An Empirical Analysis of Financial Sector Development and Savings Mobilization in Nigeria: ECM Analysis

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Author’s contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

This study employs Error Correction Model (ECM) and Co-integration analysis to study the relationship between financial sector development and savings mobilization in Nigeria 1986 to 2017. As expected from a developing country like Nigeria, a short-run positive relationship is observed between the Nigerian stock market and crude oil prices and the direction is from crude oil prices to the Nigerian stock market but not the other way round. The short run, interest rate earning has a positive and significant impact on domestic savings while the other variables have no significant impact domestic savings in Nigeria. Government should therefore consolidate on past financial sector reforms to improve domestic saving mobilization to reduce the dependence of Nigeria on foreign savings to finance domestic investment.

Keywords: Savings; financial development; Co-integration ECM.

1. INTRODUCTION

Recent development in finance-growth nexus has led to a renewed interest in finance-savings relationship. Ideally, economic growth is a fundamental requisite to economic development. This informs why in Nigeria growth continuous to dominate the main policy thrust of government’s
development objectives. Fundamentally, economic growth is associated with policies aimed at transforming and restructuring the real economic sectors. Nevertheless, the lack of sufficient domestic resources, savings and investment to support and sustained the sectors is a major impediment to economic development in the country because of the gap between savings and investment [1].

The primary roles of savings are to provide developing countries (including Nigeria) with the much needed capital for investment which improved economic growth. Increase in savings leads to increase in capital formation and production activities that will lead to employment creation and reduce external borrowing of government. Low domestic saving rates may maintain low-growth levels because Harrod Domar model suggested that savings is an important factor for economic growth.

Malunond [2] asserts that depending on foreign sources to financed investment makes the country highly sensitive to external shocks. Therefore, domestic savings mobilization will continue to be a priority as a source of investment financing in order to minimize vulnerability to international economic fluctuations. Many empirical study studies have been carried out on the determinants of savings across the world. The reason has been that savings rate of many countries; particularly the less developed countries have been declining. In addition the role of investment (via Savings) in economic growth and development has induced many researchers to continuous to investigate the factors that influence savings [3].

Financial development connotes improvements in the functioning of the financial sector. These include increased access to financial intermediation, greater diversification opportunities, improved information quality, and better incentives for prudent lending and monitoring [4,5,6]. The purpose of this study is to empirically examine the relationship between financial sector reformed and domestic saving mobilization in Nigeria. This study is motivated by the conflicting findings in the empirical literature on the nature of the relationship between financial development and the saving rate for different countries, and also the need to shed additional light on this issue by focusing on Nigeria.

In Nigeria, national savings increase continuously in absolute terms from 1981 to 1994 with a continuous increased value of savings over time. However, recent data also shown that the saving culture in Nigeria is very poor relative to other developing economies despite the financial reformed to mobilized savings for investment. For instance, during the period 1981 to 1985, domestic saving averaged 8.34 percent of GDP and decreased to average of 7.81 percent from 1986 to 1994. However, with the distress in the financial sector of the 1990s, the rate of aggregate saving declined significantly. The distress syndrome resulted in a significant fall in domestic saving in the period 1995 to 2004, with the saving to GDP ratio dropping to 5.63 percent. Obadan and Odusola [7] asserted that the low level of savings in Nigeria is as a result of high incidence of poverty and low level of disposable income, under developed savings channels, reflecting underdeveloped financial markets, conspicuous consumption, and unfavorable economic environment characterized by high unemployment and inflation. However, the average saving to GDP ratio between 2005 to 2012 figure stood at 15.8 percent.

From the foregoing, there is an urgent need to encourage Nigerians to change their current attitude towards saving. Furthermore, the right saving culture must be put in place by institutions and regulatory agents who influence the decisions of households, firms and governments. In this regard, there is need to put in place articulate economic policy which is capable of providing the much needed enabling environment that will induced domestic savings in order to provide all the funds needed for investment in various sectors of the Nigerian economy. Therefore this study will examine the impact of financial sector development on domestic savings mobilization in Nigeria.

The long-debated relationship between savings and the level and growth rate of income provides a strong stimulus for analyzing the determinants of savings more thoroughly [8]. Understanding the nature of savings behaviour is critical in designing policies to promote savings and investment which in turn enhance economic growth through capital formation [9]. Since, Nigeria continues to face a potential shortage of resources to finance public and private investments due to low poor financial development and low domestic saving rates which leads to slow economic growth rates [10]. It is argued that low domestic saving rates may lead to slow economic growth rate. Imoughele and Ismaila [1] revealed that low economic
growth rate in Nigeria is largely due to lack of sufficient domestic resources and poor financial system in mobilization of savings.

Understanding the finance savings relationship will guide policymakers in Nigeria in reducing reliance on foreign borrowing and donor-assistance. This can be achieved by financial sector reformed and raising domestic saving rates to mobilize capital for economic growth. In order to raise the saving rate, the government needs to manipulate the determinants of domestic savings. This could help policy-makers to formulate more appropriate policies on real deposit rate of interest, capital mobilization and accumulation for the development of Nigeria. The estimation of domestic savings function is to identify the factors that determines saving behavior which will be appropriate for policy makers in making decisions towards promotion of domestic savings. Based on the determinants of domestic savings, policy makers could have better powers over savings by controlling the relevant and important variables in the desired direction so as to foster self-sustained economic growth and development.

This study will used time series data covering the period 1986 to 2017. This period is important because it covers Structural Adjustments Programs (SAPs) when Nigeria economy was liberalized. Basically the study will examine the impact of financial sector development on savings mobilization in Nigeria. The remainder of this study is structured as follows: section 2 provides a review of existing empirical literature. Section 3 presents the data and methodology of the study. Section 4 presents and discusses the empirical results. Finally, section 5 offers some concluding remarks on the findings.

2. LITERATURE REVIEW

Several studies have tried to explain the meaning of saving notable are [11,1,12,13]. According to Igbatayo and Agbada [11] savings is defined as the excess of income over consumption and concluded that this is the way of acquiring assets for the whole economy. Imougehele and Ismailia [1] defined savings as the amount of income per capital time period that is not consumed by economic units. For the household, it represents that part of disposable income not spent on domestically produced or imported consumption goods and services. For the firm, it represents undistributed business profits.

In developing countries like Nigeria, private savings constitutes the main source of capital accumulation for investment purposes. From theoretical literatures, total savings of households, entrepreneurs and corporate entities in an economy have positive correlation with output. Amongst other things, savings serve as the main source of financing investment and related economic activities. Igbatayo and Agbada [11] noted that, higher level of national savings leads to higher investment and consequently higher output. This is so because the level of savings determines the magnitude of capital accumulation. On the other hand, the magnitude of total earnings depends on the level of total output, thus output also determines the level of savings (capital accumulation) and investments by households and entrepreneurs. Ozioma [12] opined that the reverse of savings is when current expenditure exceeds current income and is termed dissaving; and dissaving occur within all major groups of the country – individuals, business and government.

Two concepts of savings are used in national income accounting - Net and Gross savings. Net savings is when individuals save after taxes exceed personal outlays, business save through rational profit and governments save when current receipts exceeds current expenditures. Similarly, [12] opined that gross national savings is the source for additions to stock of tangible assets, including investment in homes as well as in business inventories, plant and equipment. He further states that for the economy as a whole, gross savings equals gross investments. [14] earlier stated that the major portion of gross savings consists of capital consumption allowance, which accrues chiefly to the business sector. Personal savings therefore represents the changes in net worth of individual’s assets. The change in net worth should be equal to the amount of personal savings out of income as [13] opined in their study.

Igbatayo and Agbada [11] have however identified two broad levels of savings determinants. Micro – level and Macro level determinants. In this study emphasis would be on some of the macro determinants which include the level of financial markets development, level of economic growth, price stability, interest rate, fiscal relations condition in the external sector which links the economy to the world market, Terms of Trade changes (TOT) etc to mention but a few.
Financial sector development is all the wholesale, retail, formal and informal institutions in an economy offering financial services to consumers, businesses and other financial institutions.

Salami and Oluseyi [15] assert that financial system consists of different institutions, markets, instruments, and operators that interact within an economy to provide financial services such as resource mobilization and allocation, financial intermediation and facilitation of foreign exchange transactions. Iganiga [16] defined financial system as a conglomerate of various markets, instruments, operators, and institutions that interact within an economy to provide financial services such as resources mobilization and allocation, financial intermediation and facilitation of foreign exchange transactions to exchange foreign trade. The Nigerian financial sector can be categorized into two, namely, the informal sector which comprises the local money lenders, the thrifts and savings associations, etc. It is poorly developed, limited in reach, and not integrated into the formal financial system, but plays a major role in the Nigerian financial system and the formal financial system comprises the capital and money market institutions and these consist of the banks and non-banks financial institutions.

2.1 Empirical Issues

Recent trend on the relationship between financial sector reforms and growth has led to the emergency literature on the impact of financial development on domestic resource mobilization [17]. In view of the critical role that domestic resource mobilization plays in facilitating pro-poor growth, this issue has attracted the attention of researchers and policy makers in recent times [17,18,19,20] deemed that savings is critical in the development process, and the financial system must be robust to generate the needed savings to finance investment activities that will accelerate the rate of growth and development. King and Levine [18] found that higher levels of financial development are associated with faster capital accumulation. A similar study by [19] and [20] found a negative correlation. Park and Shin [21] find the impact of financial development to be insignificant. Horioka and Terada-Hagiwara [22] employs data from 12 economies in developing Asia countries during 1996 – 2007 and find that the relationship between financial development and saving rate is nonlinear and hump-shaped.

Nyanzi and Kaberuka [23], in a study on the effect of financial sector liberalization on private financial savings in Uganda used the Granger and Engel framework and structural change analysis and found a positive relationship between financial liberalization and private financial savings.

Iganiga [24] used the least square technique to evaluate the Nigerian financial sector reforms within the framework of a behavioral model and found that financial reforms had a positive and significant impact on domestic savings. Matthew and Olowe [25] in a study on the impact of liberalized financial system on savings, investment and growth in Nigeria found that financial liberalization had a positive and significant impact on savings. Khan and Hasan [26] in a study on financial liberalization, savings, and economic development in Pakistan found that financial liberalization had a positive and significant impact on savings. Asamoah [27] in a study on financial sector development, savings mobilization and poverty reduction in Ghana, used a multivariate VAR and vector error correction model and found that there is no relationship between financial sector development and savings mobilization.

Asamoah [27] examines the impact of financial sector reforms on savings, investments and gross domestic product in Ghana and found a positive and significant relationship between financial reforms and savings. Nair (undated) examines the impact of financial sector liberalization on household savings in India using a financial sector liberalization index and found that financial development impacts negatively on household saving rate. Ang [17] examines savings mobilization, financial development and liberalization in Malaysia using the autoregressive distributed lag (ARDL) model. He finds two contradictory results, a positive relationship between financial deepening and private savings on one hand, and a negative relationship between financial liberalization and private savings on the other hand.

Ewetan et al. [28] examines the long-run relationship between financial sector development and domestic saving in Nigeria for the period 1980 to 2012 using time series data. It employs bounds tests cointegration approach also known as autoregressive distributed lag estimation due to mixed integration order of the variables and small sample size. The econometric results provide evidence of long run
relationship between financial sector development and domestic saving in Nigeria and concluded that government should therefore consolidate on past financial sector reforms to improve domestic saving mobilization to reduce the dependence of Nigeria on foreign savings to finance domestic investment.

Ayalew [29] reviewed the developments in saving and investment in Namibia over a period of seventeen years. The study employed co-integration and error correction techniques to assess the determinants of savings and investment in Namibia. The study found that private savings in Namibia is significantly influenced by real income, while it is very doubtful if bank deposit rates have any influence on saving in Namibia. In particular, real lending rates, inflation, real income and government investments were found to be important determinants of investments in Namibia. The study recommended the need for Namibia to address critical challenges in its economy, especially the shortages of skilled labour in order to achieve higher growth targets in future.

Nwachukwu and Egwaikhide [30] used an error correction to investigate the determinants of savings in Nigeria. The estimation results indicated that the level of per capita income, terms of trade changes, public saving rate, external debt service ratio and the inflation rate has positive and significant influences on domestic saving while real interest rate and growth rate of income have a negative impact on the saving rate.

Furthermore, [3] employed error correction analysis to ascertain the long run determinants of savings in Nigeria during the period 1981 to 2007. The findings showed that financial deepening, bank density, real interest rate, inflation and real income per capital are the major determinants of savings in Nigeria.

Orji [31] investigated the determinants of bank savings in Nigeria as well as examined the impact of bank savings and bank credits on Nigeria’s economic growth from 1970-2006. He adopted two impact models; Distributed Lag-Error Correction Model (DL-ECM) and Distributed Model. The empirical results showed a positive influence of values of GDP per capita, Financial Deepening, Interest Rate Spread and negative influence of Real Interest Rate and Inflation Rate on the size of private domestic savings.

Nwachukwu [32] employing time series data for Nigeria for the period covering 1970 to 2010 examined the determinants of private savings in Nigeria. He relied upon co-integration procedures to estimate savings rate function for Nigeria within the framework of the Life Cycle Hypothesis. The results of the analysis showed that the saving rate rises with both the growth rate of disposable income and the real interest rate on bank deposits. The degree of financial deepening was also observed to have a negative impact on savings behaviour in Nigeria. Public savings seems not to crowd-out private savings; an indication that government policies that are aimed at improving the fiscal balance has the potential of bringing about a substantial increase in the national saving rate.

Simon-oak and Jolaosho [33] empirically assessed the impact of real interest rate on savings mobilization in Nigeria. The Vector- Auto Regression (VAR) was employed, using the time series data from 1980 to 2008. The authors reported that real interest rate has negatively impacted on the level of savings mobilization in Nigeria. They concluded that there is need for government in Nigeria to bridge the existing gap between the lending and savings rates and increase per capita income level of the populace, to stimulate savings for investment and economic growth and also efforts should be geared towards reducing domestic inflation rate to arrest its negative impact on real rates in Nigeria.

Abu [34] studied the relationship between savings and economic growth in Nigeria using Granger Causality techniques and Co-Integration for the period 1970 to 2007. His results indicate that the variables are co-integrated in such a manner that one can conclude there is a long-run equilibrium relationship between them and that causality is from economic growth to savings.

3. RESEARCH METHODS

3.1 Theoretical Framework

In spirit with [35] and [36] who explain the role of government in mobilizing savings through the financial repression hypothesis. The hypothesis examines the effect of government policy in preventing through controls the real interest rates from adjusting to competitive levels to clear the market. [35] argues that with controlled interest rates it is likely that not all economic agents will access credit and this can lead to two-fold scenario; where those firms that can access
subsidized credit would embark on capital-intensive projects and those not favoured by the policy would only carry out a short maturity projects with huge returns. Also, another result of financial repression according to [35] and [36] is that it substitutes market for non-market forces from determining interest rates. This is manifested through rationing of the available funds to the investors.

This analysis concludes that removing financial restrictions in countries where interest rates are controlled exerts a positive effect on growth rates towards their competitive market equilibrium [35]. Many countries have embarked on financial liberalization programmes in order to make real returns on savings more competitive and attractive to savers. This was devised as a way of maximizing savings, investment and growth. Yet there is a trade-off between interest rates and investment levels. It is therefore necessary to strike a balance between saving and investment promotion that is achieved through interest rate adjustments and financial reform.

### 3.2 Model Specification

The study adopted [28] model that studied financial sector development and domestic savings in Nigeria for the period 1980 to 2012 using time series data. It employs bound test co-integration approach due to mixed integration order of the variables. In modeling, the relationship between financial sector development and domestic savings, current period. Savings is assumed to be influenced by past domestic savings rate itself as well as current and past values of key financial sector development indicators in the economy.

\[
\text{DSAV}_t = \alpha + \text{BFD}_t + \text{YX}_t + \text{E}_t
\]

DSAV is domestic saving, FD is an indicator of financial development, \(X_t\) – is a vector of control variables, which affect the domestic saving, the control variables includes Gross domestic Product Per Capital, Credit to private sector as a percentage of real GDP, interest rate on deposit, inflation. The paper attempts to fill the gap by eliminating credit to private as a percentage of real gross domestic product. Over the years financial reforms have not encourage credits to private sector due to poor saving mobilization mechanism. On that note, it is imperative to eliminate the variable since impact is on domestic savings is highly insignificant to the dependent variable.

\[
\text{SAV} = f (\text{GDPPC}, \frac{\text{M}_2}{\text{GDP}}, \text{INT}, \text{INF})
\]

This can be stated in operational form as

\[
\text{SAV} = X_0 + X_1 \text{GDPPC} + X_2 \frac{\text{M}_2}{\text{GDP}} + X_3 \text{INT} + X_4 \text{INF} + E_t
\]

Apriori Expectations are: \(X_1, X_2, X_3 > 0; X_4 < 0\)

where:

- SAV = Domestic savings mobilization.
- GDPPC= Gross domestic product per capita
- M2/GDP= Financial deepening
- INT = Interest rate proxy by deposit rate
- INF= Inflation Rate

### 3.3 Sources of Data

The data to be used in carry out this study would be time series data for the period 1986 ~ 2017 obtained mainly from secondary sources. Among these are Central Bank of Nigeria (CBN) statistical bulletin (various issues), The National Bureau of Statistic (NBS), Economic Journals, text book and published article in the subject matter.

### 3.4 Method of Data Analysis

The estimation technique used in this study is the Error Correction Method (ECM) techniques. The regression analysis was used to test for the magnitude and direction of relationship between the independent variables and the dependent variable. Also the Augmented Dicker-Fuller Test (ADF) was used to test for the presence or otherwise unit root test in the series. The t-statistic was used to test for the individual significance of the independent variable to the dependent variable. The variables were also tested for co-integration, to examine their convergence status. This is because, variables that fail to converge may be hazardous to policy making. The ECM was used to determine the speed of adjustment to equilibrium given that long run relationships exist among the data series.

### 4. EMPIRICAL RESULTS

#### 4.1 Unit Root Tests Results

To test the stationary properties of the data, ADF (Augmented Dickey Fuller) unit root tests are employed. The results for both the level and differenced variables are presented in Table 1.

From the Table 1, Savings Mobilization, Gross Domestic Product per capita, Financial
Deepening, Inflation rate are stationary at first difference, while Interest Rate are stationary at levels.

**Johansen co integration test:** The test of the presence of long run equilibrium relationship among the variables using Johansen Co integration test involves the identification of the rank of the $n$ by $n$ matrix $\Pi$ in the specification given by:

$$\Delta Y_t = \beta + \sum_{i=1}^{k-1} \Gamma_i \Delta Y_{t-i} + \Pi Y_{t-k} + \epsilon_t$$  \hspace{1cm} (4)

Where $Y_t$ is a column vector of the $n$ variables $\Delta$ is the difference operator, $\Gamma$ and $\Pi$ are the coefficient matrices, $k$ denotes the lag length and $\beta$ is a constant. In the absence of cointegrating vector, $\Pi$ is a singular matrix, indicating that the cointegrating vector rank is equal to zero. Johansen co integration test will involve two different likelihood ratio tests: the trace test ($\lambda_{trace}$) and maximum eigen value test ($\lambda_{max}$) shown in equations below:

$$J_{trace} = -T \sum_{i=r+1}^{n} \ln (1 - \lambda_i^2)$$  \hspace{1cm} (5)  

$$J_{max} = -T \ln (1 - \lambda_{r+1}^2)$$  \hspace{1cm} (6)

Where $r$ the number of individual series, $T$ is the number of sample observations and and $\lambda$ is the estimated eigen values. The trace test tests the null hypothesis of $r$ cointegrating vectors against the alternative hypothesis of $n$ cointegrating vectors. The maximum eigen value test ($\lambda_{max}$), on the other hand, tests the null hypothesis of $r$ cointegrating vectors against the alternative hypothesis of $r+1$ cointegrating vectors. If the two series are found to be co-integrated, then error correction model (ECM) is appropriate to investigate causality relationship.

The result Table 2 shows that there exist at last three (3) co-integrating equations at 5% level of significance. This further shows that there is long run relationship between savings mobilization and the independent variables. The result indicates that, in the long run; the dependent variables can be efficiently anticipated using the specific macroeconomic variables.

**4.2 Error Correlation Model**

The result of the error correction mechanism is of the model is reported in Table 3. From the above, it could be observed that the entire variables estimation met their expected sign. Also, gross domestic product per capita LGDPPC has direct and insignificant impact on private domestic savings in Nigeria. One percent increase in LGDPPC leads to 0.9013 percent increase in Nigeria’s private domestic savings. This is consistent with apriori expectation.

<table>
<thead>
<tr>
<th>Variables</th>
<th>At levels</th>
<th>First difference</th>
<th>McKinnon 5% critical value</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAV</td>
<td>1.3887</td>
<td>-3.2654*</td>
<td>-2.98</td>
<td>1(1)</td>
</tr>
<tr>
<td>LGDP</td>
<td>-0.5755</td>
<td>-3.0687*</td>
<td>-2.98</td>
<td>1(1)</td>
</tr>
<tr>
<td>LM2/GDP</td>
<td>-0.3445</td>
<td>-3.7478*</td>
<td>-2.98</td>
<td>1(1)</td>
</tr>
<tr>
<td>INT</td>
<td>-4.5199*</td>
<td></td>
<td></td>
<td>1(0)</td>
</tr>
<tr>
<td>LINF</td>
<td>-0.6143</td>
<td>-6.3615*</td>
<td>-2.98</td>
<td>1(1)</td>
</tr>
</tbody>
</table>

*Significant at 5% Sources: Author Regression Output

<table>
<thead>
<tr>
<th>Hypothesized No of CE (S)</th>
<th>Eigen value</th>
<th>Trace statistic</th>
<th>0.05 Critical value</th>
<th>Prob**</th>
</tr>
</thead>
<tbody>
<tr>
<td>None*</td>
<td>0.8625</td>
<td>103.7919</td>
<td>69.8189</td>
<td>0.0000</td>
</tr>
<tr>
<td>At Most 1*</td>
<td>0.7582</td>
<td>62.1199</td>
<td>47.8561</td>
<td>0.0013</td>
</tr>
<tr>
<td>At Most 2*</td>
<td>0.5591</td>
<td>32.3048</td>
<td>29.7971</td>
<td>0.0252</td>
</tr>
<tr>
<td>At Most 3</td>
<td>0.3440</td>
<td>15.1083</td>
<td>15.4947</td>
<td>0.0571</td>
</tr>
<tr>
<td>At Most 4</td>
<td>0.2576</td>
<td>6.2547</td>
<td>3.8415</td>
<td>0.0124</td>
</tr>
</tbody>
</table>

Sources: eviews10

Trace test indicates 3 co integrating eqn(s) at the 0.05 level.

*Denotes rejection of the hypothesis at the 0.05 level
Table 3. Parsimonious error correction model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Co-efficient</th>
<th>Std. error</th>
<th>t-statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.1264</td>
<td>0.0267</td>
<td>4.7340</td>
<td>0.0001</td>
</tr>
<tr>
<td>D( LGDPPC)</td>
<td>0.9013</td>
<td>0.5677</td>
<td>1.5876</td>
<td>0.1319</td>
</tr>
<tr>
<td>DINF</td>
<td>-0.0695</td>
<td>0.0333</td>
<td>-2.085</td>
<td>0.0535</td>
</tr>
<tr>
<td>D(INT)</td>
<td>0.1651</td>
<td>0.0800</td>
<td>2.0639</td>
<td>0.0556</td>
</tr>
<tr>
<td>D(LM2GDP)</td>
<td>0.0773</td>
<td>0.1168</td>
<td>0.6618</td>
<td>0.5175</td>
</tr>
<tr>
<td>ECM (-1)</td>
<td>-0.3245</td>
<td>0.0673</td>
<td>-4.8188</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

Key Statistics

R\(^2\) – Squared: 0.7039
Adjusted R\(^2\) – Squared: 0.6114
F – Statistic: 7.6075
Prob (F – Statistic): 0.0008
Durbin – Watson Stat: 2.1084

Source: eview10

This result supports the fact that in the short run increasing LGDPPC enhanced the growth performance of the Nigeria private domestic savings. This finding is not line with [29] and [38] who reported that savings in is significantly influenced by real income. The result further revealed that interest rate (INT) has direct and significant impact on Nigeria private domestic savings. One percent increase in INT will lead to about 0.1651 percent increase in Nigeria’s savings. This is consistent with the apriori expectation. This result supports the fact that a well managed and interest rate has the ability to induce savings in Nigeria. The significant nature of this variable is as a result of robust interest rate policy and the dominance of formal sector in granting savings mobilization to the Nigerian economy. This is line with [30]; [3] which held that interest rate statistically significant to the mobilization of savings in Nigeria.

The inflation rate (DINF) has inverse and significant effect on Nigeria’s private domestic savings. This does conform to the apriori expectation. One percent increase in DINF leads to 0.0695 percent decrease in Nigeria’s savings. This is consistent with the apriori expectation. This result supports the fact that on the short run increase in inflation reduce savings. This is consistent with [38] who investigated the core leading determinants of financial savings in Nigeria and found that inflation is the major determinants of savings in Nigeria. The coefficient of financial deepening D(M2GDP) is directly but insignificantly impact on savings such that one percent increase in D(M2GDP) leads to 0.0773 percent increase in the Nigeria savings. The insignificance of this variable is attributed to poor financial development in the in mobilizing savings in Nigeria but the direct relationship of the variable indicate financial development induce savings mobilization. This is consistent with [29].

Several authors [3] and [28] who reported that there is direct relationship between financial sector development and domestic saving in Nigeria for the period 1980 to 2012 using time series data. It employs bounds tests cointegration approach also known as autoregressive distributed lag estimation due to mixed integration order of the variables and small sample size. The econometric results provide evidence of long run relationship between financial sector development and domestic saving in Nigeria.

From Table 3, the coefficient of determinations R\(^2\) of the estimation is 0.7039 which indicates that about 70 percent of the total variations in Nigeria private domestic savings are explained by the included explanatory variables. The F-statistic shows overall significance of the model. The F-statistic is significant at 5% level. The probability of its value (0.0008) is less than the 0.05 critical levels. We, therefore, reject the null hypothesis that the model is not significant in explaining the variations in the Nigeria private domestic savings. Finally, The Durbin Watson statistic value is 2.1084. This test value shows the absence of positive serial autocorrelation among the independent variables since the DW statistics is approximately 2.

5. CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusion

This study has investigated the financial sector development and savings mobilization in Nigeria for the period which spanned between 1986 and
Econometric model was specified and estimated via Error Correction Mechanism (ECM) to ascertain the relationship between financial sector development and savings mobilization in Nigeria. The variables were tested for stationarity, co-integration analysis was carried out and also error correction test was performed. The study found that the savings and selected macroeconomic variables included the model have a long run relationship. The empirical results showed the following:

1. Interest rate on deposit has a direct and significant relationship with private domestic savings mobilization in Nigeria. Interest rate earned on deposit had attracted savings mobilization in Nigeria.
2. Income has direct but insignificant impact on private domestic savings in Nigeria. The implication of this result is that the higher the economic position of the household, the higher the level of savings. This is consistent with [3] findings.
3. The result shows that inflation rate has inverse and significant relationship with Nigeria private savings. This is consistent with the apriori expectation.
4. Several authors [3] and [38] who reported that inflation rate has inverse and significant effect on savings in Nigeria.
5. Financial development has direct but significant relation with private domestic savings in Nigeria. This finding implies that the various initiatives adopted by the Nigeria Central Bank in the last few years to strengthen and further develop financial markets and institutions contribute insignificantly to increase private savings.

5.2 Recommendations

The growing gross domestic product per capita should be encouraged through productive venture as skill acquisition, technology advancement and entrepreneurial growth.

1. The interest rate earning on deposit should be increased, this will enhance the banking habit of the people, thus stimulate savings culture that will lead into investment.
2. Government should look inward on the danger associated rising inflation, look for a structural solution to the menace of inflation in Nigeria.
3. There is the need to constantly encourage financial sector reforms in order to meet the expected financial sector development in Nigeria.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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