EFFECTS OF FINANCIAL DEEPENING ON ECONOMIC GROWTH IN NIGERIA

By

EZEMOBI CHIGOZIE MAUREEN

NSU/ADM/MBA/FIN/0007/16/17

BEING A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, NASARAWA STATE UNIVERSITY, KEFFI, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS IN BUSINESS ADMINISTRATION (MBA)

DEPARTMENT OF BUSINESS ADMINSTRATION,
FACULTY OF ADMINISTRATION
NASARAWA STATE UNIVERSITY, KEFFI
NIGERIA

OCTOBER, 2018

DECLARATION

I hereby declare that this research work is carried out by me and presented to the school of postgraduates studies, Nasarawa state University, Keffi, for the award of Master in Business Administration (MBA).

_____ _____

EZEMOBI CHIGOZIE MAUREEN **Date**

NSU/ADM/MBA/0007/16/17

CERTIFICATION

This project has been carefully read and approval as meeting the requirement for the Award of Master in Business Administration (MBA) in the department of Business Administration, Faculty of Administration, Nasarawa State University, and Keffi

_____ _____

Dr. Mrs. Ruth A Andah Date

Supervisor

_____ _____

Head of Department Date

Dr. J.E.I. Abbah

_____ _____

Internal Examiner Date

_____ _____

Dean of Post Graduate Studies Date

Prof. S. A. S. Aruwa

DEDICATION

This project work is dedicated to Almighty God who is my great inspiration in life, whose grace has been sufficient for me throughout the period, and especially my wife for her fire sight in supporting (Financially).

ACKNOWLEDGMENT

The acknowledgement is to God Almighty for His protection and provision during my studies, despite in the area of inconveniences but God stood for me in all ramifications. My thanks also goes to my beloved husband and darling children for their prayers and financial support, may God bless them all.

ABSTRACT

The study examines the effects of financial deepening on economic growth in Nigeria. Financial deepening implies the ability of financial institutions to effectively mobile saving for the purpose of investment .the growth of domestic saving provides the real structure for the creation of diversified financial claims. Financial deepening generally entails an increased ratio of money supply to gross domestic. Data were collected from secondary source, and regression model was used to analysis the data. The findings from regression result showed there is positive relationship between financial deepening on economic growth in Nigeria. The findings recommend that monetary authorities should continue with the policy reforms to consolidate the emerging confidence in the financial system. The central Bank of Nigeria should encourage the current drive to ensure a cashless economy.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Financial deepening implies the ability of financial institutions to effectively mobilize savings for investment purposes. The growth of domestic savings provides the real structure for the creation of diversified financial claims. Financial deepening generally entails an increased ratio of money supply to Gross Domestic Product (Popiel, 1990), Nnanna and Dogo, 1999) and Nzott, 2004). The sum of all the measures of financial assets gives us the approximate size of financial deepening. That means that the widest range of such assets as broad money, liabilities of non-bank financial intermediaries, treasury bills, value of shares in the stock market, money market funds, etc, will have to be included in the measure of financial deepening.

Indicators of financial deepening differ in economies and between the countries. It is also possible that, different financial markets have different levels of financial deepening, for example, the countries that have efficient financial systems have higher financial deepening ratios. The share of assets in GNP of developed countries' financial markets is greater than that of the developing countries (Jovanovic, 1990).

The financial system has been acknowledged globally to play a catalytic role in the economic development of nations (Sanusi, 2009). It plays a key role in the mobilization and allocations of savings for productive use, provides structures for monetary management, the basis for managing liquidity in the system. It also assists in the reduction of risks faced by firms and businesses in their productive processes, improvement of portfolio diversification and the insulation of the economy from the vicissitudes of international economic changes.

The increasing deepening and expansion of the financial system is expected to lead to increased variety of financial instruments not only in the banking subsector but also in the

capital market. Greater availability of varieties of financial institutions and instruments is expected to deepen the financial system. Financial deepening can be measured using several kinds of indices, a few of these are: the ratio of the growth rate of broad money (M_2) to that of the gross domestic product; ratio of Total banking assets to GDP, Gross Savings in the economy to GDP as well as Gross Domestic Investment to GDP as well as the Interest Rate Spread (i.e the difference between lending rate and deposit rate). The more deepened the financial system the more expanded the level of output and the rate of growth of output are supposed to be.

Goldsmith (1969) motivated his path breaking study of finance and growth as follows: "One of the most important problems in the field of finance, if not the single most important one … is the effect that financial structure and development have on economic growth." Economic growth cannot be possible without the combined role of investment, labour and financial deepening (Ndebbio, 2004). Though Economists have accepted effects of financial deepening on economic growth, they have not had the same idea about the direction of causality, which means whether financial development causes economic growth or economic growth causes financial development. For instance, Hicks (1969), Shaw (1973) and Schumpeter (1912) support that financial development causes economic growth, that is, financial deepening is a necessary pre-condition for economic growth. This hypothesis is usually labeled "supply leading" since it postulates that the presence of efficient financial markets increases the supply of financial services in advance of the demand for them in the real sector of the economy. In contrast to this opinion, Robinson (1952) and Patrick (1966) discusses that in the existence of same type of financial regulations, economic growth creates a demand, and financial system gives an automatic response to this demand which causes financial system development. They

argue that financial deepening is merely a by-product or an outcome of growth in the real side of the economy. This is called the "demand-following" hypothesis since financial markets develop and progress following the increased demand for their services from the growing real economy.

Nigeria has experienced growth in the financial sector and consequently increases in financial deepening over time. Growth in financial outlet, development in the money and capital market increases in stocks, and activities in the capital market, increases bank branches, rapid use of credit and debit cards, increasing use of payment technologies like ATM machines(Automatic Teller Machine Technology) and electronic transfer of deposits, expanding Internet banking services, e-banking, and increase in total deposits, (Luis, 2009). Growth in financial sector should translate into the growth of the economy, because growth in the financial sector will make available funds for investment.

In the capital market, market capitalization is the most widely used indicator in assessing the size of a capital market to an economy. Before 1988, the total market capitalization was less than N10 billion from 1988 to 1994, it hovered between N10 billion to

N57 billion. In 2003, it was N1, 3593 trillion, N2.1125 trillion in 2004 and N5.12 trillion in 2006.The market capitalization recorded the highest value of N13.2294 trillion in 2007. But this fell to N9.562 trillion in 2008 due to the global financial meltdown. The percentage market capitalization compared to the economy's Gross Domestic Product (GDP) helps to assess the size of the stock market. In 1981, this was 10.5%, but fell to 7.4% in 1994. It rose again to 9.3% in 1995, 10.6% in 1996; 18.9% in 2003, 25.6% in 2004 and 27.4% in 2005.

The question is whether the development in the financial sector, which has led to financial deepening, has been able to bring about anticipated growth, considering the fact that Nigeria still experiences high level of unemployment, inflation rates are still high, lack of credit for

investment, the deposit and lending rates are still very wide apart, there is wide disparity between the lending and deposit rates. Therefore, this study examines the extent to which financial deepening has impacted on economic growth in Nigeria.

1.2 Statement of Problem

The relevance of the financial system to economic growth is not clear-cut. The direction of causality between financial deepening and growth has always been a controversial issue. There are two main opposing hypotheses which are testable: the 'supplyleading' hypothesis versus the 'demand-following' hypothesis. Supply-leading emphasizes financial deepening as an important prerequisite for growth. The supply-leading hypothesis suggests that financial deepening fuels growth. The existence and development of the financial markets brings about a higher level of saving and investment and enhance the efficiency of capital accumulation, (Hicks 1969, Levine 1993, Diego 2003). Demand-following posits that financial deepening follows growth; development of the financial markets is merely a lagged response to economic growth. This implies that any early efforts to develop financial markets might lead to a waste of resources which could be allocated to more useful purposes in the early stages of growth. As the economy advances, this triggers an increased demand for more financial services and thus leads to greater financial development, (Robinson 1952, Lucas 1988 & Favara 2003).

Since 1986, the monetary authorities in Nigeria have adopted various measures aimed at deepening the financial system and reducing the level of financial repression in the system. The reform of the financial structure led to changes in Nigeria's financial sector in an effort to foster competition, strengthen the supervisory role of the regulatory authority and streamline the relationship between the public and financial sectors of the economy. Many new financial instruments/assets and techniques have been developed and existing ones have been modified,

the financial markets have been adapted to meet new demands and new circumstances. All these have been aimed at deepening the financial system. But how has all these impacted on economic growth in Nigeria.

This research will examine the causal relationship that exists between finance and growth within the Nigerian economy, is it supply leading or demand following in nature?

1.3 Objectives of the Study

The main objective of the study is to examine empirically the extent of financial deepening in Nigeria, and its impact on the Nigerian economy since the onset of financial reforms in 1986 up to 2008.

The specific objectives of the study include:

i. To examine the structure and growth of financial deepening in Nigeria.
ii. To analyze the impact of financial deepening on economic growth in Nigeria
iii. To make policy recommendations

1.4 Research Hypotheses

The research will test one main hypothesis which is as follows:

H_1: Financial deepening has no significant effect on economic growth in Nigeria.

H_2: Financial deepening has significant effect on economic growth in Nigeria.

1.5 Significance of the Study

The research is significant to the following stakeholders:

Policy Makers: The effect of financial deepening on economic growth is important as this will inform and update Nigeria policy makers to give priority to all policies that affect financial deepening and find ways through which financial deepening can be made more effective and

efficient. This study will help formulate policies capable of enhancing the development of the financial sector. According to Ndebbio (2000)[9], the financial sector is the conduit through which financial deepening is manifested.

Investors: The result of the study would be of benefit to investment analysts and investors in examining the effectiveness of financial deepening and thus evaluating the option available for accessing long-term, short-term, non-debt financial capital which enables investors to avoid over reliance on debt financing.

Researchers: Individuals or groups who want to study the effect of financial deepening on economic growth will find this work very useful because it carefully analyzed the impact of financial deepening on economic growth and proffered solutions on how financial deepening can be made more efficient. As a matter of fact, it adds to already existing empirical literature in the context of Nigeria.

Financial Institution: This study will help the financial Institution operators to understand the dynamics in financial policies thereby equipping them to participate in a more sustainable manner in the financial system. The financial institutions are the channels through which financial deepening is implemented to foster economic growth.

1.6 Scope of the Study

The study covers the period 1986 to 2010. This period however, is considered by the study wide enough to permit a logical deduction that can influence policy decisions in the financial sector development. The summing up of financial assets to represent a broad measure of financial deepening is not a problem, but the availability of data for some of them is.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Concept of Financial Deepening

Financial deepening implies the ability of financial institutions to effectively mobilize savings for investment purposes. The growth of domestic savings provides the real structure for the creation of diversified financial claims. Financial deepening generally entails an increased ratio of money supply to Gross Domestic Product (Popiel, 1990, Nnanna and Dogo, 1999, & Nzotta, 2004).

Financial deepening can be defined as the effort aimed at developing the financial system that is evident in increased financial instrument/assets in the financial markets – money and capital markets, leading to the expansion of the real sector of the economy (Njiforti et'al, 2007). It is the effort of developing countries to achieve growth through financial intermediation.

The definition of financial deepening in literature reflects the share of money supply in GDP. The most classic and practical indicator related to financial deepening is the ratio of *M2/GDP* which means the share of M1 + all time-related deposits and noninstutional money market funds to GDP in a certain year (Öçal and Çolak, 1999). Financial deepening is thus measured by relating monetary and financial aggregates such as M1, M2 and M3 to the Gross Domestic Product (GDP). M1: Technically defined, is the sum of: the tender that is held outside banks, travelers checks, checking accounts (but not demand deposits), minus the amount of money in the Federal Reserve float.

M2: The sum of: M1, savings deposits (this would include money market accounts from which no checks can be written), and small denomination time deposits

M3: M2 plus the large time deposits.

M1, M2, M3 are all measures of money supply, that is the amount of money in circulation at a given time. Generally, the types of commercial bank money that tend to be valued at lower amounts are classified in the narrow category of M1 while the types of commercial bank money that tend to exist in larger amounts are categorized in M2 and M3, with M3 having the largest. The terms M1, M2, M3 refer to the monetary aggregates. For quite some time it was thought that there was a perfect one to one relationship between these numbers and the rates of inflation. Recently this relationship seems to have broken down, and the money supply numbers have lost some of their appeal to market participants.

Shaw (1973) explains the changes in system of finance with a term *financial deepening*. According to this idea, when financial system has achieved a specific depth, credits and deposits maturity would become equal.

2.1.2 Concept of Economic Growth

Jhingan (2003) defines economic growth as a process whereby the real per capital income of a country increases over a long period of time. According to him, economic growth is measured by the increase in the amount of goods and services produced in a country. Economic growth occurs when an economy's productive capacity increases which, in turn, is used to produce more goods and services.

Economic growth is the increase of per capita gross domestic product(GDP) or other measure of aggregate income. It is often measured as the rate of change in GDP. Economic growth

refers only to the quantity of goods and services produced. The term economic growth refers to the increase (or growth) of a specific measure such as real national income, gross domestic product, or per capita income. National income or product is commonly expressed in terms of a measure of the aggregate value added output of the domestic economy called gross domestic product, GDP. In other words, GDP is a measure of the value of all of the goods and services produced in a country in a year. GDP can be calculated as the value of the output produced either in a country or equivalently as the total income, in the form of wages, rents, interests, and profits, earned in a country. Thus, GDP is also known as output or national income.

2.2 The Structure of the Nigerian Financial System

A financial system is a conglomerate of various markets, instruments, operators and institutions that interact within an economy to provide financial services such as resources mobilization and allocation, financial intermediation and facilitation of foreign exchange transaction to exchange foreign trade.

As mentioned earlier, the Nigerian financial system can be broadly subdivided into 2, namely: the informal and the formal. The informal sector comprises the local money lenders, the thrifts and savings associations etc. This component is poorly developed, limited in reach, and not integrated into the formal financial system. Its exact size and effect on the economy remain unknown and a matter of speculation. The formal financial system on the other hand, can be subdivided into the money market and capital market and these comprise the banks and non-bank financial institutions.

2.2.1 The Money Market

The money market segment of the financial system constitutes the hub of the financial system. Its major function is to facilitate the raising of short-term funds from the surplus sectors to the deficit sectors of the economy and comprises the discount houses, commercial and special purpose banks like the Community banks. They deal in short term credit instruments of high quality, such as treasury bills, treasury certificates, call money, commercial paper and so on.

Commercial banks perform three major functions, namely, acceptance of deposits, granting of loans, and the operation of the payment and settlement mechanism. In terms of flow of funds, the banking system, clearly dominates and has an important impact on the level of economic development. The first commercial bank was established in 1894, and is the forebear of the present day First Bank of Nigeria PLC. Since the government commenced the active deregulation of the economy in 1986, the commercial banking sector has continued to witness rapid growth, especially in terms of the number of institutions and product innovations in the market. With the bank consolidation of 2005 and bank reforms, Nigeria has a total of twenty four commercial banks with over 3000 branches nationwide (Ndebibo, 2010)

Discount houses these are non-bank financial institutions that mobilize funds for investment in securities according to the liquidity needs of the system. Discount houses were created to serve as financial intermediaries between the CBN, licensed banks and other financial institutions.

2.2.2 The Capital Market

The Nigerian Capital Market is a channel for mobilization and utilization of long-term funds. The instruments traded in the market include government securities, government and corporate bonds and equity and preference shares (stocks) and mortgage loans. The main institutions in the market include the Securities and Exchange Commission (SEC), which is at the apex and serves as the regulatory authority of the market, the Lagos Stock Exchange (LSE), the issuing

houses and the stock broking firms. The capital market is classified into primary and secondary segments. The Lagos Stock Exchange commenced business in 1961. The Primary Market is a market for new issues of securities. The mode of offer for the securities traded in this market includes offer for subscription, rights issues, and offer for sale and private placements.

The Secondary Market is a market for trading in existing securities. This consists of exchange and over-the-counter markets where securities are bought and sold after their issuance in the primary market. In a strict sense, it constitutes the stock exchange since it is the mechanism which gives liquidity to the securities listed on the exchange. Activities in the secondary market have increased substantially over the years. The structure of the Nigerian financial system, can be summarized in the chart below, showing that the financial system is made up of bank and non-bank financial institutions under different regulatory institutions

2.3 Financial Deepening in Nigeria

The financial deepening index of MS2/GDP moved from 35.9 in 1986 down to 24.2 in 1992 and increased to 29.7 by 1994. This declined further to 15.3 by 1997 before rising to 32.0 by 2004. The aggregate moved down to 18.0 by 2005 and up again to 29.7 by 2007. The trends above clearly show that the financial deepening index did not experience any dramatic changes during the period. This is despite the various reforms introduced from 1986 which should have a positive effect on financial deepening in Nigeria (Nnanna and Dogo, 2008).

The ratio of currency outside banks to money supply progressively declined between 1997 and 2007. The ratio moved from 30.4 in 1979 down to 15.2 in 2007. This shows a higher level of banking habits in the country. The decline had been more pronounced between 2005 and 2007 following the increased use of Automated Teller Machines and plastic money in the country (Garba, 2003).

Table 2.1: Financial development indicators in Nigeria (1970 – 2008)

Indicators (%)	**Before reforms (1970 – 1986)**	**During reforms (1987 -2008)**
M2/GDP	26.7	22.8
Private sector credit/GDP	16.8	14.4
Currency outside bank/M2	23	15.7
Interest rate spread	1.8	10.7
Real interest rate	-8.1	-15.5
Gross Savings/GDP	7.1	12.6

Source: CBN Statement Bulletin 2017

2.4 Stages of Financial Deepening

Nobuhiro Kiyotaki and John Moore (2005) identified 3 stages of financial deepening. On the one hand, there may be a limit on how much a private agent can credibly promise to repay someone who provides finance: that is, the degree of bilateral commitment a borrower can make to an initial lender when selling a paper claim. On the other hand, there may be a limit on the extent to which the initial lender can resell the paper to someone else in a secondary market

They assumed that an agent can credibly commit to repay at most a fraction "θ" of his or her future output. The parameter θ in part reflects the legal structure and contractual redress available to a creditor in the event of default. In this sense, θ provides one simple measure of

financial depth, capturing the degree of "trust" in the economy. Unless steps are taken by the borrower at the time of issue, private paper cannot freely circulate later on, that is, ex ante, the borrower must expend resources in order that, ex post, outsiders are on an equal footing with the insider and paper is liquid. Without such expenditure, paper becomes illiquid after being initially sold: it cannot be subsequently resold in a secondary market. The costs of conversion are indexed by a parameter φ, which, like θ, is taken to lie between 0 and 1. The higher is φ, the less costly is conversion. Taking φ to be another index of financial depth, we will be investigating the effects of an exogenous rise in φ.

The "θ-φ model" predicts three stages of financial deepening, corresponding to three different regions of the θ-φ parameter space, as shown in Fig 2.3

2.5 Impact of Financial Deepening on Economic Growth

According to Dancheng (2008), financial deepening plays an important role in economic growth and development:

i. Financial deepening can improve and enhance the allocation of resources. Finance has the significant function of adjusting economic structure. First, it is to create favorable conditions for readjustment of the industrial structure. In capital market, under the premise of ownership, corporate assets can shift the enterprises resources from industries or enterprises to the higher margin industries and the businesses through securitization form, and change the resource allocation structure, which realize the optimization and readjustment of the industrial structure. Secondly, it is to adjust the industrial structure and expand sources of funds. Readjustment of the industrial structure requires a large amount of incremental capital investment. Thirdly, it is to widen the space of the industrial structure adjustment. Incremental investment is often bounded by the sources of funds. Therefore,

changes in the existing resources among different industries and distribution can quickly realize the stock restructuring.

ii. Financial deepening can promote the capital formation. If a country has not sufficient and sustained capital supply, it cannot form a new economic growth point and promote sustained and stable economic development. However, the capital formation in a region is constrained by the level of savings in the region, but using the direct and indirect means of financing, it can translate directly surplus funds of the inner region, outside enterprises and residents into the investment capital by changing savings into the investment indirectly or directly, this is the basic function of finance.

iii. Financial deepening can promote the reform of the corporate governance structure. A country's financial development, especially in the development of capital markets, not only provides a convenient channel of financing for enterprises, and financing mechanisms of capital markets can effectively promote the governance structure change of the state-owned enterprises.

iv. Finance is the core of the modern economy, in the economic operation; it plays an important role in guiding the flow of resources in the country and among countries through special funds flow, which gets scarce resources in the region.

2.6 Empirical Review

The financial system serves as a catalyst to economic development through various institutional structures. The system vigorously seek out and attract the reservoir of savings and idle funds and allocate same to entrepreneurs, businesses, households and government for investments projects and other purposes with a view of returns. This forms the basis for economic development (Nzotta 2004:169).

Empirical evidence suggests that there are economies that have indeed benefited from well-developed financial systems in the past. For some of the very successful emerging market economies, finance appears to have been a crucial factor for economic success, e.g. in Taiwan (Chang and Caudill, 2005). However, it is not always possible to identify such a strong effect of finance on growth in mature OECD countries (Shan and Morris, 2002). For developing economies, the results are similarly diverse. Some studies find a strong impact of finance on growth (Tsionas, 2004), while others find the finance-growth relationship to be more complex (Harb, 2005). The efficiency of financial markets in promoting financial deepening and savings mobilization of financial resources has been recognized by policy makers and Economists such as Ronald McKinnon (1973) and Edward Shaw (1973). McKinnon postulates that an increase in holding financial assets (financial deepening) by the public, promotes savings mobilization which leads to higher levels of savings, investment, production, growth, and poverty alleviation.

Ndebbio (2004) in his study; financial deepening, economic growth and development: evidence from selected Sub- Saharan African countries, argued that the poor growth of output (economic growth) of any country is caused by shallow financial depth, the range of financial assets for that country is narrow. He tried to explain why most Sub – Saharan African countries have low or negative per capita growth rates. He identified a range of financial assets that could adequately approximate financial deepening. Using ordinary least squares (OLS) multiple regression procedure, three modelled equations, were estimated and analysed. A cross-country regression was used for 34 SSA countries. He concluded from his results that financial deepening as represented by the growth rate of per capita

(real/nominal) money balances (*GPRMB/GPMB*) and degree of financial intermediation (*FDY*) positively affect per capita growth of output.

Goldsmith (1969) in his study, tried to find out whether finance exerts a causal influence on growth and whether the mixture of markets and intermediaries operating in an economy influences economic growth. He carefully compiled data on 35 countries over the period 1860 to 1963 on the value of financial intermediary assets as a share of economic output. He assumed, albeit with ample qualifications, that the size of the financial intermediary sector is positively correlated with the quality of financial functions provided by the financial sector. He graphically documented a positive correlation between financial development and the level of economic activity.

According to Gershenkron (1962), banks effectively finance industrial expansion than any other form of financing in developing economies. Banks are the largest financial intermediators in the Nigerian economy. In addition to the intermediation role, a nation's financial system links the domestic economy with the rest of the world by providing the means for the settlement of international transactions. It has also been observed that growth in the financial industry, if transmitted well, would result in the growth of real sector and the opposite is possible if the financial sector is repressed and inefficient (Cameron, 1972).

Coskun Koçukozmen (2009) in his study; financial development and economic growth: a cointegration approach, examined the direction of the relationship between financial development and economic growth with Granger Causality test on a quarterly basis between 1991-2008. He used GDP as an indicator of economic growth, and the ratio of M2, M2Y, and M3 money supplies to GDP was used as indicators for measuring financial deepening. The results show that a long term relationship between financial development and economic growth does not exist. He argued that financial systems need developed financial markets,

which completed its deepening to affect economic growth positively. The results of Granger Causality also showed that financial development has a positive effect on the economic growth rate in the short run.

Using the Vector auto regressive model with high frequency quarterly data from 1998Q to 2006Q4, Mbutor (2009) analyzed the channels of transmission of monetary policy in the Nigerian economy. Using variables such as GDP, domestic prices, broad monetary aggregates and real effective exchange, he discovered that, the lending rates had the highest impact on GDP, in terms of time of impact, broad money supply had the fastest impact on GDP. He argued that the role of the banking system in propagating monetary impulses to the real sector should be recognized as critical.

Ayadi et'al, (2007) examine The Structural Adjustment, Financial Sector Development and Economic Prosperity in Nigeria. They evaluated the structural adjustment program in Nigeria, with a view to finding out if it resulted in an enhanced level of financial development. Using the Spearman rank correlation, they examined the relationship between financial development and economic growth during post-SAP period. They argued that the extent of financial development depends on the volume of bank credit as well as the stock market capitalization. They employed the use of some of the variables identified by Beck et'al (2000) to test whether or not economic growth and financial development co-move since the introduction of structural adjustment in Nigeria. Their results reveal a lack of consistent relationship between financial system development and economic growth in post-SAP Nigerian economy.

Christopoulos and Tsionas (2004), use panel cointegration analysis to examine whether a long-run relationship between financial development and economic growth exists for 10

developing countries over the period 1970–2000. Their findings are supportive to a unique cointegrating vector between growth, financial development, investment share, and inflation, and to unidirectional causality from financial depth to growth.

Rajan and Zingales (2003) argue that trade openness may also induce financial development with respect to effects from political economy. Domestic interest groups have a natural interest in obstructing financial development in order to prevent competitors from entering the market. As international competition increases, such groups shift their interests towards positive financial sector development.

Hemachandra (1998) examines Financial Deepening and its Implications on Savings and Investments in Sri Lanka. He investigates the validity of financial deepening paradigms in the context of Sri Lanka, and the effects of financial deepening on savings and investment that promote growth. In investigating financial deepening in Sri Lanka, Hemachandra uses three paradigms i.e., Keynesian, McKinnon-Shaw and neo-structuralist. After examining these three versions he argued that an improved model which combines both Keynesian and McKinnon- Shaw versions produces a model more successful in explaining the characteristics of financial deepening in Sri Lanka. The results showed that there are several factors other than interest rate influencing financial deepening in Sri Lanka.

Oya Pinar and Evren Damar (2006), examines the financial sector deepening and economic growth: Evidence from Turkey. They analyzed the effects of financial sector deepening on economic growth using a province-level data set for 1996-2001 on Turkey. The analysis was carried out using two different methods: cross-section analysis and dynamic panel data analysis. Using both traditional OLS and dynamic panel GMM techniques, the results showed that financial deepening (i.e. an increase in the total deposits to GDP ratio) has a direct and robust impact on the growth rate of real GDP per capita. However, unlike most of

the cross-country studies in this literature, the findings suggest that financial development has a negative relationship to economic growth.

2.7 Theoretical Framework

Theoretically, financial development creates enabling conditions for growth through either a supply leading (financial development spurs growth) or a demand following (growth generates demand for financial products) channel. A large body of empirical research supports the view that development of the financial system contributes to economic growth (Rajan and Zingales, 2003). The most influential contributions on the relationship between finance and growth identify financial development as a crucial precondition of long-run growth, suggesting that financial liberalization is an important instrument of economic policy.

2.7.1 The Endogenous Growth Model

Bencivenga and Smith (1991) and Levine (1991) were among the first to propose endogenous growth models to identify the channels through which financial markets affect long-run economic growth. With the emergence of the endogenous growth theory, the direct and indirect influence of financial markets on economic growth has drawn considerable attention, particularly with regard to sound development strategies.

The endogenous growth models show that economic growth performance is related to financial development, technology and income distribution. The endogenous growth models focus on the relationship between financial development and long-run economic growth, emphasizing that productivity growth is most likely to be the channel of transmission from financial development to economic growth. It is concerned with financial markets, savings, investments, and growth. The argument is that financial markets will raise savings, investment and hence the growth rates.

The endogenous growth model of King and Levine (1993b) focuses on the connections between finance, entrepreneurship and economic growth. Financial institutions in this model play an important role in both the monitoring and financing of potential entrepreneurs, in their initiation of innovative activities, and launching of new products.

Figure 2.2 displays the channels, through which financial intermediation contributes to economic growth. Initially, in the entrepreneurial selection procedure, the financial intermediary monitors the whole set of candidates in the market and picks up potential entrepreneurs with the ability to manage innovations in the intermediate goods production technology. Second, the financial intermediary finances the innovative activities. If entrepreneurs are successful, they will enjoy monopoly profits by producing the unique intermediate product at a lower cost than their rivals but charging the same price. However, to produce intermediate goods the successful entrepreneurs need external financing.

The financial intermediary evaluates and finances those entrepreneurs while it can pay back the consumers (savers) the interest according to its evaluation of the profitability of those entrepreneurs. Requiring the input of intermediate goods and labor, the production of final goods is also affected by the innovative success − the productivity increases with the technological progress. Of course, the aggregate final goods' production influences the consumers, who also provide the labor in this model, by affecting their optimal choice of intertemporal substitution in consumption.

The model identifies the following potential relationships between finance and growth. First, finance supports innovations and hence increases the productivity which is positively correlated with growth. Second, efficiency improvements in the financial sector, such as a decrease in the cost of monitoring, will increase the real rate of return and thus lead to a

higher future growth rate. Third, the model also suggests a reverse channel of causation where distortions in the innovative sector lower the demand for financial services and retard financial development.

2.7.2 Harrod-Domar Growth Model

The economic growth models of Harrod and Domar are based on the experiences of the advanced capitalist economies. They both emphasize the role of investment in economic growth based on the dual characteristics of investment. Firstly, it creates income and secondly, it augments the productive capacity of the economy by increasing its capital stock. The former is regarded as the 'demand effect' while the later is the 'supply effect' of investment.

The Harrod - Domar model provides accurate short-term predictions of growth and has been used extensively in developing countries to determine the required investment rate or financing gap to be covered in order to achieve a target growth rate. It is based on the following assumptions.

i. There is an initial full employment equilibrium level of income.

ii. There is the absence of government intervention.

iii. The models operate in a closed economy which has no foreign trade.

iv. The average propensity to save is equal to the marginal propensity to save.

v. There are no lags in adjustments between investment and creation of productive capacity.

vi. Savings and investment relates to income of the same year. vii. There is no depreciation of capital goods.

Based on the above assumptions, Domar's model was built on premise that to maintain full employment equilibrium level of income, aggregate demand should be equal to aggregate supply. Thus, we arrive at the fundamental equation of the model.

$\Delta I\alpha = I\delta$…… 1

Where I= Investment, ΔI =

Changes in Investment,

α = Marginal propensity to save

δ = Net potentials social average productivity of investment ($=\Delta Y/I$)

Solving equation (1) by dividing both sides by I and multiplying by α we get:

$\Delta I/I = \alpha\ \delta$…….. 2

This equation shows that to maintain full employment the growth rate of net autonomous investment ($\Delta I/I$) must be equal to $\alpha\delta$ (the MPS times the productivity of capital). This is the rate at which investment most grow to ensure the use of potential capacity in order to maintain a steady growth rate of the economy at full employment. According to Domar, any divergence between the two will lead to cyclical fluctuations. When $\Delta I/I$ is greater than δ, the economy would experience boom and when $\Delta I/I$ is less than δ, it would suffer from depression.

Harrod model tries to show how steady growth may occur in the economy. Once the steady growth rate is interrupted, and the economy falls into disequilibrium, cumulative forces tend to perpetuate this divergence thereby leading to either secular deflation or secular inflation. Harrod's model is based upon three growth rates; the actual growth rate (G) which is determined by the savings ratio and the capital output ratio. The actual is given as G=S/C. Where G is the rate of growth of output in a given period of time, C is the net addition to capital and is given as the ratio of investment to the increase in income ($I/\Delta Y$) and S is the average propensity to save APS.

The second is the warranted growth rate GW which is given as the GW=S/Cr where S=APS and Cr= the capital requirement needed to maintain GW. This equation shows that if the economy is to grow at the steady rate of GW. That will fully utilize its capital; income must grow at the rate of S/Cr per year.

The third is the natural growth rate. This is the rate of increase in output at full employment as determined by a growing population and the rate of technological progress Jhingan (2003). Harrod's equation for the national growth rate is Gn. Cr = or ≠ S where Gn is the natural of full-employment rate of growth. For full employment equilibrium growth, Gn=GW=G. Any divergence between the three rates of growth would cause condition of secular stagnation or inflation in the economy.

Harrod- Domar growth models were criticized on the ground of their unrealistic assumptions such as the existence of full-employment, non-government intervention in the economy, constancy of MPS (s) and the capital output ratio (∂) etc.

However, Harrod-Dommar postulates that a change in national income depends linearly on change in capital stock. That is =N=1b investment will bring about =N=1b output. In summary the Harrod-Domar growth model summaries as follows: economic growth will proceed at the rate which society can mobilize domestic savings resources coupled with the productivity of the investment (Somoye, 2002).

2.7.3 Supply - Leading Hypothesis

The supply-leading hypothesis suggests that financial deepening fuels growth. The existence and development of the financial markets brings about a higher level of saving and investment and enhance the efficiency of capital accumulation. This hypothesis contends that well-functioning financial institutions can promote overall economic efficiency, create and expand liquidity, mobilize savings, enhance capital accumulation, transfer resources from traditional (non-growth) sectors to the more modern growth inducing sectors, and also promote a competent entrepreneur response in these modern sectors of the economy.

Early economists like Schumpeter (1911) have strongly supported the view of finance led causal relationship between finance and economic growth. According to Mckinnon (1973), a farmer could provide his own savings to increase slightly the commercial fertilizer that he is now using and the return on the marginal new investment could be calculated. However, there is a virtual impossibility of a poor farmer's financing from his current savings, the total amount needed for investment in order to adopt the new technology. As such access to finance is likely to be necessary over the one or two years when the change takes place.

The recent work of Demirguc-Kunt & Levine (2008) in a theoretical review of the various analytical methods used in finance literature, found strong evidence that financial development is important for growth. To them, it is crucial to motivate policymakers to prioritize financial sector policies and devote attention to policy determinants of financial development as a mechanism for promoting growth.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

The study used expo - facto research design. This is as a result of the fact that the data used are already established data and cannot be manipulated by the researcher.

3.2 Data Sources

The data required for this analysis are time series data. In order to facilitate time series analysis, the data were sourced from the Central bank of Nigeria (CBN) statistical bulletin, Nigerian Stock Exchange (NSE) fact books, published journals, seminars papers, Central bank of Nigeria bullion, unpublished write-up.

3.3 Method of Data Collection

The data used in this research consists of secondary data to achieve the objectives of the study.

3.4 Techniques of Analysis

The results generated from the study are analyzed using both descriptive and analytical techniques. The analytical techniques employed are based from the result of the regression analysis using the ordinary least (OLS) approach. Analysis is done using economic view (E-view) statistical package.

3.5 Model Specification

The bench mark for the above model can be specified as:

$$\mathbf{GDP_t = f\ (FD_t)} \text{ ……1}$$

$$FD_t = (MSG_t, PLR_t, FSG_t, CHM_t\ INF_t, PCG_t, DBG_t, COBM_t) \text{ …….2}$$

Where:

GDP_t = Gross Domestic Product

FD_t = Financial Deepening

MSG_t = Money supply/GDP ratio (M2/GDP)

FSG_t = Financial Savings/GDP ratio (FS/DGP)

CHM_t = Value of Cheques Cleared to Money Supply (CHQ/MS2)

PCG_t = Ratio of Private Sector Credit to GDP (PSC/GDP
DBG_t = Ratio of Deposit Money Bank Asset to GDP (DBMA/GDP)

INF_t = Rate of Inflation

PLR_t = Prime lending rates

$COBM_t$ = Currency outside Banks to Money Supply (COB/MS2)

The above variables were logged to take care of non-linear phenomena. Thus, we consider a restricted standard form of our VAR model with lag order k, as:

$$Y_t = \mu + \sum_i Y_{t-1} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Where Y_t is an (n x 1) vector of endogenous variables, μ is a vector of constants, while Y is the corresponding lag term for each of the variables. A is an (nxn) matrix of autoregressive coefficient vector of Y , ε_t is a vector of white noise processes.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction

This chapter is basically divided into two. Section 4.2 presents the trend, structure and growth of financial deepening in Nigeria, while section 4.3 presents empirical analysis.

4.2 Trend, Structure and Growth of Financial Deepening Nigeria

Until recently, with the recapitalization in the banking sector which resulted in mergers and acquisitions, increased bank branches and innovations of new products and technology coupled with growth in the capital markets, the Nigerian financial system remained by and large relatively underdeveloped because of lack of financial intermediation and financial deepening which the economy requires for sustained growth. In Nigeria however, the influence of money supply on economic growth can only be taken with mixed reactions. Between 1971 and 1975, the growth rate of the economy measured by the real GDP ranged from 21.3% in 1971 to 3.0% in 1975.

By 1981, the real GDP grew by 26.8% and remained negative till 1984. A simple variance analysis shows that between 1971 and 1986, the mean spread of the GDP was 108.7.

However, between 1986 and 1994, the real GDP had a variance of 9.1. The variability of the GDP was much higher before deregulation, while it becomes lower during and after the deregulation of the economy. Both M1 and M2 had little correlation with growth of real GDP before deregulation in 1986. M2 was observed to have a variance of 362.6 and a correlation coefficient of 0.21. The period 1986-1994 had a lower correlation of 0.16

between broadmoney (M2) and growth of real GDP. The mean spread of M2 was 289.2 as against 108.7 for the real GDP.

The correlation between M1 and GDP between 1970 and 1986 stood at 0.22 and for 19861994, it was 0.33.

Table4.1: Trend in selected monetary and economic aggregates

Year	M2 Growth	M2 Growth	Real GDP Growth	Lending Rate	GDP Growth Deflator
1970	4.1	3.2	22.1	7.0	4.21
1971	5.8	3.4	21.3	7.0	4.16
1975	68.0	73.5	-3.0	6.0	18.02
1980	46.1	50.1	5.5	7.5	12.17
1985	10.3	8.7	9.4	9.3	3.6
1986	3.2	-1.2	3.1	10.5	-2.03
1987	22.0	13.7	-0.5	17.5	48.87
1988	42.6	41.9	9.9	16.5	21.44
1989	8.0	21.5	7.3	26.8	45.23
1990	40.4	44.9	8.2	25.5	7.09
1991	32.7	32.6	4.7	20.0	18.61
1992	48.9	52.3	3.6	29.8	64.93
1993	53.0	55.1	2.6	32.2	42.41
1994	16.7	13.6	43.8	24.5	12.77
1996 - 2000	14.9	12.8	3.7	21.5	11.65
2000 - 2006	15.4	11.7	3.45	12.0	9.8

Source: Central bank Nigeria Bulletin (various issues)

The Nigerian Capital Market

The capital market is very vital to the growth, development and strength of any country because it supports government and corporate initiatives, finances the exploitation of new ideas and facilitates the management of financial risk. From 1961, the Nigerian capital

market has grown tremendously, particularly during the periods of the indigenization decrees of 1972 and 1977. The securities increased from 8 in 1961 to about 301 in 2008. Over the years, the Nigerian capital market has witnessed relatively stability and also recorded impressive growth. This has positioned it to positively impact the economy.

The total new issues before 1989 was below N1 billion. However, from 1989 to1996 it hovered between N1 billion to N10 billion. The amount crossed the N10 billion marks in 1997. For instance, between 1996 and 2001, a total of 172 new issues (securities of public companies amounting to N56.40 billion) were floated in the capital market. The total new issues were valued at N5.85 billion in 1996 but it rose by about 532% to N37.198 billion in 2001. Total new issues were N61, 284 billion, in 2002, N180, 079.9 billion in 2003. N195, 418.4b in 2004 and N552, 782b in 2005. It crossed the trillion marks in 2007 being N1.935 trillion that year but fell to N1.509 trillion in 2008.

Market Capitalization is the most widely used indicator in assessing the size of the capital market of an economy. Before 1988, the total market capitalization was less than N10 billion from 1988 to 1994. It hovered between N10 billion to N57 billion. In 2003, it was N1,3593 trillion, N2.1125 trillion in 2004 and N5.12 trillion in 2006.The market capitalization recorded the highest value of N13.2294 trillion in 2007. But this fell to N9.562 trillion in 2008 due to the global financial meltdown. The percentage market capitalization compared to the economy's Gross Domestic Product (GDP) helps to assess the size of the capital market. In 1981, this was 10.5%, but fell to 7.4% in 1994. It rose again to 9.3% in 1995, 10.6% in 1996; 18.9% in 2003, 25.6% in 2004 and 27.4% in 2005.

However, in 1995, when the market was liberalized, the capitalisation shows a steady rise from 20% in 2005 to over 50% in 2007. The sharp increase from 2005 to 2007 can be mainly attributed to the bank consolidation programme of the Central Bank of Nigeria

(CBN) where banks were directed in 2004 to increase their capital base to about US$200milliom by December 2005 (World Bank, 2007). The market however plummeted in 2008 owing to the global financial crisis. During that period according to the CBN (2009), Nigeria stock market lost almost 70% of market capitalisation.

Table 4.2: Gross domestic product and performance of the Nigerian capital market from 1981-2008

Year	GDP{ at current prices (# B)	Total new issues (#M)	Market capitalization (Equities and debts) (#B)	Value of transactions (Government and industrial securities) (#M)	Total listing on the Nig Stock Exchange (Equity, industrial loan & govt. stock)
1994	205,971.4	833.0	6,794.8	494.4	240
1995	204,806.5	450.7	8,297.6	348.0	244
1996	219,876.8	400.0	10,020.8	137.6	253
1997	263,729.6	1,629.9	12,848.6	521.6	267
1998	267,660	9,964.5	16,358.4	265.5	295
1999	265,379.1	1,870.0	23,125.0	136.0	239
2000	271,365.5	3,306.3	31,272.6	313.5	251
2001	274,833.3	2,636.9	47,436.1	402.3	272
2002	275,450.6	2,161.7	66,3680	569.7	276
2003	281,407.4	4,425.6	180,305.1	1,838.8	276
2004	293,745.4	5858.2	281,815.8	7,062.7	276
2005	302,022.5	10,875.7	281,887.2	11,072.7	264
2006	310,890.1	15,018.1	262,517.3	13,572.3	264
2007	312,183.5	12,038.5	300.041.1	14,027.4	268
2008	329,978.7	17,207.8	472.290.0	28,154.6	260
2009	356,994.3	37,198.8	662,561.3	57,6372	261
2010	433,203.5	61,284.0	764,975.8	60,088.6	258
2011	477,833	180,079.9	1,359,274.2	120,703.0	265
2012	527,576	195,418.4	2,112,549.6	225,820.6	277
2013	561.931.4	552,782	2,900,062.1	262,929.6	288
2014	595,821.6	707,400	5,120,000	470,253.0	294
2015	634,251	1,935,080	13,294,059	2,100,000	310
2016	674,889	1,509,230	9,562,970	4,400,000	301

Source: SEC, NSE, CBN (Various issues)

Some selected indicators of financial deepening are highlighted below. From the table 4.3, we can see the trend of money supply (M2), credit o the private sector and Gross domestic product. Also, included are the ratios of M2 to GDP and credit to the private sector and GDP. In 1986, M2/GDP ratio was 34.43%, it fell to 14% in 1995, it started rising, and by 2001 it was 26%, by 2010, it had risen to 37%. However, we could see a level of inconsistencies and fluctuations over the years.

Table 4.3: Selected Financial Deepening Indicators

Year	Money Supply[2] (M_2) (N' Million)	Credit to Private Sector[2] (N' Million)	GDP at Current Basic Prices (N' Million)	Financial Deepening	
				(M_2/GDP) (%)	(CPS/GDP) (%)
1994	23,806.40	15,247.45	69,146.99	34.43	22.05
1995	27,573.58	21,082.99	105,222.84	26.20	20.04
1996	38,356.80	27,326.42	139,085.30	27.58	19.65
1997	45,902.88	30,403.22	216,797.54	21.17	14.02
1998	52,857.03	33,547.70	267,549.99	19.76	12.54
1999	75,401.18	41,352.46	312,139.74	24.16	13.25
2000	111,112.31	58,122.95	532,613.83	20.86	10.91
2001	165,338.75	127,117.71	683,869.79	24.18	18.59
2002	230,292.60	143,424.21	899,863.22	25.59	15.94
2003	289,091.07	180,004.76	1,933,211.55	14.95	9.31
2004	345,853.96	238,596.56	2,702,719.13	12.80	8.83
2005	413,280.13	316,207.08	2,801,972.58	14.75	11.29
2006	488,145.79	351,956.19	2,708,430.86	18.02	12.99
2007	628,952.16	431,168.36	3,194,014.97	19.69	13.50
2008	878,457.27	530,373.30	4,582,127.29	19.17	11.57
2009	1,269,321.61	764,961.52	4,725,086.00	26.86	16.19
2010	1,508,172.91	930,493.93	6,912,381.25	21.82	13.46
2011	1,952,922.28	1,096,535.57	8,487,031.57	23.01	12.92
2012	2,131,820.08	1,421,664.03	11,411,066.91	18.68	12.46
2013	2,637,913.73	1,838,389.93	14,572,239.12	18.10	12.62
2014		2,290,617.76			12.34

	3,799,538.05		18,564,594.73	20.47	
2015[1]	5,138,700.94	3,680,090.19	20,657,317.66	24.88	17.81
2008[1]	8,029,088.61	6,941,383.41	24,296,329.29	33.05	28.57
2009[1]	9,456,480.31	9,147,417.17	24,794,238.66	38.14	36.89
2017	11,034,940.93	10,157,021.18	29,205,782.96	37.78	34.78

Sources: Central Bank of Nigeria and National Bureau of Statistics (2011)

4.3 Unit Root Test

This research work began with the investigation of the time series properties of each variable employed in the study by using both the Augmented Dickey Fuller (ADF) and Phillip Peron (PP) tests to determine the order of integration of the series. Table 4.4 shows that the two tests are consistent, suggesting that GDP, INF, PLR, FSG, PSG, and DMBA are all stationary at first difference which implies that, they all integrated of order one, while MSG, VCM and COBM are stationary at second difference, meaning they are integrated of order two. Since the series are not integrated of the same order, it therefore excludes the possibility of a long run relationship among the variables, which implies the cointegration test is not necessary. Therefore the analysis of this study proceeded with the Vector Autoregressive approach.

Table 4.4: Unit Root Test

	AUGMENTED DICKEY FULLER TEST			**PHILIP PERRON TEST (PP)**			**Order of Integration**
VARIABLES	**Levels**	**1st Difference**	**2nd Difference**	**Levels**	**1st Diff**	**2nd Diff**	
GDP	-1.914316	-3.758154		-1.978333	-4.583836		I(1)
MSG	-2.157673	-3.245701	-4.803433	-2.316620	-4.462011		I(2)

COBM	-1.196450	-3.646667	-6.522666	-1.121046	-5.191223		I(2)
INF	-3.259615	-4.120127		-2.707685	-4.153398		I(1)
PLR	-3.279916	-5.083103		-3.513118	-5.676626		I(1)
FSG	-3.172769	-4.883144		-4.121516			I(1)
VCM	-1.384435	-3.500262	-3.754765	-1.972000	-6.845338		I(2)
PSG	-1.444976	-7.169413		-2.486433	-5.856403		I(1)
DMBA	-2.015773	-4.131488		-2.335235	-5.768409		I(1)

Notes: The ADF and PPT critical value at 5% level is -3.6219. All the series had intercepts with trends respectively. The critical values are based on Mckinnon criterion. The optimal lag is selected on the basis of Akaike Information Criterion (AIC). The null hypothesis of the test is: a series has a unit root. The rejection of the null hypothesis is at the 5% level of significance .I() shows the level of integration.

4.3.1 Granger Causality

Since no cointegration relationship exists between GDP and financial deepening, the next step is to examine the direction of causality among the variables. The effect was analyzed using granger causality test as shown in table 4.5. Only the significant results are reported below.

The results show that a weak unidirectional causality was found running from Financial Savings to GDP, implying that the effect or influence of financial savings to GDP in Nigeria is weak. The results show that Currency outside banks granger causes inflation, implying

that the more currency (money) outside the banking sector, the higher the level of inflation, this is in line with the quantity theory of money. There exists a bi-directional causality between GDP and VCM (the ratio of value of cheques cleared to money supply). MSG (ratio of money supply to GDP) grangers cause DMB (ratio of deposit money bank asset). Also, PSC (ratio of private sector credit to GDP) granger causes MSG. The causality test also suggests that economic growth proxied by GDP causes PSG (ratio of private sector credit to GDP)) without a feedback.

Table 4.5 Granger causality test

Null Hypothesis	F- test	P- Value
FGS does not Granger Cause GDP	3.59504	0.04988
COB does not Granger Cause INF	6.13604	0.00986
COB does not Granger Cause MSG	4.54199	0.02628
PLR does not Granger Cause COB	5.02064	0.01935
MSG does not Granger Cause DMB	6.2755	0.0091
DMB does not Granger Cause MSG	4.92775	0.02051
DMB does not Granger Cause VCM	3.76889	0.04418
FGS does not Granger Cause INF	7.72825	0.0041
PLR does not Granger Cause INF	3.65982	0.04766
INF does not Granger Cause PLR	5.95264	0.01098
PSC does not Granger Cause M2	4.77072	0.02267
PSC does not Granger Cause VCM	1.6028	0.23031
GDP does not Granger Cause PSG	14.4276	0.00022
GDP does not Granger Cause VCM	12.0483	0.00055

*Notes: All tests are achieved with a lag length chosen according to the Akaike criterion. The direction of causality is based on the probability value. The smaller p-value indicated the presence of causality***.**

4.3.2 Impulse Response Function

In this section, we investigated the effect of financial deepening on economic growth. We used the graphs below to show how growth (GDP) responded to unexpected shocks in financial deepening.

Impulse response analysis is a device to display the dynamics of the variables tracing out the reaction of each variable to a particular shock at time t. The simulation horizon covered 10 quarters. The solid blue lines are impulse responses.

The lag length of one was chosen based on the FPE, AIC, SC and HQ as indicated in table 4.6.

Table 4.6 Lag Length Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
1	-448.2652	NA	3.90E+09*	44.54480*	47.70444*	45.33944*

** indicates lag order selected by the criterion*
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Supply Leading

Figures 4.1 (a-h), enable us to trace out the responses of the variables to a shock in the exogenous variables. The set of graphs show the response of GDP to variables that make up financial deepening.

Panel A, shows that GDP responds negatively to financial deepening within the first four quarters and latter rose significantly attaining a positive sign at the end of the fourth quarter till the end of the tenth quarter. The negative significance within the first four quarters can

be attributed to the period where banks were terminally distressed and accounted for low levels of financial deepening. The fact that GDP rises thereafter from a negative to attain a positive sign suggest that deepening of the financial markets can lead to a significant growth in the long run. This lends credence to the supply leading hypothesis that financial deepening cause's economic growth.

Panel B indicates that private sector credit (PSC) impacts positively on economic growth (GDP). That is GDP responds positively to an unexpected shock in PSC within the first four quarters, and further increases significantly till the end of the tenth quarter. The implication of this finding is that, sustaining desired levels of new investments through private sector credit will facilitate growth in the economy. Although the level of interest rates have remained very high, the level of private sector credits have not sustained the desired levels of new investments through private sector credit to facilitate growth in the economy.

Panel C, shows an unexpected shock in inflation leads to a constant rise in GDP. This result is in line with our a priori expectations. A mild level of inflation stimulates investment and consequently growth.

We observed from panel D that, GDP increased from negative to positive within the first two quarters when financial savings increase by one standard deviation and there after declines persistently till the end of the last quarter. This result suggests that economic growth cannot be sustained by banks' savings.

In panel E below, we observed that GDP responds negatively to checks outside banks. The implication is that if more checks are issued into the economy, this will slow down economic activities.

Panel F shows the response of real GDP to an expansionary shock in the prime lending rate (PLR). Within the first two years, GDP is stable with changes in PLR. At the end of the second quarter, GDP rises quickly and significantly and further increases up to the fourth quarter. And almost stabilizes till the end of the last quarter. This suggests that financial deepening with respect to the prime lending rates would lead to a high and sustainable economic growth in Nigeria.

In Panel G, we observe that a positive innovation in deposit money outside bank (DMB) has a positive effect on GDP in the first three quarters and then it fizzles out in the fourth quarter. At the end of the fourth quarter till the last quarter, GDP responds negatively to unexpected shocks in DMB. This suggests that if more deposits are held by non-financial banks (institutions), GDP will drop significantly.

In Panel H below, a one standard deviation increase in currency outside bank, leads to significant rise in GDP reaching its maximum in the third quarter and thereafter declines gradually till the end of the last quarter maintaining its positive sign. This suggests that more currency outside bank will leave more cash balances with individuals in the economy thus increasing the level of demand for goods and services which in turn increases the level of investment thus increasing the level of GDP.

Demand Following

In figures 4.2 (a-h), we trace out the responses of the variables to a shock in the endogenous variable. The set of graphs show the response of the variables that make up financial deepening to GDP.

Panel A shows the response of COB to a sudden change in GDP within the 1st two quarters as being insignificant. But at the end of the 2nd quarter, right up to the 12th quarter, COB responds negatively and significantly to a sudden change in GDP which does not meet our priori expectation. This suggests that increase in economic growth does not lead to increased COB.

Panel B shows the response of DMB to a change in GDP, it is negative within the 1st three quarters; however, from the 4th quarter up to the 12th quarter, DMB responds both significantly and positively to changes in GDP. This is in support of the demand following hypothesis.

Panel C indicates that financial savings FSG, responds positively to GDP within the 1st quarter, it then significantly falls to negative up to 3rd quarter and gradually moves up to positive in the 6th quarter and it steadily rises through to the 12th quarter.

We observed from panel E that, MSG within the first four quarters was significantly negative; however, there was a steady growth from the fifth quarter to the seventh quarter, which leveled out to the 12th quarter.

Panel F shows the response of PLR to a shock in Gross domestic product (GDP). PLR significantly declined from the 1st quarter, became negative in the second up to the seventh quarter and then insignificantly fizzled out up to the 12th quarter.

We observed from panel G that, PSG decreased from positive to negative within the first two quarters when GDP increased by one standard deviation and thereafter, increased persistently till the end of the last quarter. This result suggests that GDP has an influence on PSG.

Panel H shows the response of VCM to expansionary shocks in D. We observed that VCM is positive in the 1st quarter, but slowly declined to the 3rd quarter, after which it steadily rose through the 12th quarter.

4.3.3 Variance Decomposition

In this section, we examined the relative contribution of the variables in the VAR model to GDP. This is accomplished by carrying out a decomposition of GDP with a view to determining the size of the fluctuations in a given variable that are caused by different shocks. We calculated the variance decomposition at forecast horizons from the first to the 10 quarters. The first to the fourth quarters represent the short run, while the eighth and 10 quarters represent the medium term.

Table 4.3 shows that, deposit money bank contributes more to GDP in the first three quarters than the other variables and from the fourth quarter, the financial deepening variable MSG contributes more significantly and relatively to GDP. For instance, in the third quarter, DMB accounts for 7.5% of the variability in GDP. In the fourth, eighth and tenth quarter, MSG accounts for 18.6%, 47.7% and 48.8% for the variations in GDP respectively.

However, the contribution of the private sector credit and prime lending rate to total GDP is very small when compared with the other variables of financial development. This possibly implies that a good percentage of the deposit money banks lending is not really to the private sector but, rather to other areas of the economy.

Conclusively**,** our empirical findings point at a supply-leading hypothesis confirming the fact financial deepening leads to economic growth in Nigeria.

Table 4.7: Variance Decomposition of GDP:

Period	S.E.	M2	PSC	INF	FS	VC	PLR	DMB	COB	GDP
1.000	4.360	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.000
2.000	6.723	0.001	0.688	0.320	5.692	2.541	0.017	7.069	4.675	78.996
3.000	7.956	5.242	0.610	1.361	4.008	2.085	0.277	9.703	10.049	66.665
4.000	8.396	18.644	0.448	1.985	3.468	1.897	0.560	7.489	11.109	54.400
5.000	8.724	32.294	0.379	1.937	3.719	3.257	0.629	6.337	9.503	41.945
6.000	9.158	41.102	0.634	1.791	3.996	4.747	0.594	7.542	7.471	32.124
7.000	9.642	45.627	1.279	1.787	4.183	5.532	0.547	9.716	5.880	25.448
8.000	10.111	47.730	2.203	1.967	4.342	5.664	0.524	11.725	4.771	21.075
9.000	10.542	48.615	3.276	2.294	4.525	5.414	0.532	13.155	4.013	18.176
10.000	10.932	48.879	4.414	2.704	4.741	4.995	0.572	13.969	3.511	16.214

Source: Eviews software

4.4 Analysis of Regression Results

The regression model has a very good statistical fitness judged by high adjusted R-squared values while the t-values indicate the significance of the individual variables at 5% level of significance. The interpretations of the results are made with respect to GDP only.

From Table 4.8, COB, FSG and MSG exhibit a positive and significant relationship with GDP at 5% level of significance. If COB is lagged by one is increased by one unit, GDP will increase by 0.0175 points. Also, if Financial saving (FSG) is lagged by one is increased by one unit, GDP increases by 0.015648 points. When MSG is lagged by one, is also increased by one unit, GDP increases by 0.017852.

VCM, DMB, PLR, have a positive correlation with GDP with little significance. If the previous year's VCM is increased by one unit, GDP will increase by 0.00034 unit points. GDP rises by 22 unit points when DMB lagged once

increases by one unit. The result further indicates that if previous year's PLR rises by one unit, GDP will rise by 0.0036 unit points. Increasing FSG by one unit increases GDP by 0.0034 unit points. A positive relationship is observed between INF and GDP. This debunks the recent empirical growth literature of Khan and Senhadji (2001) that there is a negative but nonlinear relationship between inflation and growth.

The implication of the above findings is that, deepening of the financial sector has been able to mobilize and allocate resources to some extent to meet up with investment expenditure that will final translate into meaningful economic growth.

4.5 Discussion of Findings

From the empirical analysis we found out that; financial deepening does not impact or influence economic growth in the short run. However, in the long run there is a significant effect of financial deepening on economic growth. Lending credence to the supply leading hypothesis that financial deepening causes economic growth.

Also, the private sector credit contributes positively to economic growth; however, the level of significance is very low. A positive relationship is observed between inflation and GDP. This result is in line with the a priori expectations since we normally expect rising inflationary pressures to have a positive effect on growth. Even though there has been clear improvement in the financial sector over the past few decades, the degree of financial development is still below the threshold needed to spur economic growth. The implication is that the financial sector is still not able to mobilize and effectively allocate funds to the private sector.

From the demand side, it was also observed that GDP had a positive and significant impact on Deposit Money Bank Asset, Money supply and private sector credit, thereby laying credence to the demand following hypothesis. In the Long-run, there is strong evidence that economic growth is leading financial development when bank credit to private sector is used thereby supporting the demand following hypothesis.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study empirically investigated the impact of financial deepening on economic growth in Nigeria, with the view of determining which of the hypothesis (theories) is relevant in the Nigerian economy, is it supply leading (Financial deepening leads to economic growth) or demand following (economic growth triggers financial deepening). The literature on the relationship between the economic growth and financial development overwhelmingly suggest as positive, first-order relationship between the two. Nevertheless, empirical studies on the issue of causality between the financial development and economic growth, however, remain sparse (Pagano, 1993).

To represent economic growth, we used GDP (Gross domestic product) and percentage change data natural logarithm was taken. Financial deepening was defined to include MSG (the ratio of money supply to GDP, VCM (value of cheques to money supply), PSG (ratio of private sector credit to GDP), FSG (financial savings to GDP), INF (rate of inflation), PLR (real lending rates), DMB (deposit money bank assets to GDP), COB (currency outside Banks to money supply). The prime lending rates of the banks was used to stand for interest rate (the long term interest).

To attain the set objectives, we employed the Structural Vector Auto Regressive method because it uses economic theory to sort out the links among the desired variables with the standard practice reporting the Granger causality tests, impulse response functions and the variance decompositions according to (Stock and Mark, 2001). But before employing the

VAR we investigated the nature of the time series data using both Augmented Dickey-Fuller (ADF) and Philip Peron (PP) tests

5.2 Conclusion

In this study, we used the structural vector auto-regressive (SVAR) model to empirically analyze financial deepening and economic growth in Nigeria, given the two theories; supply leading and demand following hypotheses. The study basically investigated the causality between financial deepening and economic growth. Results showed that in Nigeria some of the indicators of financial deepening; money supply, private sector credit, inflation, favoured the supply leading hypothesis, meaning that financial deepening influenced economic growth. The financial sector has an important role to play in the growth of the Nigerian economy. We also observed some traces of demand following hypothesis with financial deepening variables like private sector credit and deposit money banks responding positively to gross domestic product. However, this study concluded that financial deepening propels economic growth because the variables of financial deepening were more significant in explaining economic growth, therefore supporting the supply leading hypothesis.

5.3 Recommendations

There should be a determined effort by the monetary authorities to bridge the gap existing between lending rate and deposit rate, foster a moderate rise in nominal rates and stabilize inflationary pressures so that the people will be fully motivated to save in a bid to generate needed loanable funds for investment in Nigeria. Savings must be encouraged

and any country that does not encourage savings should forget about making any investment, whether private or public, (Fry, 1988).

There is an urgent need to sustain a higher level of macroeconomic stability in Nigeria, reduce the high incidence of non performing credits ensure that private sector credits are channeled to the real sector of the economy, enhance the level of corporate governance in the financial system.

Based on the findings of the study, another recommendation is that monetary authorities should continue with the policy reforms to consolidate the emerging confidence in the financial system. The financial sector reforms should be intensified; this will create a sound market-oriented financial sector, leading to an increase in the level of financial savings and level of financial activities in the financial markets, which will translate to increased deepening and hence economic growth.

The Central Bank of Nigeria should be encouraged with their current drive to ensure a cashless economy. This will help to bring the currency outside banks to its lowest level since everyone willing to carry out any transaction will need to have an account with one of the financial institutions. Therefore, efforts should be made to extend financial services to the informal or rural areas. There should be a decentralization of financial activities from the urban areas to the rural areas.

5.4 Limitations of the Study

This study was restricted to a period of thirty years from 1990 to 2017. The choice of data range is due to the availability of data and also covers the purpose for which the research work is intended. The financial deepening indicators which the researcher used were constructed proxies which might not perfectly replicate the functions of financial deepening. However, financial inclusiveness should be all embracing and in practice perfect measures do

not exist. The study deals with secondary data obtained from Central bank of Nigeria Statistical bulletin, which may contain some measurement errors. This may likely affect the robustness of our findings.

REFERENCES

Adebiyi, M.A. (2002): Is Financial Sector Liberalization the Cause of Banking Fragility in Nigeria? African Review of Money, Finance and Banking, 23-40.

Aghion, P., Bacchetta, P., and Banerjee, A. (2004): Financial Development and Ang, J.B. (2007). Financial Deepening and Economic Development in Malaysia." Economic Papers, 26 (3), September, 249-260.

Ajayi, S.I. (2006). The Determinants of Foreign Direct Investment in Africa: A Survey of the Evidence. In S.I Ajayi (Ed), Foreign Direct Investment in Sub-Saharan Africa: Origins, Targets, Impact and Potential. Nairobi, Kenya: African Economic Research Consortium and Insurance, Vol. 4, No 1. Pp. 46-67.

Ayida, O.E. (2007). Structural Adjustment, Financial Development and Economic Prosperity in Nigeria, International Journal of Finance and Economics, Vol. 19. Central Bank of Nigeria Annual Report and Accounts, Various Issues Statistical Bulletin, Various Issues.

Beck, T, Demirguc. K, Levine, R (2000a). A new database on financial development and structure. World Bank Economic Review 14 (3), 597– 605.

Beck T, and Ross, L (1999): "A New Database on Financial Development and Structure," World Bank, unpublished.

Bencivenga, V.R. and Smith, B.D (1991): "Financial intermediation and endogenous growth". Review of Economic Studies, 58(2): 403–44.

Chang, T. and Caudill, S. B (2005): Financial development and economic growth: The case of Taiwan, Applied Economics, 37, 1329-35.

Christopoulos, D. K. & Tsionas, E. G. (2004): Financial development and economic growth: evidence from panel unit root and cointegration tests, Journal of Development Economics,

Cletus C. A &Jude O. C. (2008): Toda and Yamamoto Causality Tests between "BankBased" Financial Deepening and Economic Growth in Nigeria.

Cross-Country Comparisons", In: Financial Structure and Economic Growth: A Cross Country Comparison of Banks, Markets, and Development, Eds: A. Demirguc-Kunt and R. Levine. Cambridge, MA: MIT Press: 81-140. Delivered at National Institute for Policy and Strategic Studies, August.

Demetriades, P.O. & Hussein, K.A. (1996). Does financial development cause economic growth? Time series evidence from 16 countries, Journal of Development Economics, 51, pp. 387-411.

Demirgüç, K, and Ross, L (2001b): "Bank-Based and Market-Based Financial Systems:

Dong He and Robert Pardy (1993). "Stock Market Development and Financial Deepening in Developing Countries: Some Correlation Patterns", The World Bank, Policy Research Working Paper 1084.

Felix, A et al (2008): Structural Adjustment, Financial Sector Development and Economic Prosperity in Nigeria. International Research Journal of Finance and Economics ISSN 1450-2887 Issue 15 (2008)

Ghani, E. 1992. "How financial markets affect long-run growth: A cross country study".

World Bank Working Paper Series 843, Operations Evaluation Department

Washington, D.C.

Granger, C.W.J (1988) Some Recent Development in a Concept of causality. Journal of Econometrics 39, 199-211.

Gujarati D. N. (1995); Basic Econometrics, 4th edition, United State Military Academy, West Point McGraw – Hill, Inc. 1995

Hemachandra W. M. (1999): Financial Deepening and its Implications on Savings and Investments in Sri Lanka.

Jin, J. C. (2000) Openness and Growth: An Interpretation of Empirical Evidence from East

Asian countries, The Journal of International Trade and Economic Development, Vol.9, No.1, pp.5-17

John, E. and Ndebbio, U (2004): Financial deepening, economic growth and development: Evidence from selected sub-Saharan African countries. African Economic Research Consortium, P.O. Box 62882-00200 Nairobi, Kenya Journal of Economic Literature , Vol. 35, No. 2, pp. 688-726.

Khan & Mohsin (2002). Inflation, Financial Deepening, and Economic Growth.Conference on Macroeconomic Stability, Financial Markets and Economic Development, Mexico City

Khan, S and Abdelhak, S (2000): "Financial Development and Economic Growth," IMF Working Paper WP/00/209; Journal of African Economies, forthcoming.

King, R.G. and Levine, R (1993): "Finance, entrepreneurship and growth: Theory and evidence". Journal of Monetary Economics, 32(3): 513–542.

Levine, R (1997): "Financial Development and Economic Growth: Views and Agenda,"

Luintel, K.B. & Khan, M., (1999), A Quantitative Reassessment of the Finance Growth

Nexus: Evidence from a Multivariate VAR , Journal of Development Economics, 60, 381405

Manning, M. J (2003): "Finance Causes Growth: Can We Be So Sure?" Contributions to Macroeconomics, 3 (2003), http://www.bepress.com/bejm/contributions/vol3/iss1/art12

Michael, A (2003): A Re-examination of McKinnon-Shaw Financial Development

Hypotheses: Evidence from Seven African Countries. The Nigerian Journal of Risk Montiel, P.J. 1995. “Financial policies and economic growth: Theory, evidence, and countryspecific experience from sub-Saharan Africa”. AERC Special Paper (April 1995).

Nagel, A & Jeffrey P (2003): “Empirical macroeconomics: The effects of monetary policy”. Paper Presented at the Gold-Hammer Collaborative Research at Reed College.

Ndebbio, J.E. (2004) Financial Deepening, Economic Growth and Development: Evidence from Selected Sub-Sahara African Countries, AERC Research Papers No. 142 African Economic Research Consortium, Naira.

Nicholas, A et’al (2007) Financial Deepening and Economic Growth Linkages: A Panel Data

Analysis, University of Piraeus, Piraeus; Utrecht School of Economics, University of Utrecht. Review of World Economics 2007, Vol. 143 (1)

Nnanna, O (2001): “Monetary Management: Objectives, Tools and the Role of Central Banks in the Region”. Regional Forum on Economic and Financial Management for Parliamentarians. Nigeria:WAIFEM.

Ogun, O.D. (1986) A Note on Financial Deepening and Economic Growth: Evidence from Africa, Nigerian Journal of Economic and Social Studies,28 (2).

Ogun, O.D. (1986): “A note on financial deepening and economic growth: Evidence from Africa”. The Nigerian Journal of Economic and Social Studies, 28(2): 275–283.

Olofin, S. et'al (2008) Financial Structure and Economic Growth in Nigeria, Nigerian Journal of Securities and Finance Vol. 13 No. 1 Pp 47-68 Oloyide, A. (1998). The Financial Systems

Role in Resource Mobilization and investment: An Analysis of Financial Deepening in Nigeria's Financial Sector, Economic and Financial Review, Abuja.

Ozturk, I et'al (2007): Finance – Growth Nexus: Evidence from Turkey." International Research Journal of Finance and Economics, 11, 30-40. [3]

Patrick, H (1966): Financial Development and Economic Growth in Underdeveloped Countries, Economic Development and Culture Change Vol. 14 No. 2 Jan.

Peter, L and Rousseau (2007): What is happening to the impact of financial deepening on economic growth?

Rao, M et'al (2010): Trade Liberalization, Financial Development and Economic Growth: Evidence from Pakistan (1980-2009). Journal of International Academic Research (2010) Vol.10, No.2. 31 August 2010

Rudra, P. P (2010): Financial Deepening, Foreign Direct Investment and Economic Growth: Are They Counteracted. International Journal of Financial Research Vol. 1, No. 1; December 2010

Sam, Q. Z (2001): The Impact of Financial Sector Reform on Bank Efficiency and Financial Deepening for Savings Mobilization in Ghana African Economic Policy Discussion Paper Number 81 February 2001

Samuel, M. N and Emeka, J. O (2009): Financial deepening and economic developmentof Nigeria: an empirical investigation. African Journal of Accounting, Economics, Finance and Banking Research Vol. 5. No. 5

Sanusi, J.O. (2002b): Central bank and the Macroeconomic Environment in Nigeria." Lecture Shaw, E (1973): Financial Deepening in Economic Development, London, Oxford University Press.

Sinkey, J. R. (1989): "Bank Financial Management in the Financial Services Industry," Macmillian Publishing Company.

Tabi, A. J et'al (2011): Financial development and economic growth in Cameroon, 1970-2005. Journal of Economics and International Finance Vol. 3(6), pp. 367-375, June 2011

Thomas, G et'al (2008): Financial Deepening, Trade Openness and Economic Growth in Latin America and the Caribbean. Center for International Economics University of Paderborn, Warburger Strasse 100 33098 Paderborn / Germany.

Thornton, J (1995): "Financial Deepening and Economic Growth in Developing Countries," Economia Internazionale.

Valerie, R. B and Buce, D. S (1991): Financial Intermediation and Endogenous Growth. Cornell University and Cornell University and Rochester Center for Economic Research Yan, E. (2007): Why Isn't Financial Deepening Happening in Developing Countries, www.worldbank.org.

Yucel, F. (2009): Causal Relationships between Financial Development, Trade Openness and Economic Growth: The Case of Turkey, Journal of Social Sciences 5(1): 33-42, 2009.