Financial Intermediation and Private Sector Investment in Nigeria

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Abstract
The symbiotic relationship between adequate funds to real sector and speed of economic growth is not in contention. Consequently, the successive Nigerian governments have made several policy attempts in the last three decades at ensuring that funds are channeled to savings deficits. These efforts notwithstanding, the economy at a glance, seems not to have made remarkable progress. What is more, there is dearth of empirical studies specifically targeted at assessing the specific contribution of financial intermediation to economic growth in Nigeria. It is this gap that this study sought to fill. To realize the goal of this study, we adopted Private Investment (PRIVET) as the regressand and Financial Savings as a ratio of Real Gross Domestic Product (FS/RGDP), Credit Extended to Private Sector by deposit money banks (CEPS), Prime Lending Rate (PLR) & Real Gross Domestic Product (RGDP) as the regressors. The study employed econometric method to construct a multiple regression model to analyze the long-run relationships among variables. The results showed that three out of the five coefficients are statistically significant at 5% level. CEPS and PLR conformed to the theoretically expected signs, while FS/RGDP, RGDP and DUM did not. Heteroscedasticity test carried out suggests that OLS assumption of constant variances over time was not violated. Ramsey Reset test indicates that the model is well specified. The findings indicate that although some progress is noted, much is remained to be done to ensure enabling environment conducive for investment growth and expansion of domestic capacity

Keywords: Private Sector Investment, Prime Lending Rate, Financial Intermediation, financial system, financial institutions, multiple regression model.

1.0 BACKGROUND TO THE STUDY
The relationship between development in financial sector and investment growth, in all economies, has been the major subject of literature in the recent years. Lack of efficient financial intermediation especially in developing countries is widely evidenced by the mismatch between savings and investment. It is however obvious that the need for investment in the real sector of these countries cannot be disputed. This was addressed in the past, for the purchase of capital, through the introduction of development financial institutions and other such vehicles by providing credit below market rates.

One of the most important creations of modern society is the financial system and the primary task of the financial system is to move funds from surplus spending economic units to deficit spending economic units in order to produce goods and services and as well to make investment in new equipment and facilities so as to stimulate the growth of the economy and improve the standard of living of citizens. As the economy grows the financial system according to Ochejele (1999) becomes increasingly more complex and its structure more sophisticated. The financial system of any nation has a functional relationship with the size of her economy. A growing economy has to place more responsibilities on the financial sector in order to mobilize the needed capital to facilitate production and generate income and employment. On the contrary, an economy that does not experience growth on sustained basis is likely to have a very passive financial sector as there seemed to be no incentives in place for investment. Through the process of growth as posits by Oke (1989), the financial system offers a wide range of portfolio options for savers and issuable instruments for investors, a function often referred to as financial intermediation.

Increased level of integration of the Nigerian financial system to the global system and rapid globalisation of the financial markets has significantly generated interest on the level of financial deepening in the economy. The financial system can be said to be comprised of various institutions, instruments and regulators. According to the Central Bank of Nigeria (1993) the financial system refers to the set of rules and regulations and the aggregation of financial arrangements, institutions, agents, that interact with each other and the rest of the world to foster economic growth and development. Nzotta (2004) opines that the financial system serves as a catalyst to
economic development through various institutional structures. It seeks out and attracts resources from the surplus spending units and idle funds and allocates same to entrepreneurs, businesses, households and government for investments projects and other purposes with a view of returns. It plays a key role in the mobilisation and allocation of savings for productive use and also in the provision of structures for monetary management and the basis for managing liquidity in the system. It also assists in the reduction of risks faced by the economic agents in their productive processes and in the improvement of portfolio diversification and the insulation of the economy from the vicissitudes of international economic changes. In addition, the financial system provides linkages for the various sectors of the economy and encourages a high level of economies of scale and specialization of expertise.) The financial system additionally provides the necessary environment, as further contended by Nzotta (2004), for the implementation of various economic policies of the government which is intended to achieve non-inflationary growth, exchange rate stability, balance of payments equilibrium foreign exchange management and high levels of employment.

The Nigerian financial system can certainly be broadly divided into two sub-sectors, which are the formal and informal sectors. The informal sector has no formalised institutional framework, no formal structure of rates and comprises the local money lenders, thrifts, savings and loans associations and all forms of ‘isusu’ associations. This sector according to Olofin and Afandigeh (2008) is poorly developed in the less developed countries including Nigeria, and is limited in reach and not integrated into the formal financial system. It exact size and impact on the economy remain unknown and a matter of speculation as there are no universal parameter for measurement. The formal sector, on the other hand, could be clearly distinguished into the money and capital market institutions. The money market is the short-term end of the market and institutions here deal on short term instruments and funds. The capital market encompasses the institutions that deal on long-term funds and securities. Following the introduction of Structural Adjustment Programme (SAP) in the 1980s with the liberalisation of licensing of banks, the banking sector began to exert considerable influence on the savings–investment processes in order to accelerate the rate of economic growth, economic stability and poverty reduction. Towards achieving these goals, the soundness of intermediation should be deemed as important as its volume, hence the need to have an efficient financial system which stands to intermediate between the demanders and suppliers of investment funds.

It is against this background that the research seeks to provide answers to the following questions. (i) What role has financial intermediation played on investment growth in Nigeria? (ii) Do reforms in financial sector enhance the level of domestic investment in Nigeria? (iii) What is the causal link between financial intermediation and investment growth in Nigeria? Informed by the questions is the overarching objective of this study is to determine the magnitude of impact of financial intermediation on economic growth in Nigeria. More specifically, the study using data from 1980 to 2010 intends to determine the impact of financial intermediation on investment growth in Nigeria; to highlight, if any, significant impact of reforms in financial sector on the level of domestic investment in Nigeria, and to examine the policy implications of such impact on Nigerian economy.

2.0 LITERATURE REVIEW

2.1 Theory of Financial Intermediation

The general aim of financial sector is inter-temporal and interpersonal transfer of resources (Winkler 1998). Financial sector specifically as contend by Rajan & Zingales (1998) help firms to overcome the problems of moral hazard and adverse selection and this reduces the costs of external financing; as well as the transaction costs in general (Levine 1997). The theory of financial intermediation was first formalized in the works of Goldsmith (1969), Shaw (1973) and Mckinnon (1973), who see financial markets (both money and capital markets) playing a pivotal role in economic development, attributing the differences in economic growth across countries to the quantity and quality of services provided by financial institutions. Supporting this view is the result of a research by Nwaogwugwu, (2008) and Dabwor, (2009) on the Nigerian stock market development and economic growth, the causal linkage. However, this contrasts with Robinson (1952), who argued that “financial markets are essentially hand maidens to domestic industry, and respond passively to other factors that produce cross–country differences in growth. Moreover there is general tendency for supply of finance to move along with the demand for it. The same impulse within an economy, which set enterprises on foot, makes owners of wealth, venturesome and when a strong impulse to invest is fettered by lack of finance, devices are invented to release it. The Robinson school of thought therefore believes that economic growth will bring about the expansion of the financial sector.

Goldsmith (1969) attributed the direct correlation between the level of real per capita GNP and financial development to the positive effect that financial development has on encouraging more efficient use of the capital stock. In addition, the process of growth has feedback effects on financial markets by creating incentives for further financial development. Mckinnon (1973) in his thesis argued that there is a complimentary
relationship between physical capital and money that is reflected in money demand. This complimentarity relationship according to McKinnon (1973) links the demand for money directly with the process of physical capital accumulation mainly because the conditions of money supply have a first order impact on decision to save and invest. Debt intermediation hypothesis was proposed by Shaw (1973), whereby expanded financial intermediation between the savers and investors resulting from financial liberalisation (higher real interest rates) and development increase the incentive to save and invest, stimulates investments due to an increase supply of credit, and raises the average efficiency of investment. This view stresses the importance of free entry into and competition within the financial markets as prerequisites for successful financial intermediation.

Structural problems such as market inefficiencies as the principal cause for economic backwardness of developing countries have been emphasized by the structuralist school of thought. They criticized the market clearing assumptions implicit in the financial liberalization school, especially the assumption that higher interest rates attract more savings into the formal financial sector (Van Wijnbergen, 1982 and 1983). Moreover, Van Wijnbergen (1982 and 1983) argued that it could very well be the case that informal markets will provide more financial intermediation. Since institutions in this sector are not subject to reserve requirements and other regulations that affect financial institution in the formal sector. They also stressed that in the event that informal sector agents substitute their deposits for that in the formal sector due to high interest rates, the unexpected consequence will be an adverse effect on financial intermediation and economic growth.

There are also several literature reviews on the relationship between finance and economic growth: Gertler (1988), Pagano (1993), Levine (1997; 2005), Trew (2006), and Demirgüç-Kunt and Levine (2008). This paper is distinct from previous literature reviews because it is organized by what seem to be the most important, usually unresolved, issues in the finance and growth literature.

The positive effect of financial sector development on economic growth is modelled with information gathering, resource allocation and rising liquidity (Greenwood, Jovanovich 1990), rising productivity (King, Levine 1993a), reducing of monitoring costs (Diamond 1984, Boot, Thakor 1997, Holmström, Tirole 1997, Blackburn, Hung 1999). In Greenwood and Jovanovich model financial intermediaries help agents to choose projects with higher returns. Without financial intermediaries agents could not invest in these projects because of the lack of the information and low liquidity of the project (Greenwood, Jovanovich 1990). Schumpeter’s (1934) argument focuses on the ability of banks to allocate savings more effectively. Goldsmith (1969), McKinnon (1973) and Shaw (1973) emphasize the role of financial intermediation in supplying the capital accumulation required in economic growth; by lowering financial market frictions, domestic savings are increased and foreign capital is attracted.

Williams and Mahar (1998) arguing along the lines of McKinnon and Shaw maintain that if the financial sector is free, it can provide the necessary information for economic growth and development. They argued that there are six kinds of reforms that need to be put in place in order to fill a repressed financial system, so that it can take the initiative to pull up the real sector through investment. These six reforms are: (i) the deregulation/liberalization of interest rates; (ii) removal of credit controls; (iii) relaxation of entry-rules into the financial sector especially the banking subsector; (iv) bank autonomy/which frees the banks from bureaucratic controls; (v) privatizing the ownership of banks; and (vi) deregulating international capital flows.

The private sector credit as a ratio of GDP and financial savings as a ratio to GDP are commonly used as indicators of financial stability (Easterly and Rebelo, 1993; Fischer, 1993; Allen and Ndikumana, 1998 and Levine et al 2000). Baldwin (1991) identifies five main channels, which foster economic efficiency in an economic and monetary union and consequently may have beneficial effects on output growth. These are: (i) Elimination of transaction costs; (ii) Improved allocation of market capital; (iii) Intensified cross-border competitive pressures; (iv) Higher efficiency of corporate ownership; and (v) Increased output as a result of reduced and converged inflation rates.

2.2 An Overview of Nigeria’s Financial Sector

Nigeria like other African countries was faced with a series of economic problem. Some of these were high inflation and unemployment, increasing poverty, low economic growth, high fiscal deficits, and high balance of payment deficits, financial sector repression and worsening terms of trade. The necessary conditions for growth and efficient economic management prompted the need for adoption of a consistent, appropriate macroeconomic policy framework and the existence of high quality institutions. The introduction of the Structural Adjustment Programme (SAP) in July 1986 was an effort to set the macroeconomic policy framework right. The major financial sector reform policies implemented were the deregulation of the interest rates, exchange rate and the liberalization of entry and exit into banking business. Also there was the establishment of the NDIC, strengthening the regulatory and supervisory institutions etc. Even though some positive effects in the growth of financial institutions and financial instruments were recorded during the SAP-era, the systemic risks and vulnerability of the institutions became higher.

However, in July 2004, the Soludo reforms came in when 89 banks were forced to emerge forming 25
universal banks. This was further reduced to 24 banks at the end of December 2007. The two major elements of the reform agenda were the requirement for Nigerian banks to increase their shareholders funds to minimum of N25billion by the end of December 2005 and consolidation through Mergers and Acquisition. Insurance companies were equally mandated to increase their shareholders funds by December 2007 to N10billion for re-insurers, N3billion for general insurers and N2billion for life insurer’s operators. This exercise has brought about a reduction in the number of insurance companies from 103 to 71.

According to Soludo (2008), banking services are available to about 40 percent of the population who do not have access to formal finance and are forced to rely on a narrow range of some risky and expensive informal services which constraints their ability to participate fully in markets to increase their income and contribute to economic growth. More so, total bank credit to the private sector is not increasing and a few small and medium enterprises obtain services from the money deposit banks. There is a concern issue that the recent financial sector reform in Nigeria will have a similar effect with that of deregulation period which made commercial bank accounts inaccessible to most Nigerians. The reform has failed to recognize the lower strata of the society. There is still high cost of capital (high interest rates) and existing anomalies in lending for investment in agricultural production. While the cost of raising funds through the money market is high, there is this existing anomaly which relates to credit availability, disbursement of loans as well as actual disbursement falling short of loan approval, Aderibigbe (2005). With this trend of events in the system there is then a growing concern whether financial intermediation in Nigeria which has heightened with the consolidation and recapitalization is having a disproportionate beneficial impact on economic growth.

The system has undergone significant changes, in recent time, in terms of the policy environment, number of institutions, ownership structure, size and scope of markets, as well as in the regulatory framework. However, in spite of the far-reaching reforms of the past two decades, the Nigerian financial system is yet to be in a position to fulfill its potential as an engine of economic growth and development. The financial system is relatively superficial and the apparent diversified nature of the financial system is suspicious. This is because although a wide variety of financial institutions and markets exist, deposit money banks overwhelmingly dominate the financial sector and traditional bank deposits represent the major forms of financial saving. More so, challenges are still prevalent in both capital market and money market as policy environment is still plagued by incessant reversals.

In the light of these developments, the key questions that are begging for answers in respect of the relationship between financial intermediation and growth: How effective have policies aimed at channeling funds to the growth sectors been? How can investment funds be effectively and properly channeled into deficits from surplus units? How has financial intermediation in Nigeria contributed to investment growth?

3.0 MODEL SPECIFICATION

This model is specified in order to capture the research objectives of the model. This research work adopted one model for the research objectives. It employed a multiple regression model for the objectives using Ordinary Least Square (OLS) estimation because of its reliable traits as the best linear unbiased estimator (BLUE properties). Its error term is also assumed to have a minimum and equal variance. The model for our study is specified thus below:

\[ PRINVT = f (FS/GDP, CEPS, PLR, RGDP) \]……………….……….(1)

Econometric transformation of (1)

\[ PRIVET = \beta_0 + \beta_1 FS/GDP + \beta_2 CEPS + \beta_3 PLR + \beta_4 RGDP + \beta_5 DUM + \mu \] …… (2)

Taking the log transformation of the equation (2) above we have:

\[ \log PRINVT = \beta_0 + \beta_1 \log FS/GDP + \beta_2 \log CEPS + \beta_3 \log PLR + \beta_4 \log RGDP + \beta_5 \log DUM + \mu \] …(3)

Where,

\[ \beta_i \text{’s are parameters to be estimated} \]

\[ PRIVET = \text{Private Investment}. \]

\[ FS/RGDP = \text{Financial Savings as a ratio of RGDP}. \]

\[ CEPS = \text{Credit Extended to Private Sector by deposit money banks.} \]

\[ PLR = \text{Prime Lending Rate.} \]

\[ RGDP = \text{Real Gross Domestic Product as a proxy for income.} \]

\[ DUM = \text{Dummy Variables (0 = pre-consolidation period and 1= consolidation period) as a proxy for financial sector reform.} \]

\[ \text{A priori Expectations: } \beta_1 > 0; \beta_2 > 0; \beta_3 < 0; \beta_4 > 0; \beta_5 > 0 \]
4.0 EMPIRICAL ANALYSES OF RESULTS

This is a section that shows the outcome of various tests carried out and the analyses that follows.

4.1 Table 1: Results of augmented Dickey-Fuller stationary test

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF test-stat.</th>
<th>Critical value</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIVET</td>
<td>2.0865</td>
<td>1%</td>
<td>Integrated at higher order</td>
</tr>
<tr>
<td>FS/RGDP</td>
<td>-0.1084</td>
<td>1%</td>
<td>Integrated at higher order</td>
</tr>
<tr>
<td>CEPS</td>
<td>13.0710</td>
<td>1%</td>
<td>I(O)</td>
</tr>
<tr>
<td>PLR</td>
<td>-6.9910</td>
<td>1%</td>
<td>I(O)</td>
</tr>
<tr>
<td>RGDP</td>
<td>-5.8949</td>
<td>1%</td>
<td>I(O)</td>
</tr>
</tbody>
</table>

Source: Computed by the authors from result of ADF stationarity tests.

Table (1) shows summary of results of unit root tests carried out on each of the variables in the model. The outcome shows that three of the variables (CEPS, PLR and RGDP) are stationary at level form, while FS/RGDP and PRIVET (the dependent variable) are non stationary even after first differencing – indicating that both variables have higher order of integration. This necessitates test for co-integration, to find out whether the coinciding of the other of integration of these variables (i.e. the dependent variable (PRIVET) and one of the independent variables) is by chance or not. This is necessary to avoid a spurious regression situation.

Table 2: Result of Johansen co-integration test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Test-statistics</th>
<th>Critical value</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual</td>
<td>0.7065</td>
<td>3.76</td>
<td>Integrated at higher order</td>
</tr>
</tbody>
</table>

Source: Authors computation from result of co-integration test.

The outcome of the co-integration test as specified in table (2) yielded residual that is non-stationary at level form. The implication of this finding is the absence of a long run relationship between the dependent variable (PRIVET) and the independent variables, as suspected. This underscores the fact that analysis herein can and will be carried out based on conventional long run regression model, whose results outcome is presented in table (3) below.

Table 3: The long run regression model

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variables/constant</th>
<th>Coefficients</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIVET</td>
<td>C</td>
<td>12374.7</td>
<td>0.051</td>
</tr>
<tr>
<td></td>
<td>DFS/RGDP</td>
<td>-1108894</td>
<td>-2.281*</td>
</tr>
<tr>
<td></td>
<td>DCEPS</td>
<td>6.040218</td>
<td>4.642*</td>
</tr>
<tr>
<td></td>
<td>DPLR</td>
<td>-756.4508</td>
<td>-0.020</td>
</tr>
<tr>
<td></td>
<td>DRGDP</td>
<td>-1.187244</td>
<td>-0.398</td>
</tr>
<tr>
<td></td>
<td>DUM</td>
<td>-2028605</td>
<td>-1.749*</td>
</tr>
</tbody>
</table>

R²: 0.74
Adj R²: 0.68
F-stat: 13.52
D-Watson: 1.90

Source: Authors computation from result of long run regression model

Note * indicates significant at 5% level

Table 3 above presents results of conventional long run regression model. The results show that three out of the five coefficients are statistically significant at 5% level. CEPS and PLR have the theoretically expected signs, while FS/RGDP, RGDP and DUM, (DUM is dummy for financial sector reform) do not have the theoretically expected signs. The coefficient of multiple determinations, that is, the adjusted R² is strong at 0.68. This indicates how strong the power of the independent variables is in explaining changes in the dependent variable-in this case private investment. The value of the F-statistics shows that the entire model is statistically significant. Furthermore, the D. Watson statistics reveals the absence of autocorrelation problem at 1 percent level.

Further Discussion of Result

Given a coefficient of -1108894, for FS/RGDP, suggest that financial savings as a ratio of real GDP has a negative influence on private investments in Nigeria. It goes further to suggest that one unit increase in the value of FS/RGDP depresses level of private investment by 1108894. On the other hand, a coefficient of 6.040218 suggest that the level of private investment in Nigeria is stimulated by the level of credit extended to private sector by deposit money banks; a unit increase in the level of credit extended to private sector is expected to stimulate private investment by 6.040218. Interestingly, the CBN’s N25 billion recapitalization policy to deposit money banks in Nigeria, which came into effect by 2004, against expectations, exerts a negative impact on the level of private investments in Nigeria. Given a coefficient of -2028605, it is expected that for every one unit increase in the amount of funds that goes into recapitalization of the banks, the level of private investment...
reduces by 2028605. The analysis to be drawn from this is the fact that, rather than stimulate private investment, the N25 billion naira recapitalization policy of the CBN has actually crowded out private investment in Nigeria within the period under study.

4.4 Other Second Order Tests

Table 4: Result of white heteroscedasticity test

<table>
<thead>
<tr>
<th>No of observation</th>
<th>Auxiliary R²</th>
<th>Obs R²</th>
<th>Probability value</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>0.983550</td>
<td>23.69518</td>
<td>0.004810</td>
</tr>
</tbody>
</table>

Source: Authors computation from test statistics

The result of white heteroscedasticity test carried out on the residual, indicates the absence of heteroscedasticity in the data, given a probability value of 0.0048. Conclusion drawn from this is the fact that the homoscedasticity assumption of CNLRM has not been violated, meaning that the variance is constant over time.

From the result of Ramsey Reset test, which is a test of how well specified the model is, it indicates that the model is well specified, given a probability value of 0.00.

5. CONCLUSION

After reviewing the theoretical and the empirical literature over the link between financial sector and the real sector and the need for adequate funds to stimulate investment in order to keep the economy on an even keel, this work examines empirically the relationship between financial intermediation and private sector investment in Nigeria using annual data from 1980 to 2010. This study emphasizes that private investment plays a positive role in boosting the economic growth of countries. It could bring important benefits in the form of capital formation, human capital formation, diversified export trade, job creation, the enhancement of enterprise development, technological spillovers etc.

Our findings showed that the real sector is yet to get the required support it needed. This can be attributed mainly to structural and institutional rigidities and yet to fully developed financial system. We believe that if the policy recommendations are implemented adequately that it will ensure, to a great extent, significant impact; thus shaping Nigerian economy to be ready to pursue other desirable macro-economic objectives.

However, government policies are needed to enhance expected benefits. The role of political stability as a key factor in attracting and maintaining investors cannot be overemphasized, which maximizes a country’s potential for attracting FDI inflows.

6.0 RECOMMENDATIONS

On the strength of the findings of this study the following recommendations are made as follows:

I. In order to provide enabling environment conducive for investment growth and expansion of domestic capacity, there is dire need to stimulate competition among investors. Incentive packages need to be developed for investment in various sectors in order to diversify the economy especially towards agriculture, transportation, energy production, telecommunication, mining, industrialization, manufacturing, etc.

II. The structure of taxes and tariffs should be modeled with a view to opening windows of opportunities to any investor wishing to invest in Nigeria provided the outputs of others are not hampered.

III. There should be a regulatory agency that will sensitize private investors on the benefit of credit facilities.

IV. The lending rate should properly be regulated in such a way that it will make credit be accessible to all investors with genuine intentions.

V. There is need to pursue policies on improving the legal framework, adequate infrastructure, good governance, an effective judicial system and respect for the rule of law among others.

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