Interest Rates and Investment Behaviour in Nigeria: An Empirical Evidence

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Abstract
This study is on empirical assessment of Variation in Interest Rates and Investment behaviour in Nigeria for the period 1981 and 2019. Time series data on interest rate, inflation rate, exchange rate and gross fixed capital formation obtained from the Central Bank of Nigeria, National Bureau of Statistic, World Bank Development Indicators and others were estimated using the error correction mechanism of autoregressive distributed lag (ARDL). The findings of the study show that a negative and significant relationship exist between interest rate and gross fixed capital formation in Nigeria in the period of study. The implication of this is that a unit increase in prime lending rate will lead to a decrease in investment by 0.02 units. Based on these findings the following recommendations were made: the issue of high interest rate with hidden transaction costs by banks must be vigorously addressed by the monetary authorities. The regulatory body should put in place policies that will stabilize the monetary policy rate (MPR) so as to keep the lending rate low in order to stimulate investment. The Central Bank should mandate banks to channel mobilized savings to investors in the form of loans. Monetary authorities should make policies which would help to boost the saving culture of the people. This could be done by increasing the deposit rate which would lure the people to deposit their money in banks thereby increasing the supply of loanable funds. This would lead to a fall in lending interest rate and eventually rise in investment.

Key Words: Interest Rate Variation, Investment Behaviour, Autoregressive Distributed Lag (ARDL).

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I. Introduction
Interest rate in every economy is a major monetary policy tool aimed at promoting economic growth and development especially through investment process. The short and long-term variability in interest rates is a prominent feature in any economy. Interest rate changes in response to a variety of economic events such as changes in federal policy, crises in domestic and international financial markets and changes in the prospects for long term economic growth, inflation rate, business environment and investment. However, economic events such as these tend to be irregular (Acha and Acha, 2019). There is a more regular variability of interest rates associated with the business cycle, the expansion and contraction that the economy experiences over time. For instance, short term interest rates rise during business expansion and fall in economic recession. Long term interest rates do not appear to vary much with the level of economic activities especially investment which is the main drivers of economic growth. The term cyclical volatility of interest rate refers to the variability of interest rate over periods that correspond to the length of the typical business cycle.

Interest rate variations affect decisions on investment and savings pattern. Investment behaviour is mainly affected by the level of interest rate obtainable in an economy. Investors differ in their willingness to hold risky assets such as bonds and stocks. When the returns to holding stocks and bonds are highly volatile, investors who rely on these assets to finance their consumption profile face relatively large chance of having low consumption. For example, before retirement, people receive a steady stream of income that helps to buffer the changes in wealth associated with changes in the returns on their investment portfolios. This steady return from working helps them maintain a relatively steady level of consumption. After the retirement, steady stream of income from working ceases to exist, hence, a less volatile investment portfolio is called for. The lower volatility of investment returns allows retirees to maintain relatively less consumption over time.

Nigeria experienced severe macroeconomic problems towards the end of the 1970s through the first half of the 1980s when output declined substantially. The real gross domestic product (GDP) growth rate
averaged only 1.5 per cent, per annum during the period 1973-2017 (registering negative growth rate in six years during the period), CBN (2018). In response to the deteriorating economic situation, the Nigerian government launched policy programmes contained in the Structural Adjustment Programme (SAP). Several forms of corrective measures were undertaken including financial sector reforms policies.

Prior to 1986 in Nigeria, the common practice has been the support of certain economic projects considered to be essential part of development strategy. Government adopted policies aimed at accomplishing specified objectives such as interest rate ceiling and selective sectoral policies. Those policies were introduced with the intention of directing credit to the priority sectors and securing inexpensive funding for their activities. The ceiling on interest rate and quantity restrictions on loanable funds for certain sectors ensured that larger share of funds is made available to favoured sectors. Such practice hinders financial intermediation since the financial markets will only be accommodating the credit demands of the government and ignoring risks. The practice has been disfavoured as growth policy by the repressionist school led by McKinnon (1973) and Shaw (1973).

According to the McKinnon (1973) and Shaw (1973) financial repression paradigm, government’s efforts to promote savings by such indiscriminate measures have repressed the financial system. This discourages financial intermediation. Thus, the repressionist school calls for financial liberalization (the removal of ceilings on interest rates among others) as a growth promoting policy. According to them, the removal of interest rate ceilings will raise aggregate savings because the interest rate elasticity of private savings is positive. Interest rate policy in Nigeria is perhaps one of the most controversial of all financial policies. The reason for this may not be far-fetched because interest rate policy has direct bearing on many other economic variables including investment decision. Interest rate plays a crucial role in the efficient allocation of resources aimed at facilitating growth and development of an economy and as a demand management technique for achieving both internal and external balances.

According to Uchendu (2020), interest rate policy is among the emerging issues in current economic policy in Nigeria in view of the role it is expected to play in the deregulated economy by inducing savings which can be channelled to investment and thereby, increasing employment, output and promotes efficient financial resource utilization. Also, interest rate can have a substantial influence on the rate and pattern of economic growth by influencing the volume and disposition of savings as well as national productivity (Leahy, 1993).

**Statement of the Problem**

The financial system of most developing countries like Nigeria has come under stress as a result of economic shocks of 1980s. The financial repression largely manifested through indiscriminate distortions of the financial prices, including interest rates. This tends to reduce the rate of growth and the real size of the financial system. More importantly, financial repression has retarded development as envisaged by Shaw (1973). This led to insufficient availability of investible funds, which is regarded as a necessary catalyst for promoting investments in an economy. This decline in investment as a result of a drop in the external resource transfer since the 1982 has been enormous in the highly indebted countries, and has been accompanied by a slow-down in growth in all the less developed countries (LDCs).

Both private and public investment rate have been falling, although the former was more drastic than the latter. If this trend is maintained, it will lead to a slowdown in medium term growth possibilities in these economies and will reduce the level of long-term per capita consumption and income, endangering the sustainability of the adjustment efforts. The observed reduction in investment in LDCs seems to be the result of several factors. First, the low availability of foreign savings has not been matched by the corresponding increase in domestic savings. Secondly, the determination of fiscal conditions due to the cut in foreign lending to the rise in domestic interest rate, the acceleration in inflation forced a contraction in public investment and, the increase in macroeconomic instability associated with external shocks and the difficulty of domestic government to stabilize the economy has hampered private investments.

Finally, the debt overhang has discouraged investment through its implied credit constraints in international capital markets (Lui Serven and Falokun, 2019). In order to curb the adverse effect of the 1980s financial repression, Nigerian government deregulated interest rates in 1987 as part of the Structural Adjustment Programme (SAP) policy target.

The official position was that interest rate liberalization among other things enhanced the provision of sufficient funds for investors, especially manufacturers (a priority sector) which was considered to be prime agents and by implication, promoter of economic growth. However, in a policy reversal, the government in January 1994 out rightly introduced some measure of regulation into interest rate management. It was claimed that there were “wide variations and unnecessary high rate” under the complete deregulation of interest rates. Immediately, deposit rates were once again set at 12.0 per cent, and 15.0- per cent, per annum while a ceiling of 21.0 per cent per annum was fixed for lending rates. The cap on interest rate introduced in 1993 was retained in
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1994 with minor modifications to allow for flexibility. The cap stayed in placed until it was lifted in 1997, thus enabling the pursuit of the flexible interest rate regime which bank deposit and lending rates were largely determined by the forces of demand and supply for funds, Omole and Falokun (2018).

Declining investment ratio due to level of interest rates, are problems because, investment drives growth in any economy, and low investment increases vulnerability in the economy, Niambon and Oshikoy (2019). One of the challenges Nigeria faces is the issue of what policy and how to make policies which could revive and raise investment in the country in order to stimulate and sustain economic growth.

The main focus of this paper is to empirically investigate the variation in interest rate and investment behaviour in Nigeria. This investigation could not have been more significant any other period than this period of Nigerian economic recession where both the federal and state governments have been devising various policy measures to increase the productivity of various sectors through credit supply as this has been among the top priority policy measures adopted by the Central Bank including most states.

Furthermore, most studies on interest rate have been on its effect on economic growth without actually tracing its relationship to investment growth. This paper tries to close such gap and therefore provide empirical evidence with regards to their nature and effect on economic growth through investment.

Again, the work would help policy makers and regulatory institutions in policy simulations with regards to the variables applied in the study. The result would be useful in public discourse given the uniqueness of this area of study in emerging economies like Nigeria.

II. Theoretical and Empirical Literature

There exist some well-known theories of interest rates. They include the Abstinence or Waiting Theory of Interest; the Agio Theory or Time Preference Theory; the Marginal Productivity Theory; Savings and Investment Theory (the Classical Theory) and Loanable Funds Theory.

According to the Abstinence Theory of Nassau Senior, interest is the reward for abstaining from immediate consumption of wealth. When people save, they abstain from present consumption. That involves some sacrifice. To make them save, interest is offered as a reward. But Marshall preferred the word, “waiting” to “abstinence”.

The “Agio” theory of interest of Bohm-Bawerk tells us that as the present period carries a premium (agio) over the future, and as people prefer present consumption to future consumption, we have to pay a price for them by the way of compensation, and that is interest. The Time Preference Theory of Irvin Fisher is more or less the same as Agio Theory of Interest. The Marginal Productivity Theory of distribution is nothing but the application of the marginal productivity theory of distribution. It shows that interest rate tends to equal the marginal productivity of capital.

The Classical Theory of Interest infers that the rate of interest is determined by the supply of capital which depends upon savings and the demand for capital for investment. The theory is based on the assumption that there exists, a direct relationship between the rate of interest, savings and direct relationship between interest rate and investment. The Classical Economist believed that savings would increase when the interest rate was high, and that investment would increase given a fall in interest rate. Meanwhile, the rate of interest would establish the equilibrium between savings and investment.

The Loanable Funds Theory (Neo-Classical Theory) of interest rate was developed by Knut Wicksell, Dennis Robertson and others. The loanable funds theory is wider in its scope than the classical theory of interest. The terms “loanable funds” includes not only saving out of current income but also bank credit, dishoarding and disinvestments. But by savings, the classical economists referred only to savings out of current income. Hence, we know that bank credit is an important source of funds for investment.

In the classical theory, saving was demanded only for investment. But according to loanable funds theory, the demands for funds arose, not only for investment but also for hoarding wealth (assets pricing). The classical theory regarded interest as a function of savings and investment, \( r = f(S, I) \). But according to loanable funds theory, the rate of interest is a function of four variables, i.e, \( r = f(I, S, M, L) \), where \( r \) is the rate of interest; \( I \) = Investment; \( S \) = Saving; \( M \) = Bank Credit and \( L \) = Desire to hoard or desire for liquidity.

Several researchers have investigated the relationship between interest rate and economic growth in both developed and emerging economies. Hence, there exist numerous literatures on this. Some of the studies are reviewed below.

Ologu, (1992) in a study of “The Impact of CBN’s monetary policy on aggregate investment behavior, found out only few of the variables were significant at both the 95.0 per cent, and 90.0 per cent, confidence limits in explaining the behavior of investment during the (1976-90) period. Specifically, he found out that:

1. Contrary to expectation and to change’s stock adjustment hypothesis, the existing stock of capital goods (plants and machinery) was not a major determinant of investment behavior of forms in Nigeria.

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2. Interest rate was significant in influencing investment decision noting that“ this is not surprising since in a situation of limited residual funds as in Nigeria, the cost of capital should exert significant influence on both the frequency and volume of demand for invisible funds by investors. Aysam et al (2004) in their study on how to boost private investment in the MENA countries. The role of Economic Reforms”. Among their independent variables were accelerator, real interest rate, macroeconomic stability, structural reform, external stability, macroeconomic volatility, physical infrastructure. Their studies ranged from 1990 to 2000 comprising of panel data of 40 developing countries. They used co-integration technique to determine the existence of a long-term relationship between private investment and its determinants. They found that almost all the explanatory variables exhibit a significant impact on private investment, with the exception of macroeconomic stability and infrastructures. The accelerator variable (ACC) has the expected positive sign, which implies that the anticipation of economic growth induce more investment. Similarly, interest rate (r) appears to exert a negative effect on firm’s investment projects, which is consistent with the user cost of capital theory.

Chetty (2004) explained that the investment demand curve is always a backward bending function of the interest rate in a model with non-convex adjustment costs and the potential to learn. At low interest rates, an increase in the rate of return raises the cost of learning and increases aggregate investment by enlarging the set of firms for when the interest rate exceeds the rate of return to delay. An increase in interest rate is more likely to stimulate investment when the potential to learn is larger and in the short run rather than the long run.

Ekwemem (2005), studied interest rate and investment behaviour in Nigeria using time series data spanning from 1976 - 2006. He found out that the behaviour of interest rate and inflation rate have significant influence on investment.

Lesotho (2006) studied “An investigation of the determinants of private investment “the case of Botswana”. Among his independent variable were real interest rate, credit to the private investors, public investment and trade credit to the private investors, real interest rate affect private investment positively and significantly. Other variable do not affect private investment level in the short-term as they show insignificant co-efficient.

Albu (2006) studied the trends in the interest rate, investment, GDP growth relationship. The study used two partial models to examine the impact of investment on GDP growth and the relationship between interest rate and investment in the case of the Romanian economy. The study found that the behaviour of the national economy system and interest rate-investment relationship tend to converge to those demonstrated in the normal market economy.

Akintoye and Olowolaju (2008) examined optimizing macroeconomic investment decision in Nigeria. The study employed both the ordinary least square and vector auto regression frame works to stimulate and project inter-temporal private response to its principal shocks namely: public investment, domestic credit and output shocks. The study found low interest rate to have constrained investment growth. The study resolved that only government policies produce sustainable output, steady public investment and encourage domestic credit to the private sector will promote private investment.

Mahmudul and Gazi (2009) in their study in Jordan on stock investment (based on the monthly data from January 1988 to March 2003) found that interest rate exerts significant negative relationship with share price for markets of Australia, Bangladesh, Canada, Chile, Colombia, Germany, Italy, Jamaica, Japan, Malaysia, Mexico, Philippine, South Africa, Spain, and Venezuela. For six countries from this sample, they argued on the availability of significant negative relationship between changes of interest rate and changes of share price.

Olubanjo, Atobatle and Akinwumi (2010) simulated the inter-relationships among interest rates, savings and investment in Nigeria between 1993 and 2010 using two stages least square method. The result from their study suggested that a marked decrease in the real lending rate would not result automatically into increased domestic investment.

Eregha (2010) examined variations in interest rate and investment determination in Nigeria. The study employed dynamic model of two equations using instrumental variable technique of estimation. The study revealed that variations in interest rate posits negative but highly significant role in investment decision in Nigeria and demand for credit had a negative significant influence on interest rate variations in both the short-run and the long-run.

Haruna & Inuwa (2013) explored the relationship between savings and investment in Nigeria between 1980-2011 using autoregressive distributed lag (ARDL) and error correction model (ECM) to test if there is a short or long run relationship and it was found that there is a long run relationship between savings and investment.

Ojima and Emerenini (2015) in their own study of interest rate and investment in Nigeria applied the ordinary least square method (OLS). Their study revealed that high interest rate affect investment negatively. The study therefore suggested that the monetary authority should evolve policies that will encourage savings and reduce prime lending rate to genuine investors and others. They further recommended that since there is a
between income and savings, relevant authorities should consider economic policies that will increase income level of the people in order to mobilize investments.

Agu, Chukwunonso, Ogonna & Clement (2016) investigated the relationship between private capital formation and savings in Nigeria using ordinary least squares technique, cointegration and the error correction mechanism which they found out that capital expenditure and inflation rate exhibit negative and insignificant effects on gross fixed private capital formation, with savings having a negative and significant effect while FDI, RGDP and Prime lending rate all revealed to have a positive and significant effect on gross fixed private capital formation with the previous value(s) of gross fixed private capital formation having a positive and significant effect on the present value(s) and they recommend encouragement of savings culture and creation of an enabling environment for investment to thrive.

Furthermore, Effiong, Odey, & Nwafor (2017) They analyze the impact of savings and investment on the growth of the Nigerian economy using a battery of contemporary econometric approach involving unit root test, co-integration test and error correction model and it was found that Gross Domestic Savings Gross Fixed Capital Formation Labour Force and Savings Facility are the main drivers of economic growth in Nigeria. Furthermore, evidence from the investment model shows that Real Gross Domestic Product and Gross Domestic Savings are the two drivers of Investment in Nigeria which means that if there is proper capital accumulation in the form of savings, investment would be great and sustainable and therefore they recommended that the government through the Central Bank of Nigeria (CBN) should ensure the reduction of reserve requirements of commercial banks in order to make available adequate funds in form of loans and advances for investment which will boost economic growth.

III. Model Specification

From the above reasoning (theoretical background), the model for this study was structured in line with the work done by Haruna & Inuwa (2013) who investigated the effect of savings on investment in Nigeria using the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) for the period 1980-2011. It was found that there is a long run relationship between savings and investment. But there are other variables that affect investment which will be given consideration. The model is therefore specified thus:

\[
GCF_t = \alpha + \beta_1 PLR_t + \beta_2 INFL_t + \beta_3 EXR_t + \mu_t 
\]

Where GCF is the gross fixed capital formation, PLR is prime lending interest rate, INF is inflation rate (measuring macroeconomic instability), EXR is real exchange rate, and \( \mu_t \) is a white noise disturbance term and \( \beta_1 - \beta_3 \) are parameters to be estimated. The apriori expectation is summarized as follows:

\[
\beta_1 > 0, \beta_2 > 0, \beta_3 > 0
\]

Therefore, the form of the error correction model would be:

\[
\Delta(GCF)_t = \alpha + \beta_1 \Delta(PLR)_t + \beta_2 \Delta(INF)_t + \beta_3 \Delta(EXR)_t + ECM_{t-1} + \mu_t 
\]

Where \( \Delta \) indicates the first difference of variables. ECM stands for the error correction term (the residual series created from the cointegrating equation); and \( t \) is a time subscript.

IV. Presentation and Analysis of Results

4.1 Presentation of Unit Root Results

The Augmented Dickey Fuller (ADF) is employed to test for stationarity of all the macroeconomic variables employed for the study. The results are presented on the tables below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>P-value @ level</th>
<th>t-statistic @ first difference(5%)</th>
<th>P-value @ 1st difference</th>
<th>Critical value (5%)</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFCF</td>
<td>0.0241</td>
<td>-4.636</td>
<td>0.0001</td>
<td>-2.972</td>
<td>I(0)</td>
</tr>
<tr>
<td>EXR</td>
<td>0.9076</td>
<td>-3.303</td>
<td>0.0148</td>
<td>-2.972</td>
<td>I(1)</td>
</tr>
<tr>
<td>INFL</td>
<td>0.0114</td>
<td>-6.167</td>
<td>0.0000</td>
<td>-2.972</td>
<td>I(0)</td>
</tr>
<tr>
<td>PLR</td>
<td>0.4044</td>
<td>-9.417</td>
<td>0.0000</td>
<td>-2.972</td>
<td>I(1)</td>
</tr>
</tbody>
</table>

Source: Extract from computer on regression of data using Stata version 13

The decision rule here is that when the t-statistics is greater than the critical value at 5% significance level and the probability value (P-Value) is less than 0.05, it shows that the variable is stationary at level otherwise the difference is taken until it becomes stationary.
The results show that all the variables tested were not stationary at level except inflation and gross fixed capital formation. Others were stationary only at first difference. The t-statistic values of all the variables are less than the critical values at the standard 5% significant level and their probability values are greater than 0.05 at levels except inflation and gross fixed capital formation. The fact that the variables were stationary at different order of integration however connotes the existence of unit root and indication for co-integration.

Therefore in order to avoid the misinterpretation bias that comes with analyzing co-integrated variables using the Ordinary least squares estimation technique, the study tested for cointegration using the autoregressive distributed lag (ARDL) cointegration bound test.

4.2 Co-integration Estimate

Sequel to the mix in the result of the unit root tests presented in table 4.3 above, this study carried out the co-integration test using the Auto-Regressive Distributed Lag Bound Co-integration test. Pesaran, Shin and Smith (2001) provide two asymptotic critical values (lower and upper) bounds for testing the existence of co-integration when the regressors are purely I(0) or I(1). A lower value assumes the regressors are purely I(0) while an upper value assumes the regressors are purely I(1). If the F-statistic falls outside the critical values, then a conclusive statement can be made regarding the nature of co-integration among the variables in the ARDL model, without a priori information on the order of integration of the independent variables. For instance, if the F-statistic is higher than the upper critical value, then the null hypothesis of no co-integration is rejected, suggesting the existence of co-integration among the variables. Conversely, if the F-statistic is lower than the lower critical value, then the null hypothesis of no co-integration cannot be rejected, suggesting the absence of co-integration among the variables. However, if the F-statistic falls between the upper and lower critical values, then the result is inconclusive.

| Estimated Model F-Statistics |
|-----------------------------|-------------------|
| 5.214                       |

<table>
<thead>
<tr>
<th>Critical Values</th>
<th>Lower Bound I(0)</th>
<th>Upper Bound I(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>4.29</td>
<td>5.61</td>
</tr>
<tr>
<td>5%</td>
<td>3.23</td>
<td>4.35</td>
</tr>
</tbody>
</table>

**Source:** Authors’ computation using STATA 15.

From the co-integration result presented in table 4.4 above, it was observed that the value of the F-statistics for the estimating model which is 5.214 is higher than the upper bound critical value at five per cent (4.35), suggesting the presence of co-integration among the variables in the model suggesting a long run relationship among the variables, thus the study proceeded to estimate both the short and long run ARDL error correction regression estimates.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUSTED D.GFCF</td>
<td>-0.0982</td>
<td>0.0872</td>
<td>-1.13</td>
<td>0.279</td>
</tr>
<tr>
<td>PLR</td>
<td>0.2548</td>
<td>0.3086</td>
<td>0.83</td>
<td>0.415</td>
</tr>
<tr>
<td>EXR</td>
<td>0.0106</td>
<td>0.0066</td>
<td>1.60</td>
<td>0.120</td>
</tr>
<tr>
<td>INF</td>
<td>-0.0471</td>
<td>0.0489</td>
<td>-0.85</td>
<td>0.401</td>
</tr>
</tbody>
</table>

**Source:** Author’s Computation using STATA 13
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Cameron & Trivedi’s decomposition of IM-test

<table>
<thead>
<tr>
<th>Source</th>
<th>chi2</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heteroskedasticity</td>
<td>36.00</td>
<td>35</td>
<td>0.4215</td>
</tr>
<tr>
<td>Skewness</td>
<td>5.54</td>
<td>7</td>
<td>0.5947</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.00</td>
<td>1</td>
<td>0.3168</td>
</tr>
<tr>
<td>Total</td>
<td>42.54</td>
<td>43</td>
<td>0.4911</td>
</tr>
</tbody>
</table>

4.3 Analysis of Long run and Short run ARDL Model of GFCF

The ARDL regression estimates on both the long and short run relationship of the model for this study is presented on table 4.3 above. From the table it is observed that prime lending rate (PLR) is not a significant determinant of gross fixed capital formation at 5% level of significance and positively related to it in the long run. Exchange Rate (EXR) is not a significant determinant of gross fixed capital formation at 5% level of significance and positively related to it in the long run. Inflation rate is not a significant determinant of gross fixed capital formation at 5% level of significance and negatively related to it in the long run.

Specifically, the study observed that a unit increase in PLR and EXR is expected to increase the GFCF by 0.2548 and 0.0106 units respectively in the long run while a unit increase in inflation is expected to decrease the GFCF by 0.0417 unit respectively in the long run.

In the short run, it was observed that prime lending rate (PLR) is a significant determinant of gross fixed capital formation at 5% level of significance and negatively related to it. Exchange rate (EXR) is not a significant determinant of gross fixed capital formation at 5% level of significance and negatively related to it. Inflation rate (INFL) is not a significant determinant of gross fixed capital formation and positively related to it.

Specifically, the study observed that a unit increase in PLR and EXR is expected to increase the GFCF by 0.0179 and 0.0024 units respectively while a unit increase in inflation rate is expected increase the GFCF by 0.0018.

From the adjusted estimate, the coefficient of the error correction term was correctly and negatively signed (-0.09) and statistically insignificant. The coefficient estimate of the error correction term of -0.09 implied that the model corrects its short-run disequilibrium by about 9 percent speed of adjustment in order to return to the long-run equilibrium. Furthermore, the coefficient of multiple determination of the model (R-squared) showed that the explanatory variables jointly explained about 92 per cent of the variations in the performance of the GFCF while the remaining 8% per cent of the variations is explained by variables not included in the model. The result of the coefficient of multiple determination showed that the model has a very good fit. Also, the result of the Durbin-Watson Stat of 2.00 showed that the estimate of the model is free from the problem of serial auto-correlation and that the model estimate is appropriate and can be used for policy recommendation.

V. Conclusion and Recommendations

The study examines the relationship between interest rates and investment in Nigeria from 1981 to 2019 using autoregressive distributed lag error correction approach. The specific objectives were to estimate the short and long run relationship as well as the error correction mechanism of interest rate, inflation rate and exchange rate on investment in Nigeria. In the process of doing this, the hypothesis that interest rate have impact on investment in Nigeria was validated as indicated by a probability less than 0.05 and a negative relationship with the growth of investment. Also the error-correction term indicated low speed of adjustment of 9.0 per cent.

The institutional and regulatory reforms in the banking sub-sector should be sustained with investment-friendly environment sustained. Furthermore, there should be increased awareness that will enhance investors’ confidence in the economy, and ultimately lead to more participation of investors in order to increase the rate of investment in the economy. While much remains to be done to ensure that the rate of interest of banking sector promotes investment in Nigeria, some growing evidences from previous research have indicated that low lending rate in Nigeria promotes investment. Based on these findings the following recommendations were made; the issue of high interest rate with hidden transaction costs must be vigorously addressed by the monetary authorities. The regulatory body should put in place policies that will stabilize the monetary policy rate (MPR) so as to keep the lending rate low in order to stimulate investment. The Central Bank should mandate banks to channel mobilized savings to investors in the form of loans. Monetary authorities should make policies which would help to boost the saving culture of the people. This could be done by increasing the deposit rate which would lure the people to deposit their money in banks thereby increasing the supply of loanable funds. This would lead to a fall in lending interest rate and eventually rise in investment.

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