institutions which enable the financial sector to: mobilize savings for investment; facilitate and promote inflows of foreign capital, including FDI, portfolio investment and bonds, and remittances; and optimize the allocation of capital between contending uses, ensuring that capital goes to its most productive use. Levine (1997) recognizes five basic purposes of financial intermediaries that give rise to these effects; savings mobilization; risk management; information acquisition about investment opportunities; monitoring borrowers and exerting corporate control; facilitating the exchange of goods and services.

Well functioning financial systems are able to mobilize household savings, allocate resources efficiently, diversify risks, induce liquidity, reduce information and transaction costs and provide an alternative to raising funds through individual savings and retained earnings. These functions suggest that financial development have a positive impact on growth. Mckinnon (1973) and Shaw (1993) are the most influential works that underpin this hypothesis and suggest that better functioning financial systems lead to more robust economic growth. Mckinnon (1973) considered an outside money model in which all firms are confined to self-finance. Hence, physical capital has a lumpy nature where firms must accumulate sufficient savings in the form of monetary assets to finance the investment project. In this sense, money and capital are viewed as complementary assets where money serves as the channel for capital information. The 'debt-intermediation' view proposed by Shaw (1973) is based on an inside money model. He argues that high interest rates are essential in attracting more savings. With more supply



of credit, financial intermediaries promote investment and raise output growth through borrowing and lending. King and Levine (1993a) find that higher levels of financial development are associated with faster economic growth and conclude that finance seems to lead growth. Neusser and Kugler (1998) and Choe and Moosa (1999) reached the same conclusion.

## **MATERIALS AND METHODS**

Development of the financial sector requires a set of indicators which can be used for effective policy formulation, implementation and evaluation. For the purpose of this study, of the several indicators of financial development, GY, which is the annual growth of the gross domestic product (GDP), real interest rate (R), the ratio of gross domestic savings to GDP (S), the ratio of domestic credit to private sector to GDP (P), have been adopted since they have been widely used as prime indicator of financial development. Other candidates selected as variables include the ratio of liquidity liabilities to GDP (M), the ratio of gross fixed capital formation to GDP (I) and trade openness as a ratio of GDP (T).

The selection of key variables to represent the level of financial services produced in an economy and how to measure the extent and efficiency of financial intermediation are the major problems in an empirical study of this nature. Construction of financial development indicators is an extremely difficult task due to the diversity of financial services provided in the financial system. Also, there is a diverse array of agents and institutions involved in the financial intermediation activities. Despite all efforts by researchers to define, refine and improve the existing measures, financial proxies used are still far from satisfactory. In this study the association between financial development and economic growth is measured by using the model specified by Erdal et. al (2007), which was a slight modification of the growth model of Rata Ram (1999). Data for these variables is evaluated from 1980 to 2008. The data were sourced from the Central Bank of Nigeria, Nigeria's National Bureau of Statistics, World Bank world development report, and West African Monetary Institute database. Before the above function is estimated, both dependent and independent variables are subjected to some statistical tests such as stationary test. The Unit root test (evaluated by Augmented Dickey-Fuller (ADF)(Dickey and Fuller, 1981) is used to

find out the stationary of any time series. If a time series is differenced once and the difference series is stationary, we say that the original (random walk) series is integrated of order one or greater (Gujarati, 1995). The functional form of the model is specified thus:

$$GY = \int (R, S, P, M, I, T) \dots \dots \dots (1)$$

GY =

$$\alpha_0 - \alpha_1(R) + \alpha_2(S) + \alpha_3(P) + \alpha_4(M) + \alpha_5(I) + \alpha_6(T) + U_t \dots \dots \dots (2)$$

Where:

$\alpha_0$  = Intercept,

= Coefficients of the independent variables for  $i=2,3,\dots,6$

The expected signs of the coefficient a priori are:

$\alpha_0 \geq 0, \alpha_1 \leq 0$  and  $U_t$  = stochastic variable.

## RESULTS AND DISCUSSION

**Table 1a:** Stationary Test Results

Variables	ADF-Test Result	Order of Integration
GY	-6.913358	I (1)
I	-3.891244	I (1)
M	-3.487788	I (1)
P	4.478501	I (1)
R	-5.792350	I (1)
S	-5.581975	I(1)
T	-5.372863	I(1)

5% ADF Critical Values for Test is -2.986225

**Table 1b:** Result of Cointegration Test

Variable	ADF	Order of Integration
ECM2	-5.382531	I (0)

As can be seen on the Table 1a, at 5% level of significance, all the variables were found to be integrated of order 1. That is, they are I(1) variables. The result from the stationary test is presented on table 1b. Cointegration test results showed that the series individually exhibit random walk, there seems to be a stable long-run relationship between economic growth and financial development. The null-hypothesis, F-statistic and P-values for each variable

are shown on Table 2. The test result shows that DS Granger causes DGY at 1% significance of level.

### DS → DGP

There is casual relationship between DS and DGY. Economic growth indicator DGY causes financial development indicator DS. Also there is no casual relationship between DGY and DI, DM, DP, DR and DT. Most of the variables have the expected signs as formulated in the model, while some were not properly signed. All these variables including the ECM2 were statistically significant at 5%, with the exception of one variable (DS) though properly signed.

## CONCLUSION

In this study the relationship between financial sector development and economic growth in Nigeria has been investigated. The empirical results show that there is substantial positive relationship between financial sector development and economic growth in Nigeria. The empirical evidence supports the view that financial sector development promotes economic growth in Nigeria. The interest rate variable though significant was not properly signed, showing that investors in the system are very particular about their rates of returns on investment and the cost of the fund. The ratio of liquidity liability to GDP was highly significance in the first lag period. This would increase growth in the next year if properly invested. The variable T was highly significant and rightly signed showing the need for greater openness and attraction of foreign direct investment. The ratio of domestic savings to GDP though significant, but not properly signed reflects the low saving culture, though the little there is contributes positively to growth.

The ratio of credit to the private sector to GDP would be more productive if channeled to productive investment, as this was significant and rightly signed even in the second lag. The adjustment parameter was significant and appropriately signed. This shows that economic growth in Nigeria adjusts fairly to financial sector development. The study further find that there is a causal relationship between DS and DGY, which means that financial development, causes economic growth. But economic growth does not cause financial development. 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.

Table 2: Granger Causality Test Results:

Null Hypothesis	Causal Inference	F-Statistic	Probability
DI does not Granger cause DGY	Accept Ho	0.82793	0.53065
DGY does not Granger cause DI	Accept Ho	0.38747	0.81386
DM does not Granger cause DGY	Accept Ho	0.52777	0.71748
DGY does not Granger cause DM	Accept Ho	1.05667	0.41632
DP does not Granger cause DGY	Accept Ho	1.57483	0.23932
DGY does not Granger cause DP	Accept Ho	1.53683	0.24914
DR does not Granger cause DGY	Accept Ho	0.44486	0.77450
DGY does not Granger cause DR	Accept Ho	0.65191	0.63570
DS does not Granger cause DGY	Reject Ho	5.37723	0.00886*
DGY does not Granger cause DS	Accept Ho	0.90242	0.49065
DT does not Granger cause DGY	Accept Ho	0.19309	0.93769
DGY does not Granger cause DT	Accept Ho	1.76898	0.19524

Note: \* Indicates Significance level of 1%

**Table 3:** The estimated results of the model using OLSEM.

Variables	Coefficient	Std Error	t-Statistic	p-value
DGY (-1)	1.588	0.449	3.536	0.005
DI	-218.139	70.097	-3.112	0.011
DM	-173.534	65.723	-2.640	0.025
DM(-1)	422.553	102.133	4.137	0.002
DP	544.998	170.124	3.204	0.009
DP(-1)	-721.905	182.174	-3.963	0.003
DP(-2)	416.495	142.226	2.928	0.015
DR	131.958	48.796	2.704	0.022
DR(-2)	-209.734	67.799	-3.105	0.011
DS	10.912	6..388	1.708	0.118
DT	232.853	67.627	3.443	0.006
C	-4539.378	2070.003	-2.193	0.053
ECM2(-1)	-2.772	0.792	-3.499	0.006

$$R^2 = 0.707$$

## CONCLUSION

In this study the relationship between financial sector development and economic growth in Nigeria has been investigated. The empirical results show that there is substantial positive relationship between financial sector development and economic growth in Nigeria. The empirical evidence supports the view that financial sector development promotes economic growth in Nigeria. The interest rate variable though significant was not properly signed, showing that investors in the system are very particular about their rates of returns on investment and the cost of the fund. The ratio of liquidity liability to GDP was highly significance in the first lag period. This would increase growth in the next year if properly invested. The variable T was highly significant and rightly signed showing the need for greater openness and attraction of foreign direct investment. The ratio of domestic savings to GDP though significant, but not properly signed reflects the low saving culture, though the little there is contributes positively to growth.

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