# Financial Deepening and Domestic Investment in Nigeria

Frances N. Obafemi[1], Chukwuedo S. Oburota[1] & Chukwunonso V. Amoke[2]

[1] Lecturers at the Department of Economics, University of Calabar, Calabar, Nigeria

[2] An MSc Student at the Department of Economics, University of Calabar, Calabar, Nigeria

Correspondence: Frances N. Obafemi (PhD), Department of Economics, University of Calabar, Calabar, Nigeria. Tel: 234-8037-436-169; 234-8055-772-912. E-mail: francesobafemi@yahoo.co.uk

**Abstract**

The study examined the relationship between financial deepening and investment in Nigeria. Secondary data spanning from 1970 to 2013 was used for the empirical analysis. It adopted the Gregor-Hansen Endogenous structural break methodology and the supply-leading hypothesis in building the model. The study also employed the Unit Root Test, Co Integration Test and Granger Causality Test. It discovered a unidirectional causality, running from financial deepening to investment. It also found that the financial deepening has a statistically significant impact on domestic investment. Based on these empirical findings, the study recommended increased integration of the credit and thrift societies, cooperatives, rural saving organization etc into the mainstream formal financial sector in order to shore up the mobilization of savings for investment. It also recommended subsidizing the operational cost of financial intermediation so as to narrow the gap in interest rate spread. These steps when judiciously executed will ultimately promote financial deepening by easing the rigidities involved in mobilizing and accessing of credit for investment purpose.

**Keywords:** financial deepening, domestic investment

## 1. Introduction

Nigerian economy is richly endowed with both human and material resources. The under exploration of these potential through investment drive could be blamed on wide range of factors which include poverty, low standard of living, rising unemployment rate. Like many economies of the world, Nigeria's economy strives through policy reform to actualize some macroeconomic goals such as price stability, attainment of full employment, optimal economic growth and equilibrium balance of payment (Obafemi, 2003).

In the process of achieving these macroeconomic goals, the importance of the financial system cannot be over emphasized. The role that financial institutions play in economic development was highlighted in the seminar work of McKinnon and Shaw (1973). They showed that development of the financial sector could be a catalyst for economic growth. According to McKinnon's model (1973), investment cannot be triggered unless sufficient savings is mobilized in the form of bank deposit liabilities. The drive to bring to fruition a viable financial system that would guarantee increased saving mobilization for Investment has necessitated financial sector reform which according to Odhiambo (2005), leads to increased financial resources for financial intermediation. Among these reforms is financial liberalization which Nigeria embraced with the introduction of structural adjustment programme (SAP). The cardinal objectives of this reform were well articulated but it resulted in financial repression (Obafemi, 2003). The efficient mobilization and allocation of the financial resources was greatly hampered amidst rising inflation and negative real interest rates, which discouraged saving and consequently, the allocation of investment fund.

The deplorable state of the financial system (before and after SAP) as noted by Dehasa et al. (2007) eroded Investment confidence. The real rate of return sustained a negative position, declining to -46.9% in 1995. The situation was worsened by rising inflation which peaked at 72.8% in 1995. The interest rate spread was not spared as it kept widening thus challenging the efficacy of the McKinnon-Shaw's argument long after the financial liberalization policy had been implemented.

Empirical evidence on the effect of the financial sector on the economy are inconclusive. Studies by Azege (2004), Olofin and Afangideh (2010), Suleiman et al. (2012), Shittu (2012), Ohwofasa and Aiyedgon (2013) concluded that financial deepening impacted significantly on economic growth while studies by Nzotta and

Okereke (2009), Odiambho (2004) were rather on the contrary. Furthermore, the direction of causality is also a subject of controversy. Darrat (1999) and Wahid (2005) found a one directional causality running from financial deepening to economic growth; Odiambho (2004) and Torruam, Chiawa, and Abur (2013) concluded that it runs from economic growth to financial deepening. Unalmis (2002), Odeniran and Udeaja (2010) found a long run two-way causality between financial deepening and economic growth.

The continued widening gap of the interest rate spread which suggests efficiency loss in the intermediation process as it constrains the expansion and the development of the financial intermediation by discouraging savers with low deposit rate and lenders with high lending rate (Ngugi, 2003). The observed low level of investment as suggested by the trend analysis of investment might not be unconnected with the declining level of financial intermediation which Nzotta and Okereke (2009), Iganiga (2010), Adams (2011) observed are occasioned by rising inflation rate, high lending rate, poor branch networking and declining per capita income. The aforementioned development gives credence to the structuralists hypothesis which states that financial liberalization as propagated by McKinnon-Shaw (1973) might not necessarily lead to increased financial resources for investment. They rather believe that it boosts the development of the unorganized financial sector as is obtainable in Nigeria where unorganized money market contributes 57.9 % of the Gross Domestic Product. All these bring to question the place of the various theories in the Nigeria economy.

Bearing in mind the fact that most studies looked at the impact of financial deepening on economic growth with only a few dealing with its impact on investment, the objective of this paper is to ascertain the impact of financial deepening on domestic investment in Nigeria. The paper is organized in five sections. Section two focused on literature review and theoretical frame work while section three described the research methodology employed in the work. Section four is the presentation and discussion of the estimated results; and section five concludes the paper.

### 1.1 Empirical Literature

Numerous empirical investigation have been carried out on the impact of financial deepening on economic growth with evidence varying among countries and different proxies used as measure of financial deepening (Darrat, 1999). Onwumere, Ibe, Ozoh and Mounanu (2008) investigated the effect of financial deepening on economic growth in Nigeria. Supply-leading hypothesis was adopted using proxies of financial deepening such as money stock diversification, broad money velocity, market capitalization, economic volatility, market liquidity and GDP growth rate for economic growth. The study revealed that broad money velocity and market liquidity promotes economic growth in Nigeria while money stock diversification, market capitalization and economic volatility did not within the period under investigation. The study therefore submitted that Government policy should aim at tactically increasing money supply and enhancing efficient capital market which will promote overall economic efficiency, expand liquidity by mobilizing savings, promote capital accumulation, transfer resources from unorganized financial sectors to growth inducing sectors (such as industries, manufacturing, agriculture and the services sectors), and also enhance competent entrepreneurial response in various sectors of the economy. The findings of this study are similar to that of Torruam, Chiawa and Abur (2013) on financial deepening and economic growth in Nigeria. However, while the latter discovered a demand-following hypothesis, the former did not test for causality.

Adegbite (2004) using broad money supply to GDP ratio as the measure of financial sector growth, found an increasing linear association between financial deepening and real sector growth in Nigeria. However, the empirical findings failed to establish a causal link between financial deepening and real sector growth. This conforms partially with the theoretical submission of Bencivenga and Smith (1991), and Dehesa, Druck, Plekhanov (2007) and Ndebbio (2004). While Bencivenga and Smith (1991) argue that in a well-developed financial system where the security (capital) market is stable and well developed; the viabilities of long term instruments stimulates savers to hold their wealth in productive asset which consequently contributes to productive Investment and growth.

Unalmis (2002) carried out a study in Turkey to determine the causality between financial deepening and economic growth. Granger non-causality in the context of Vector Error Correction Model was used. The study found that there exists bidirectional causality between financial deepening and economic growth in the long run. Owing to unsettled controversy over the impact and causality between financial deepening and economic growth, Adam (2011) investigated the efficacy of the financial intermediation process in the Nigeria's growth performance. The study adopted the Two-Stage Least Square approach. The empirical result indicated that financial intermediation process is sub-optimal because of rising inflation rate, high lending rate, poor branch networking and low per capita income.

Adekunle, Salami, and Adedipe (2013) in their study on the impact of financial sector on economic growth employed the OLS method of regression analysis. The financial development was proxied by ratio of liquidity liabilities to GDP (M2GDP), ratio of private sector credit to GDP (CPGDP) and real interest rate (INTR), while the economic growth was proxied by the real Gross Domestic Product (RGDP). The study found out that real interest rate is statistically insignificant and negatively related with other explanatory variables. Their finding brought to bear evidence that negate the findings of Adegbite (2004). They discovered that linkage between the financial sector growth and real sector remained weak and could not support the expected growth towards the vision 20-20-20. The study therefore emphasized the need to conceive and implement consistent and transparent policy amidst resilient and strong institutional development of the financial sector.

Onwumere, Onudugo, and Ibe (2013) in a study carried out on financial structure and economic growth adopted the multiple linear regression model within the endogenous growth theory. The findings showed that the broad financial structure has positive and significant impact on economic growth in Nigeria. Specifically, it asserts that while sectors like the banking and money market exert significant impact on economic growth, other sector like the insurance were discovered to have no significant impact on economic growth. The study submitted that greater effort should be made by the government and other regulatory authorities at ensuring an enabling environment for all sectors of the financial system.

Khalid (2007) using four different equations to measure the relationship between deregulated interest rate and economic growth in Pakistan (1981-2002) submitted that interest rate liberalization has not impacted significantly on economic growth in Pakistan as most indicators of financial liberalization did not reveal any statistical significant impact on saving, Investment or growth. Furthermore, Khalid (2007) gave submissions of his findings which concur with the view of Oshikoya (1992) but contrasts with that of Omar, Dahou & Pfister (2009). While Oshikoya (1992) in his time series analysis on the impact of financial liberalization on economic growth found that, in the era of regulation in Kenya (1970-1979), interest rate had a negative significant impact. It on the other hand, had a robust positive impact on economic growth in the era of financial liberalization. Omar et al. (2009) similarly found that long term economic growth in Bangladesh is largely accounted by physical capital and real interest rate and as such financial liberalization has a significant negative impact on economic growth. Obamuyi (2009) also analysed the connection between interest rate and economic growth in the regulation and deregulation era in Nigeria using a multiple linear regression. The study included a dummy variable to account for policy shift from regulation to deregulation financial sector. It found that there exists a distinctive long run relationship between interest and economic growth. The study submitted that the liberalization of interest rate in Nigeria may not optimally realize its goal if those factors which affect interest rate in Nigeria are not resolved. In the same vein, Eregha (2010) examined the relationship between interest rate and Investment in Nigeria between 1970 to 2002. He concluded based on the findings that instability in interest rate played a negative and significant role in Investment decision in the economy. The study also discovered that the demand for investment fund also has a negative and significant impact on the interest rate changes in both the short run and long run.

Darrat (1999) employed a multivariate Granger Causality test in the context of an error correction framework to investigate the dynamics of financial deepening and other macroeconomic variables. The findings confirmed that financial development is an essential causal factor of the real sector growth (Mackinnon-Shaw stance), although the potency of this findings varies across countries and proxies used as measure of financial deepening. It therefore submitted that government policies poised at promoting financial deepening must be persistent and sustainable for meaningful impact on the real sector growth. Ndakumana (2013) submitted in favour of the McKinnon-Shaw's view based on theoretical findings. It holds that financial intermediation affects domestic Investment especially by minimizing financial constraints and allowing firms to boost Investment in reaction to increased demand for output. It suggested that rather than advocating a particular type of financial structure, countries should execute policies that minimize the operational cost of financial intermediation, and put in force creditor and investors right; thus stimulating domestic Investment.

Iganiga (2010) in his assessment of the Nigerian financial sector reform using a behavioral model found that interest rate deregulation in Nigeria has been accompanied with declining bank credit due to very high lending rate with its attendant crowding out effect; a submission that coincides closely with that of Adams (2011). He therefore submitted that monetary authority (CBN) should direct their effort towards promoting a positive realistic interest rate regime thus increasing the scope of the financial reform. Adesagun (2014) in his assessment of the financial sector liberalization on bank performance using panel data noted that, though the impact of financial sector liberalization on banks performance in Nigeria for the period under study has been significant especially when measured by earnings per share and return on equity. It has not been significant enough to

transform the economy. It therefore submitted that the precondition for the efficacy of the deregulated financial sector is a stable macroeconomic environment; a view that is shared by Schmidt-Hebbel and Serven (2002), Ndebbio (2004) and Dehasa et al. (2007).

Darrat and Al-Sowardi (2010) in their study on the position of information technology and financial deep ening on Qatar; a fast growing economy, employed Vector Error Correction Model with its attendant short run causal dynamics. They discovered that the real economic growth in Qatar is robustly related over the long run to both financial deepening and information technology. The study however singled out financial deepening rather than Information Technology as more important for enhancing economic growth over the short run horizon.

Ardic and Damar (2006) in their province level data assessment of the impact of financial deepening on economic growth in Turkey equally found a strong negative relationship between financial deepening and economic growth. They argued that it is possible that financial development may not always guarantee economic growth and that the condition under which such takes place should be investigated. Guryay, Safakli, and Tuzel (2007) in their research on the relationship between financial deepening and economic growth using OLS technique in Cyrus found that causality between the two variable run from the later to the former without a feedback (demand-following hypothesis); findings similar to that of Waqabaca (2004), but in different countries with different methodology. In the same line of research, Wahud (2005) examined a disaggregated causal relationship between financial deepening and economic growth for three South Asian countries namely Pakistan, India and Bangladesh. The result concurs with the supply-leading hypothesis as the Error Correction Model indicates causality running from financial deepening to economic growth.

With the Johansen-Juselius co-integration technique and a Vector Error Correction Model, Odiambho (2004) examined the role of financial deepening on economic growth in South Africa. The result revealed demand-following response between financial deepening and economic growth. The study employed three proxies of financial deepening namely broad money supply to GDP ratio, the ratio of currency to narrow money and the ratio of the bank claim on the private sector to economic growth proxies by real GDP per capita. The study totally rejects the supply-leading hypothesis.

Using time series data and two-stage least squares framework, Nzotta and Okereke (2009) carried out a study on financial development and economic development in Nigeria between 1986-2007. The study found that the following variables namely financial saving ratio, lending rate, cheques/GDP ratio and deposit money bank/GDP ratio had a significant relationship with financial deepening. They submitted that the financial system has not encouraged an effective financial intermediation, especially the credit allocation amidst high level of monetization of the economy.

Employing co-integration test and ECM econometric approach, Shittu (2012) examined the impact of financial intermediation on economic growth in Nigeria from 1970 to 2010. The study found that financial intermediation has a statistical significant impact on economic growth in Nigeria. In like manner, Azege (2004) examined the empirical connection between the level of development of financial intermediaries and growth. The study adopted data on aggregate deposit money bank credit over time and gross domestic product to establish that a moderate positive relationship exist between financial development and economic growth. It concluded that the growth of the financial intermediary institutions in Nigeria is essential for overall economic growth.

Adigbite and Adetiloye (2013) in their study on financial globalization and domestic investment in developing country identified factors that determine the level or degree of financial globalization to include nominal exchange rate, financial depth of the country's financial system and trade. Using the Capital Opening Index and average exchange rate measure of financial globalization, the result showed that in Nigeria the greater the level of financial globalization, the more Nigeria experience capital outflow which depletes available domestic financial resources, thus impacting negatively on investment. The study recommends increased government autonomous investment to crowd in investment by implementing policies that encourage investment in the economy.

Agbaeze and Onwuka (2014) in their study on financial liberalization and investment used the generalized least square model to analyze the investment model and the firm level performance following the financial liberalization. The study also adopted the cumulative sum and the cumulative sum square to verify for structural stability. The result indicated that private sector investment has not improved following financial liberalization due to hostile macroeconomic environment. The study therefore suggests that government should promote monetary stability, ensure sound macroeconomic environment and provide infrastructures to enable private investment to thrive in the economy.

Olofin and Afangideh (2010) examined the financial structure and economic growth in Nigeria with a Small macro

econometric model to capture the inter-relationships among aggregate bank credit activities, Investment behaviour and economic growth. They also adopted three stage least square estimation techniques amidst counter factual policy stimulations. The result of the test showed that a developed financial sector alleviates growth financing constraints by increasing bank credit and Investment activities with resultant rise in output. One major finding of the study was that financial structure has no independent effect on output growth through bank credit and Investment activities; but that financial sector development merely allows these activities to positively respond to growth in output.

Odeniran and Udeaja (2010) examined the relationship between financial development and economic growth in Nigeria. The study employed Granger causality tests in a VAR framework. Four variables namely, broad money stock to GDP ratios, growth in net domestic credit to GDP, growth in private sector credit to GDP and growth in deposit liability to GDP were used to proxy financial development. The result suggested bidirectional causality between proxies of financial development and economic growth.

Sulaiman, Oke, and Azeez (2012) critically explored the effect of financial deregulation on the economic growth in developing nations with its assessment focusing on Nigeria. The study employed co-integration and error correction model (ECM) by regressing Gross Domestic Product on lending rate, exchange rate, inflation rate, financial deepening (M2/GDP) and degree of openness as proxy financial liberalization. Co-integration result confirms the existence of long run relationship while the ECM results show a very high $R^2$ in both the over-parameterized model (95%) and parsimonious model (91%). The study therefore submitted that financial deregul

Ohwofasa and Aiyedogbon (2013) employed a (VAR) methodology, and its derivatives impulse response function and variance decomposition to empirically analyze the relationship between financial deepening and economic growth. The result revealed that the series are co-integrated which suggests that there exist a long run relationship between the variables. They submitted based on findings that savings should be encouraged in order to place more funds in the hands of banks to ease fund assessment for investors seeking funds. Also, lending rate should be reasonably low so as not to discourage viable Investment project.

*1.2 Theoretical Issues*

The most established connection between finance and economic growth could be traced to the work of Schumpeter (1911) in which he contended that investors require credit in order to enhance Investment. In this case, the banks are to serve as agents to facilitate the financial intermediation of mobilizing saving for Investment. It is therefore believed that a stable financial system would promote technological innovation and productive activities desired to drive growth.

For a clear appreciation of the dynamics of financial deepening and Investment in Nigeria, an appraisal of finance-Investment literature is inevitable. The major theories are the classical theory of Investment, the Keynesian theory of Investment, the Accelerator Theory of Investment, Neo Classical Investment Theory, Tobin q theory, and Patrick Hugh (1966) supply-leading and demand-following hypothesis, McKinnon-Shaw (1973) Financial Repression /complementary Hypothesis and the Neo-Structuralist Theory.

The classical theory of investment, states that investment is determined by interest rate- a mechanism which guarantee the equality of investment (injection) and savings (withdrawal) from the circular flow of income. The classical reasoning is anchored on the fundamental principles of the classical that the free enterprise economy is self- adjusting and the Say's law of the market. They hold that investment is equal to savings because money income earned by factors of production are either spent on capital goods and/or saved. They further opined that savings by factors of production are actually spent on investment or capital goods. On the other hand Keynesian marginal efficiency hypothesis, stressed that investment decisions depend not just on the interest rate, but   on the differential of the internal rate of return generated by investing in a particular asset called Marginal Efficiency Investment (MEI) and the prevailing market rate of interest.

The accelerator theory of investment states that current net investment depends on change in income. It explains net Investment as a function of aggregate demand. The two variants of this theory are the fixed accelerator theory and the flexible accelerator theory. Though formulated under separate assumption, they share some common peculiarities namely: that provided that the factor of proportionality (accelerator) is positive, a small change in income (output) will have accelerated effect on the net Investment. The theory has suffered criticism on account of its assumption termed porous and unrealistic, and as such does not reflect the modern firm's Investment behaviour. The criticism also includes the fact that the theory ignored the possibility of technological advancement and also the role of expectation in Investment decision making. Chenery (1952), owing to the perceived weaknesses of Clark's accelerator theory of Investment which borders on the fact that Investment

being an irreversible undertaking submits that firm should thread with caution in its Investment decision. Chenery's model therefore tries to relate the net Investment to the proportion of the optimal desired stock differential.

The Tobin q theory, developed by James Tobin (1969) is a dynamic Investment theory. The theory also holds that there exists a negative relationship between interest rate and shares prices. Thus, a rise in interest rate will cause a fall in the market value of the firm's financial asset. The idea behind the theory is that when a firm makes Investment decision and install purchased capital goods, there is certain adjustment costs associated with Investment in capital goods ranging from direct cost of capital goods, cost of installation, cost of operating the machine etc. In general, therefore, we have it that the bigger the volume of Investment undertaken in a given period, the more costly the installation cost which determines the q value- Investment decision parameter. Given that it takes time for firms to move from their current capital stock (K) to their desired capital stock K* suggested by the q ratio, the relevance of lag is brought to bear especially as it pertains to firms' transition from previous to a new and higher capital stock.

Tobin q theory not only emphasized that uncertainty and business expectation as important factors that determine Investment, but also provides explanation on the connection between stock prices and real economy. This is because higher stock prices encourage firms to invest. Tobin q theory also stressed that financial constraint could also hinder Investment motive due to higher capital adjustment cost even when business expectation and prospect is viable; a stance that vindicate the McKinnon -Shaw financial repression argument.

The financial repression theory put forward by McKinnon -Shaw (1973) posits that financial deregulation in a financially repressed economy would induce higher saving, increase credit supply, encourage Investment and hence help to enhance economic growth. This is because according to McKinnon's model (1973), investment in a typical developing economy is generally self-financed, hence given its lumpy nature; Investment cannot occur unless sufficient saving is accumulated in the form of bank deposits. Also, Shaw (1973) postulated that financial intermediaries encourage Investment and raise output growth through borrowing and lending. On the contrary, they hold that interest rate regulation usually leads to low and sometimes to negative real interest rate which discourages saving and consequently truncates potential Investment. Thus, Investment is limited as a result of low saving mobilization. The underlying assumption of the complementary hypothesis of McKinnon -Shaw is that savings is responsive to interest rate and as such higher savings rate following an increased interest rate would finance a higher level of Investment. Hence they submitted that when the financial sector is repressed, it only responds passively to the real sector, and opposite would be the case if the financial sector is liberated.

However, the separate and independent work of McKinnon (1973) and Shaw (1973) have come under serious attack from recent theoretical and empirical studies fundamentally over the causality between financial development and economic growth. Two major literatures are the pioneer divide of the evidence that dubbed the supply-leading hypothesis and the demand-following hypothesis. While other theorists that could not align with these strong theoretical divide especially researchers from development economics settled for a group referred in finance-growth literature as the Neo-Structuralist school.

The foundation of this argument was originally laid by Patrick (1966) and later embellished by McKinnon and Shaw (1973), Greenwood and Jovanovic (1990) etc. Patrick (1966) supported the demand-following view, though he noted that the phenomenon is not likely to be static throughout the different stages of development (Bakere and Awotundun, 2014). Patrick (1966) cited in Bakere and Awotundun (2014) noted that prior to sustainable industrial growth, supply-leading hypothesis/argument induces real innovative Investment but as the process of real growth takes place, the supply leading hypothesis gives way to demand following hypothesis.

The efficacy and anchor of the supply-leading hypothesis is predicated on some leading finance oriented reforms like the financial liberalization as advocated by McKinnon-Shaw (1973), an initiative which enhances the abilities of financial institution to mobilize Investment fund and the productive allocation of capital by observing side by side the supply of loanable fund with the demand for Investment fund at market determined interest rate (Nssanke, 1991). The supply-leading proponents therefore advocate that financial sector policies should be prioritized and an increased concern devoted to policy determinants of financial deepening as a mechanism for promoting growth.

It is important to note that for the Keynesians, there is another variable- marginal efficiency of capital, which determines Investment. This theoretical stance of the Keynesian is replete with implications in this context. First, it means that provided there is increased business confidence and prospects (in terms of marginal efficiency of Investment capital) among potential investors even if lending rate is high, it does not deter Investment. It therefore means that, if only government will create a favourable competitive business environment as suggested

by Agbaeze and Onwuka (2014), Adesagun (2014) etc, Investment will be greatly enhanced. Secondly, it implies that McKinnon-Shaw (1973) either coincidentally reasoned-alike with the Keynesian or leveraged on the wisdom of the Keynesian as a launching pad for their theoretical proposition that financial deepening spur real sector growth.

The proponents of demand-following see financial sector development as a consequence (a lagged response), rather than a cause of economic growth. Theoretical findings of the demand-following proponents like Lucas (1988), and Robinson (1954) admit that financial institutions provide an efficient means of mobilizing and allocating fund in the economy and have assisted in economic development growth process, but however they failed to perceive financial development as the cause of economic development. They unanimously hold that early effort geared towards financial development leads to dissipation of resources which could have been allocated to more useful purposes in the early stage of growth. They believe that as the economy advances, it will trickle down, stimulating an increased demand for financial services and assets thus leading to greater financial deepening.

More interesting is the line of argument of the Structuralist school which practically punctures the efficacy of the Mackinnon-Shaw's Supply-leading hypothesis especially in developing economies. They argue that in the presence of unorganized money market, the financial sector development as advocated by McKinnon-Shaw (1973), rather leads to reduction in Investment as the credit availability in the system would be near insufficient for the formal sector. Muellauer and Murphy (1993) in support of the stance of the Neo-Structuralist (against the McKinnon-Shaw's financial liberalization aimed at financial sector development) argued based on empirical findings that though financial liberalization relaxes credit constraint, the availability of borrowing alternatives increases and this might in the aggregate reduce rather than increase private savings for Investment.

## 2. Method

The Gregor-Hansen (1992) endogenous test of structural break and the supply-leading hypothesis was employed in building the model. The study also conducted the stationary test to guarantee a non- spurious result, the co-integration test to capture equilibrium long run relationship between the variables, and employed the error correction mechanism to reconcile the short behaviour of chosen variable with its long run behaviour. The causality was also conducted to clearly ascertain the causality between financial deepening and investment in Nigeria.

### 2.1 Model Specification

The general form of the model is given below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 Du + \dots \beta_n X_n + \mu_t \tag{1}$$

Where Y = Dependent Variable

$\beta_0$ = equation constant.

Du = Dummy variable

$\beta_1 \beta_2 \dots \beta_n$ = coefficient of explanatory variables.

$X_1 X_2 \dots X_n$ = explanatory variables.

$\mu_t$ = white noise error term.

The functional form of the model is:

**MODEL 1:**

$$INV_t = f(INV(-1), CPSY, RNT, SPR, BSP, REXCH, POSA, DU05, DU87) \tag{2}$$

**MODEL 11**

$$INV_t = f(INV(-1), M2Y, RNT, SPR, BSP, REXCH, POSA, DU05, DU87) \tag{3}$$

Where,

| | |
|---|---|
| $INV_t$ | Domestic Investment |
| $INV(-1)_t$ | Lag of Domestic Investment |
| CPSY | Private Sector Credit to GDP Ratio. |
| M2Y | Broad Money supply to GDP ratio |
| RNT n | Real Interest rate. |
| SPR | interest rate Spread. |

REXCH       Real Exchange Rate

BSP       Banking Spread

POSA       Political Stability.

DU87       Dummy Proxy for Financial Liberalization

Where 0 represent period of financial repression

      1 represent period of financial deregulation

DU05 Dummy Proxy for Consolidation Policy

Where 0 stands for period prior to consolidation

      1 for period after consolidation.

The econometric form of the model is expressed as:

**MODEL 1II**

$$INV_t = \alpha_0 + \alpha_1 INVt(-1) + \alpha_2 CPSY + \alpha_3 RNT + \alpha_4 SPR + \alpha_5 REXCH + \alpha_6 BSP + \alpha_7 POSA + \alpha_8 DU87 + \alpha_9 DU05 + v_t \quad (4)$$

**MODEL 1V**

$$INV_t = \alpha_0 + \alpha_1 INVt(-1) + \alpha_2 M2Y + \alpha_3 RNT + \alpha_4 SPR + \alpha_5 REXCH + \alpha_6 BSP + \alpha_7 POSA + \alpha_8 DU87 + \alpha_9 DU05 + v_t \quad (5)$$

The a priori expectations are $\alpha_1 > 0, \alpha_2 > 0, \alpha_3 > 0, \alpha_4 > 0, \alpha_5 > 0, \alpha_6 > 0, \alpha_7 > 0, \alpha_8 > 0, \alpha_9 > 0$.

*2.2 Causality Model*

On account of the first objective, the direction of causality was ascertained between investment and financial deepening. The granger causality model is depicted as:

MODEL V

$$INV_t = \sum a_i INV_{t-1} + \sum b_j CPS_{t-1} + \mu_{1t} \quad (6)$$

MODEL VI

$$CPS_t = \sum h_i CPS_{t-1} + \sum g_i INV_{t-1} + \mu_{2t} \quad (7)$$

$$INV_t = \sum f INV_{t-1} + \sum n_j M2Y_{t-1} + \mu_{1t} \quad (8)$$

$$M2Y_t = \sum k_i M2Y_{t-1} + \sum z_i INV_{t-1} + \mu_{2t} \quad (9)$$

The standard Granger Causality test procedure indicated in equation (6), (7), (8) and (9) is valid only for stationary series I(0), if the variable are individually non stationary but are co integrated, then the causality test uses the stationary differenced data with an error correction term ($ECM_{t-1}$) to test for direction of causality. Consequently, for testing for causality between the two bivariate variables $INV_t$ and $CPS_t$ and $INV_t$ and $M2Y_t$ we have;

MODEL VII

$$INV_t = \sum a_i INV_{t-1} + \sum b_j CPS_{t-1} + \partial ECM_{t-1} + \mu_{1t} \quad (10)$$

$$CPS_t = \sum h_i CPS_{t-1} + \sum g_i INV_{t-1} + \delta ECM_{t-1} + \mu_{2t} \quad (11)$$

MODEL VIII

$$INC_t = \sum f\hat{i} INV_{t-1} + \sum n_j M2Y_{t-1} + \partial ECM_{t-1} + \mu_{1t} \quad (12)$$

$$M2Y_t = \sum k_i M2Y_{t-1} + \sum z_i INV_{t-1} + \delta ECM_{t-1} + \mu_{2t} \quad (13)$$

The independent variable is said to granger cause the dependent variable if the ECM is negative and statistically significant or the summations of the coefficient of the lagged independent variable are jointly significant.

## 3. Results

Table 1. Augmented Dickey Fuller unit root result

| Variables | Level | Remark | 1st Difference | Remark |
|---|---|---|---|---|
| CPS | -2.334047 | Non-stationary | -6.537810 | Stationary |
| EXCHR | 0.278570 | Non-stationary | -4.016021 | Stationary |
| SPR | -1.576746 | Non-stationary | -6.865316 | Stationary |
| INV | 0.769273 | Non-stationary | -5.078078 | Stationary |
| BSP | -0.097491 | Non-stationary | -4.768249 | Stationary |

| RNT | 03.973591 | Non-stationary | -7.236932 | Stationary |
| M2Y | -1.761850 | Non-stationary | -6.37282 | Stationary |
| POSA | -0.690467 | Non-stationary | -6.480741 | Stationary |
| DU87 | -1.244756 | Non-stationary | -6.480741 | Stationary |

Critical value(s) at first difference: 1% = -3.5930; 5% = -2.9320; 10% = -2.6039

Source: Authors' Computation, 2014.

From the Augmented Dickey Fuller (ADF) unit root result presented in Table 1, all the variables were not stationary at level. They were not stationary because the critical value is greater than their estimated values. However the variables were stationary at first difference. This means that the variables are integrated of order one i.e. I (1).

*3.1 Co-Integration Result*

Table 2. First co integration result

Sample (adjusted): 1973- 2013

Included observations: 41 after adjustments

Series: INV CSPY EXCHR RNT SPR BSP POSA DU05 DU87 .

Lags interval (in first differences): 1 to 2

| Eigen value | Likelihood ratio | 5 percent critical value | Hypothesized number of CE(S) |
|---|---|---|---|
| 0.966580 | 536.4755 | 197.3709 | None * |
| 0.940622 | 397.1333 | 159.5297 | At most 1* |
| 0.886958 | 281.3559 | 125.6154 | At most 2* |
| 0.811473 | 191.9759 | 95.75366 | At most 3* |
| 0.683485 | 123.5669 | 69.81889 | At most 4* |
| 0.630503 | 76.40104 | 47.85613 | At most 5* |
| 0.354784 | 35.58088 | 29.79707 | At most 6 * |
| 0.342733 | 17.61591 | 15.49471 | At most 7 * |
| 0.009942 | 0.409672 | 3.841466 | At most 8 * |

Trace test indicates 8 cointegrating eqn(s) at the 0.05 level;

* denotes rejection of the hypothesis at the 0.05 level;

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

Source: Authors computation, 2014.

Table 3. Second co integration result

Sample (adjusted): 1973 2013

Included observations: 41 after adjustments

Series: INV M2Y EXCHR RNT SPR BSP POSA DU05 DU87 .

Lags interval (in first differences): 1 to 2

| Eigen value | Likelihood ratio | 5 percent critical value | Hypothesized number of CE(S) |
|---|---|---|---|
| 0.995943 | 699.6746 | 197.3709 | None * |
| 0.990003 | 473.8791 | 159.5297 | At most 1* |
| 0.916283 | 285.0564 | 125.6154 | At most 2* |
| 0.843300 | 183.3635 | 95.75366 | At most 3* |
| 0.666022 | 107.3733 | 69.81889 | At most 4* |
| 0.543290 | 62.40943 | 47.85613 | At most 5* |
| 0.312964 | 30.27746 | 29.79707 | At most 6 * |
| 0.266526 | 14.88737 | 15.49471 | At most 7 * |
| 0.051756 | 2.178884 | 3.841466 | At most 8 * |

Trace test indicates 7 Co integrating eqn(s) at the 0.05 level;

* denotes rejection of the hypothesis at the 0.05 level;

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

Source: Authors computation, 2014.

According to the Johansen co integrating result presented in tables 2 and 3, the likelihood ratio reveal that there are eight and seven respective co integrating equations in the two models co integration result. This means that the long run relationship exists among the variables adopted in this study.

3.1.1 First Granger Causality Result

Table 4. Pairwise granger causality test result

| Null hypothesis | OBS | F- statistic | Prob |
| --- | --- | --- | --- |
| CPS does not granger cause INV | 42 | 13.6877 | 4. E-05 |
| INV does not granger cause CPS | | 0.79861 | 0.0015 |

3.1.2 Second Granger Causality Result

Table 5. Pairwise granger causality test result

| Null hypothesis | OBS | F- statistic | Prob |
| --- | --- | --- | --- |
| M2Y does not granger cause INV | 42 | 1.89000 | 0.1654 |
| INV does not granger cause M2Y | | 0.73316 | 0.4872 |

The result of the causality test in tables 4 and 5 suggest that while the second causality result showed no evidence of causality between financial deepening and investment, the first causality result suggests a unidirectional causality running from financial deepening to Domestic Investment in Nigeria. This means that the volume of domestic Investment is dependent upon the amount of financial deepening, affirming the supply-leading hypothesis adopted for the study.

Table 6. First parsimonious results

Dependent Variable: LOG (INV).

| Variable | Coefficients | Std error | t- statistics | Prob |
| --- | --- | --- | --- | --- |
| D(LOG(INV(-1) | 0.222046 | 0.113950 | 1.948627 | 0.0828 |
| D(CPSY(-1)) | 0.046171 | 0.018781 | 2.458381 | 0.0097 |
| D(EXCHR) | -0.458364 | 0.280693 | -1.632971 | 0.1120 |
| D(BSP(-1)) | 0.515059 | 0.498116 | 1.034016 | 0.3086 |
| D(SPR) | -0.054149 | 0.020362 | -2.659344 | 0.0120 |
| DU05 | 0.322618 | 0.164213 | 1.964627 | 0.0579 |
| POSA | 0.251167 | 0.166750 | 1.506250 | 0.1415 |
| ECM1(-1) | -0.655194 | 0.103257 | -6.345289 | 0.0000 |
| C | 0.474562 | 0.136202 | 3.484239 | 0.0014 |

R- Squared = 0.609399

Adsjusted R-Squared = 0.514708

F- Statistics = 6.435653

Durbin Watson Statistics = 2.352688

Source: Authors Computation, 2014.

Table 7. Second parsimonious results

Dependent Variable: LOG (INV).

| Variable | Coefficients | Std error | t- statistics | Prob |
| --- | --- | --- | --- | --- |
| D(LOG(INV(-1) | 0.204611 | 0.104444 | 1.959051 | 0.0005 |
| D(M2Y(-1)) | 2.592195 | 0.991142 | 2.615363 | 0.0133 |
| D(EXCHR) | -0.235130 | 0.262770 | -0.894813 | 0.3774 |
| DLBSP | 0.902451 | 0.790174 | 1.142091 | 0.2616 |
| D(SPR) | -0.046775 | 0.019499 | -2.398853 | 0.0223 |
| DU05 | 0.270110 | 0.155056 | 1.742016 | 0.0908 |

| | | | | |
|---|---|---|---|---|
| POSA | 0.283927 | 0.158372 | 1.792792 | 0.0822 |
| ECM2(-1) | -0.650589 | 0.090618 | -7.179443 | 0.0000 |
| C | 0.951974 | 0.246422 | 3.863190 | 0.0005 |

R- Squared = 0.674545

Adsjusted R-Squared = 0.595647

F- Statistics = 8.549555

Durbin Watson Statistics = 2.246366

Source: Authors Computation, 2014.

According to the parsimonious result in table 6, all the variables conform to a priori expectation both in sign and magnitude. This indicates that a one percent absolute change in financial deepening, lag of banking spread and interest rate spread would result to an average relative increase of 4.62 percent, 51.51 percent and 5.4 percent in domestic investment in Nigeria. One percent relative change in the lag of investment will result in 0.22 percent relative change in domestic investment. The political stability entrenched by democratic dispensation enabled a statistical deviation of 25.11 percent change in investment over the benchmark category- the era prior to democratic rule. Also an absolute depreciation in a one year lag of exchange rate would lead to an average relative reduction of 45.84 percent in domestic investment. The result also reveals a statistical deviation of the era of consolidation policy from the benchmark category – the era prior to the consolidation policy; hence the introduction of the policy contributed to a relative change of 32.26 percent in domestic investment in Nigeria.

The estimated result shows that one year lag of investment, financial deepening, spread of interest and dummy proxy of structural break are statistically significant at 5% and 10% level. While the lagged financial deepening and spread of interest rate are statistically significant at 5 percent level, lag of investment and dummy proxy for consolidation policy are statistically significant at 10 percent significance level. This is because their calculated t-value were greater than the tabulated value of 2.021 (5 percent) and 1.684 (10 percent) in absolute term. However, other variables such as exchange rate, lag of banking spread and political stability were not statistically significant at both the 5 percent and 10 percent level of significance. This is because of the fact that their calculated t- statistics is less than the tabulated t- statistics.

The F-statistic depicts that the overall model is significant and can be relied on for forcasting the future domestic investment in Nigeria. This is possible since our calculated F value of 6.435653 is greater than the tabulated F-value of 2.34. The adjusted R squared values of 0.514708 shows that about 51.47 percent of the total variation in Domestic Investment is explained by the independent variables leaving the remaining 58.53 unexplained by other factors that affect investment but are not captured in our model estimate. Hence, we conclude that are model have a fairly good fit.

The Durbin Watson statistics estimated value of 2.352688 fell on the inconclusive region, hence we cannot conclude on the existence or non -existence of the autocorrelation in our estimated model result. The error correction mechanism value of -0.655194 shows that about 65.52 percent of the short run deviation is corrected in the long run. This implies that the speed of adjustment is fairly high.

From the second parsimonious result on table 7, all the variables are consistent with a priori expectation. The result shows that a percent absolute increase in financial deepening, spread of interest rate, dummy proxy consolidation policy and political stability would result to a 259.2 percent, 4.68 percent, 27.01 percent and 28.39 percent average relative increase in domestic investment. One percent absolute depreciation in exchange rate will lead to an average relative reduction of 23.51 percent in domestic investment. The result also shows that a relative change of lag of investment and banking spread would result to an average relative change of 0.20 and 0.90 percent respectively in domestic investment.

The model result reveal that lag of investment , financial deepening, spread of interest, dummy proxy for consolidation policy, political stability are statistically significant. While lag of financial deepening and spread of interest are significant at 5 percent significant level, lag of investment, dummy proxy for consolidation policy and political stability are significant at 10 percent significant level. This is because their calculated t-value were all greater than the tabulated t-value of 2.021 (5 percent) and 1.684 (10 percent) respectively. Variables like exchange rate, banking spread were not statistically significant at both the 5 percent and 10 percent level of significance because their calculated t–value is less than the tabulated t-value.

The F statistics depict that the overall model is significant and can be relied on for forcasting the future domestic investment in Nigeria. This is possible since our calculated F statistic value (8.549) is greater than the tabulated f- statistics value of 2.34. The adjusted R squared value of 0.5966 shows that about 59.66 percent variation in

domestic investment is explained by independent variable leaving the remaining 41.34 percent for other factors which affect investment but not captured in our model. Hence, we conclude that our model have a good fit.

The Durbin-Watson statistics estimated value of 2.246366 fell on the inconclusive region, hence we cannot conclude on the existence and/or non-existence of autocorrelation in the estimated result. The ECM value of -0.650589, shows that about 65.06 percent of the short run deviation is corrected in the long run. This shows that the speed of adjustment is fairly high.

## 4. Discussion

An evaluation of the two parsimonious result showed that lag of investment and financial deepening conform to a priori expectation. They also impacted significantly on domestic investment in Nigeria. Other control variables in the model like the spread of interest and dummy proxy for consolidation policy were statistically significant for both models. Exchange rate, banking spread, political stability (for model one result) showed statistical insignificance. However, the statistical significance of political stability in second parsimonious result could be attributed to relative political stability entrenched by the current democratic dispensation. The weak statistical significance of the dummy proxy consolidation policy could be attributed on policy inconsistencies and the inability of the central bank of Nigeria to ensure that operators in the banking sector of the economy adhere strictly to the rule and regulation guiding operation in the market. The statistical insignificance of the exchange rate could be attributed to the weak external sector of the economy caused by the mono-cultural nature of the Nigerian economy; a development which exert unprecedented pressure on the nation's foreign reserve, and the monetary authorities always at the mercy of adopting remedial policy measures aimed at protecting the domestic currency in the exchange rate market.

Worthy of note is the spread of interest rate which though statistically significant but negatively signed in both models result. This coincides with the submission of Eragha (2010) and more so affirms the wide divergence of the lending rate from the deposit rate in the trend analysis as shown in the appendix. This finding portends grave economic implications as it threatened the prospect of investment in the economy. This is because with its statistical significance and wide divergence, it means that while savers are discouraged with low deposit rate, the investors are scared with high lending rate. The investment prospect is further made unrealistic by the blunt refusal of the financial institution to lend credit to the private sector due to risk of default. Little wonder why the financial deepening from the first parsimonious result showed weak magnitude though statistical significant unlike the broad money supply to GDP ratio in the second parsimonious result.

The outcome of Granger Causality result implies that there exists a unidirectional causality between ratio of private sector credit to GDP (financial deepening) and domestic investment in Nigeria within the period of the study. The relatively high speed of adjustment reveals that the factors considered in the study are well specified and very vital in determining the Investment behaviour in Nigeria. The weak statistical significance of the dummy proxy for consolidation policy in both parsimonious result calls for increased government effort to harness the full potential of the policy reforms in the financial sector of the economy.

## 5. Conclusion

In conclusion, the paper sought to investigate the impact of financial deepening on investment in Nigeria. It adopted the Gregor-Hansen methodology and the supply leading hypothesis in building the model. The empirical analysis revealed that all the variables were stationary at first difference which suggests that there exists a long run relationship between investment and the explanatory variables. The finding of the study showed that lag of investment, financial deepening, interest rate spread, dummy proxy for consolidation policy and political stability in the second parsimonious result are statistical significant at 5% and 10% level. We also discovered that while lag of investment, financial deepening, dummy proxy for consolidation policy and interest rate spread were statistically significant at 5% and 10% percent level, the exchange rate, banking spread and political stability in the first parsimonious result was not impacting significantly on Investment in Nigeria. Causality test showed unidirectional causality running from financial deepening to domestic investment which affirmed the theoretical anchor of the study. The explanatory power of the model is reasonably high in both models, meaning that the explanatory variables adopted in the study are relevant in explaining the dynamics of Investment behaviour in Nigeria.

We also discovered that the speed of adjustment is fairly high within the period of the study. The policy implication of the parsimonious ECM results is that government through its agencies should target lag of investment, financial deepening, spread of interest through her monetary cum financial policies as a veritable instrument to drive investment. For the consolidation policy and political stability that were found to be statically significant, though weak, the government should predicate future reforms on how best to achieve efficiency in

resource allocation, minimize bureaucratic cum market failure and impunity in the violation of the regulatory guideline in the financial sector of the economy. To this end the monetary authorities should re-double its effort to see that the positive ideal of some of these radical financial sector reforms see the light of the day.

Furthermore, Developing the financial sector means improving the financial structures to guarantee efficient delivery of financial services for private sector investment in order to attract more private sector participation thereby creating job and improving the quality of life of the people. Previous governments have initiated several policies and programmes aimed at the development of the entrepreneurial spirit in the real sector of the economy through their support for the establishment of small and medium scale enterprise. However, this study does not capture this subjective aspect of financial deepening due to dearth of data on entrepreneurship development within the country as most research in this area are majorly restricted to micro/ firm level analysis. Policy makers are encouraged to initiate policies that will promote the development of the financial and capital markets, eliminate obstacles that hinder growth and deepen the robustness and competitiveness of the banking system. They should introduce measures that increase accountability and autonomy of financial institution as well as restructuring and recapitalizing of financial institutions.

## References

Adam, M. A. (2011). Financial Openness Induced Growth and Poverty Reduction. *The International Journal of Applied Economics and Finance, 5*(1), 75-86. http://dx.doi.org/10.3923/ijaef.2011.75.86

Adegbite, E. O. (2004). Financial Sector Reform and Economic Development in Nigeria: The Role of Management. *A Paper Delivered at the Inuagural National Conference of the Academy of Management of Nigeria*, Abuja Nov 22-23.

Adekunle, O. A., Salami, G. O., & Adedipe, O. A. (2013). Impact of Financial Sector Development on the Nigerian Economic Growth. *American Journal of Business and Management, 2*(4), 347-356.

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

Adesagun, O. (2014). Effects of Financial Sector Liberalization on Bank Performance in Nigeria: 1971-2011. *British Journal of Marketing Studies, 2*(1), 59-78.

Agbaeze, E. K., & Onwuka, I. O. (2014). Financial liberalization and Investments–The Nigeria Experience. *Journal of Research in Economics and International Finance (JREIF), 3*(1), 12-24.

Amassoma, J. D., Nwosu, P. I., & Ofere, A. F. (2011). The Nexus of Interest RTE Deregulation, Lending Rate and Agricultural Productivity in Nigeria. *Current Research Journal of Economic Theory*.

Anyanwu, C. M. (2010). An Overview of Current Banking Sector Reforms and the Real Sector of the Nigerian Economy. *Central Bank of Nigeria Economic and Financial Review December 2010.*

Ardic, O. P., & Damar, H. E. (2006). Financial Sector Depending and Economic Growth: Evidence from Turkey. Retrieved from http://www.google.com.ng

Azege, M. (2004). *Financial Intermediation and Economic Growth: The Nigeria experience.* The University of Lagos.

Bakare, A. O., Awotundun, A. D., & Olawale, R. S. (2014). Does financial structure development drive economic performance? Theoretical and empirical evidence from Nigeria. *European Journal of Business and Social Sciences, 2*(11), 179-198.

Bencivenga, V. R., & Smith, B. D. (1991). Financial intermediation and endogenous growth. *Review of Economic Studies, 58*(2), 195-209. http://dx.doi.org/10.2307/2297964

CBN. (1993). Central Bank of Nigeria Economic and Financial Review.

Chernery. (1952). Over Capacity and Accelerator Principle. *Econometrica, 20*, 1-28. http://dx.doi.org/10.2307/1907804

Darrat, A. F., & AL-Sowaidi, S. S. (2010). Evidence from a fast growth emerging economy. *Journal of Economic and International Financial, 2*(2), 28-35. Retrieved from http://www.academicjournal.org

Darrat, A. F. (1999). Are financial deepening and Ecconomic Growth Causally related? Another look at Evidence. *International Economic Journal, 13*(3), 19-35.

Dehesa, M., Druck, P., & Plekhanov, A. (2007). *Relative Price Stability, Creditor Rights, and Financial Deepening*. WP/07/139 Western Hemisphere Department IMF Working Paper WP/07/139

Eregha, P. B. (2010). Interest Rate Variation and Investment Determination in Nigeria. *International Business Management, 4*(2), 41-46. http://dx.doi.org/10.3923/ibm.2010.41.46

Greenwood, J., & Jovanovic, B. (1990). Financial Development Hrowth and the Distribution of income. *Journal of Political Economic, 98*(5). http://dx.doi.org/10.1086/261720

Iganiga, G. O. (2010). *The Dynamics of the Nigerian Financial System: Products, Reforms and Structure.* Kaduna: Amfitop Books.

Jarque, C. M., & Bera, A. K. (1987). A test for Normality Observation and Regression Residual. *International Statistical Review, 55*, 163-172. http://dx.doi.org/10.2307/1403192

Johansen, S., & Juselius, K. (1990). Maximum likelihood Estimation and Inference on Co integration with Application on the Demand for Money. *Oxford Bulletin of Economics and Statistics, 52*, 169-210. http://dx.doi.org/10.1111/j.1468-0084.1990.mp52002003.x

Johansen, S. (1988). Statistical Analysis of Co Integration Vector. *Journal of Economic Dynamics and Control, 12*, 231-254. http://dx.doi.org/10.1016/0165-1889(88)90041-3

Khalid, A. M. (2007). Macroeconomic Effects of Financial Liberalization in Pakistan: An Assessment. *Pakistan Institute of Development Economics.*

Lucas, R. E. (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics, 22*(1), 3-42. http://dx.doi.org/10.1016/0304-3932(88)90168-7

McKinnon, R. I. (1973). *Money and Capital in Economic Development.* Washington, D. C.: The brooking Institution

Muellauer, J., & Murphy, A. (1993). *Income expectations, wealth and demography in the aggregate UK consumption function.* Paper Presented to the HM Treasury Academic Panel Mimeo.

Ndebbio, J. E. U. (2004). Financial Deepening, Economic Growth and Development, Evidence from selected Sub-Sahara African Countries. *African Economic Research Consortium (AERC) Research Paper 142,* Nairobi , August.

Ndukumana, L. (2013). Financial development, financial structure and Domestic Investment: International Evidence. *Massacluisett JEL Classification,* E22-E44.

Nssanke, M. (1991). *Mobilizing Domestic Saving for Africa development and diversification: An overview.* International Economic Centre, Oxford, university of Oxford.

Nzotta, S. M., & Okereke, E. J. (2009). Financial Depending and Economic Development in Nigeria: An Empirical Investigation. *African Journal of Accounting, Economics, Finance and Banking Research, 5*(5), 52-66.

Obamuyi, T. M. (2008). An Investigation of Relationship between Interest Rate and Economic Growth in Nigeria (1970-2006). *Journal of Economic International Finance, 1*(4), 093-098.

Odeniran, S. O., & Udeaja, E. A. (2010). Financial Sector development and economic growth: Empirical evidence from Nigeria. *Central Bank of Nigeria Economical an Financial Review,* Volume 48/3 Sept 2010.

Odhiambho, N. M. (2004). *Financial Development and Financial Growth in South Africa.* Development of economics, university of Fort Have, South Africa.

Odhiambho, N. M. (2011). Financial intermediaries versus financial market: A South African experience. *International Business and Economic Journal, 10*(2), 77-84.

Ohwofasa, B. O., & Aiyedogbon, J. O. (2013). Financial Deepening and Economic Growth in Nigeria: An empirical investigation. *Journal of Economic and Development Studies, 1*(1), June 2013.

Okereke, S. O. (2011). *An Econometric Analysis of the Impact of Financial deepening On Aggregate Welfare in Nigeria.* An M.Sc Thesis Presented to the Department of Economics, University of Nigeria, Nsukka (November, 2011).

Okoli, M. N. (2012). Evaluating the Nexus Between Financial Deepening And Stock Market In Nigeria. *European Scientific Journal, 8*(15).

Olofin, S., & Afangideh, U. J. (2010). *Financial Structure and Economic Growth in Nigeria: A macro-econometric Approach* (pp. 2-24). Retrieved from http://www.africametrics.org

Omar, H. I., Dahou, K., & Pfister, M. (2009). *Deepening African Financial Markets For Growth And Investment.*

NEPAD-OECD Africa Investment Initiative on 11-12.

Onwumere, J. U. J., Onudugo, U., & Imo, G. I. (2013). Financial Structure and Economic Growth: Evidence from Nigeria. *Global Journal for Management and Business Research Finance, 13*(5).

Onwumere, J. U. J., Ibe, I. G., Ozoh, F. O., & Mounanu, O. (2008). The Impact of Financial Deepening on Economic Growth: Evidence from Nigeria. *Research Journal of Finance and Accounting, 3*(10).

Oshikoya, T. W. (1992). Interest Rate Liberalization, Savings, Investment and Growth: The Case of Kenya. *Savings and Development, 16*(3), 305-320.

Patrick, H. (1966). Financial Development and Economic Growth in Underdevelopment Countries: Economic Development and Cultural Change. http://dx.doi.org/10.1086/450153

Robinson, J. (1954). *The generalization of the general theory of interest rate and other Essay*. London Macmillan

Schmidt-Hebbel, K., & Serven, L. (2002). Financial liberalization, savings and growth. Proceedings of the Confernce on Macroeconomic Stability. *Financial Markets and Economic Development Mexico*, Nov. 12-13, Mexico, pp. 1-31.

Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle.* Cambridge, MA: Harvard University Press.

Shaw, E. S. (1973). *Financial Deepening in Economic Development.* New York, USA: Oxford University Press.

Shittu, A. I. (2012). Financial Intermediation and Economic Growth in Nigeria. *British Journal of Art and Social Science, 2*(2).

Sulaiman, L. A., Oke, M. O., & Azeez, B. A. (2012). Effect of financial liberalization on economic growth of developing: The Nigerian evidence. *Journal of Economics and Management Science, 1*(12), 16-28.

Torruam, J. T., Chiawa, M. A., & Abur, C. C. (2013). Financial Deepening and Economic Growth in Nigeria: An Application of Cointegration and Causality Analysis. *3rd International Conference on Intelligent Computational Systems* (ICICS'2013) April 29-30, Singapore.

Toure, D. (2014). *UN Advocates safety net for infomal sector.* A report (vanguard).

Ünalmiş, D. (2002). *The Causality between Financial Development and Economic Growth: The Case of Turkey.* Research Department, Central Bank of the Republic of Turkey, 06100, Ankara.

**Copyrights**