DOMESTIC INVESTMENT AND ECONOMIC GROWTH NEXUS: A Re-visit for Nigeria

ABSTRACT

This study investigates the impact of domestic investment on economic growth in Nigeria, using annual secondary time series data spanning 37 years from 1981 to 2017 extracted from the CBN statistical bulletin. Real GDP was used to proxy economic growth, while the key explanatory variable is domestic investment with other control variables as capital expenditure, oil export earnings, exchange rate and inflation rate. The study embarked on pre-estimation test such as unit root test and the bounds co-integration test which informed our methodological choice of Autoregressive Distributed Lag (ARDL). The short run and long run estimates show that domestic investment has positive but insignificant impact on economic growth in Nigeria. This finding departs from those of previous writers due to the improved analytical framework employed in this study. On the basis of our findings, we recommend compulsory individual and national savings to boost the level of domestic investment in the country so as to achieve the much desired economic growth and development.

Key Words: Domestic Investment, Economic Growth, ARDL

1.0 INTRODUCTION

The concept of Investment has continued to occupy the front burner of economic literature from both empirical and theoretical angles. Investment is seen as one of the economic processes that countries attach great values to as an integral part of the economic growth. Essentially, investment could be domestically generated or could emerge from foreign sources. This study emphasizes on the former. However, both domestic and foreign investments have great implications for economic growth and development especially in an emerging market economy like Nigeria. From literature, authors in recent times have argued for domestic investment as key tool for economic expansion and development through capital formation. In the light of the above, [3] posits that domestic investment has a relationship with various economic variables, which made countries seek to guide the investment decision and create the appropriate climate for economic development and maximizing wealth, thus making researchers in the economy pay great attention to study investment in from several perspectives. Again, [23] domestic investment through the capital formation is not just paramount but serves as a prerequisite for the geometric acceleration of growth and development of every economy as it provides domestic resources that can be used to fund the investment effort of the economy. The essence of this economic growth is for the creation of economic and social overhead capitals (or costs), which leads to increase in national output and income through the creation of employment opportunities and reduction of the vicious circle of poverty both from the demand side and supply side. Furthermore, [13]

disclose that Investment both private and public comes with a lot of benefits such as job creation, increase in per-capita income, reduction in the level of poverty, increase in standard of living, and ultimately leads to output expansion. The study by [15] reveals that the multiplier effect of domestic investment is greater on economic growth episodes than those of foreign direct investment. However, unlike other study, they were quick to point out the inherent problem of instability in the value of domestic investment. Beside instability as identified, domestic investments (public and private) are grossly inadequate in less developed economies which are largely responsible for capital gap, infrastructural deficit and inappropriateness, poor human capital development as reflected in healthcare services and the quality of educational system.

Real Domestic investment could be linked directly with the capital spending on new projects in the sectors of public utilities and infrastructure such as roads projects, water connections, creation of urban plans and construction projects like housing and extensions of electricity and power generation, as well as social development in the areas of security, education, health and communication projects and tourism. These have tremendous implications for economic growth.

The debate on the roles of domestic investment in economic growth and development is an age long exercise starting from the classical, neo-classical and the neo-keynesians from the theoretical angle. However, the recent years, empirical evidence have re-generated a hit debates among scholars as regards its vitality in economic progress of nations, see [14; 13; 15; 3; & 23]. The quest for the attainment of economic growth and development has prompted the government to embark on massive reconstruction and public-sector investments. However, records of the past three decades have generated a lot of concern over the slow pace of industrial and infrastructural development which is directly determined by the volume of domestic investment. Though Nigeria has experienced an unprecedented increase in her revenue profile through oil exports, she has equally enjoyed cycles of an oil boom with successive governments harnessing the resources of the nation to execute its budget. Ironically, there has been an increase too in her expenditure pattern overtime. Paradoxically, it does not appear as if the increase in capital expenditures has translated into the increased capital formation and consequently economic growth and development. The problem becomes that Nigeria domestic investment as well as capital accumulation has not been growing and has declined by over 30% between 2000 and 2017 [28]. This is the crux of this study. Furthermore, Nigeria macroeconomic indicators show the pitiable performance of a Domestic investment for the period 1986 till date [4]. For example, domestic investment declined from 12.3% of GDP in 1991 to 8.3% of GDP in 1992, this may be partly due to the reduced public investment, which fell during the same period. Domestic investment then increased to 12.5% in 1993 and to 16% in 1994. Later, it fell continuously to 8.9% in 1996. Between 2001 and 2010, the ratio averaged 13%; it peaked at 16.2% in 2002 but fell again to 15.2% in 2010 [4]. The trends have continued to decline till date.

While previous studies [14; 13; 15; 3; & 23] employed the Ordinary Least Square approach, this study proposes the utilization of the Autoregressive Distributed Lag (ARDL) technique so as to simultaneously estimate unbiased and efficient short run coefficients and the long run dynamics. These would be the contribution to knowledge by this study.

In the face of this problem, this study attempts to investigate the impact of domestic investment on economic growth in Nigeria with the objectives of ascertaining the trends in domestic investment, its effects on economic growth and elicit other variables that have significant effects

on economic growth in the country. The study is structured into five distinct sections. Section one contains the introduction of the study. Section two reviews the literature while section three discusses the theoretical framework and analytical procedures. Section four presents and analyzes the data. Section five details out the summary, conclusion and recommendations.

2.0 EMPIRICAL EVIDENCES AND THEORIES
2.1   Review of relevant empirical literature on domestic investment and economic growth

A flurry of literature exists on domestic investment and economic growth. Though most of these studies are done for the developing countries, it applications in developed is not obvious negligible. This, amongst several studies includes [16; 11; 10; 26; 1; 17; & 25]. The flurry of literature on the relationship between domestic investment and economic growth in developing countries is attributed to the fact that developing countries are characterized by attractive but inconsistent investment policies. This is obvious in Nigeria as we moved from the era of regulatory control to deregulation and to guided deregulation. These array of empirical studies agreed that there is equilibrium between the growth proxy and the independent variables including domestic private investment. Two major events seem to have dimmed the relevance of the debate carried out in the different studies. The first is the array of estimation techniques and test procedures available to researchers. The second is the development in the Nigerian economy vis-à-vis, investment policies in the country. These events are precisely responsible for the resurgence in interest among researchers. The preceding events have led to the further consideration of the relationship between domestic private investments and economic by the authors using the error correction methods. From the literature reviewed, the authors argues that a slump in general economic activity will compel private investors to postpone their investment decision giving room for the boosting of foreign investment in the tradable sector while shrinking the non-tradable sector.

A recent perusal of empirical literature review that for Malaysia, [3] investigates the relationship between domestic investment and economic growth in that country, with the objective of ascertaining if domestic investment bears significant impact on RGDP. The study analysed annual data for the periods between 1960 and 2015 using Correlation analysis, Johansen co-integration analysis of Vector Error Correction Model and the Granger-Causality tests. The study found that there is a positive effect of domestic investment, exports and labors on economic growth in the long run, however, there is no relationship between domestic investment and economic growth in the short run. It is obvious from this study that in addition to domestic investment, exports and labour constitute major sources of economic growth in Malaysia.

From the Nigerian perspective, [13] examines the impact of domestic investment on economic growth in Nigeria using annual time-series data from 1970-2013. Multiple regression and co-integration methods were employed to analyze the data. The objectives of this study includes: to examine the impact of private and public investment on economic growth and to analyze the trends of private investment, public investment and economic growth in Nigeria from 1970-2013. The study divided government expenditure into productive and protective expenditures, and found out the crowding in and crowding out impact of government investment on private

investment. The result of the analyzed data illustrated that private investment and government productive investment had positive but insignificant impact on economic growth; while government protective investment had negative as well as insignificant impact on economic growth within the period under study. In addition, the study illustrated that government investment on administration, economic, social and community services crowded in private domestic investment but only investment on economic services was statistically significant for the period under study. Based on the results, the recommends that government should improve on its budget implementation, rationalization and give more priority to expenditures on economic and social services that make up for private investment, rather than expenditures on national assembly expenses as well as transfers that replaces private investment. In addition, deposit money banks should be encouraged to provide more long-term loans to the real sector of the economy.

Furthermore, [15] re-consider the empirical investigation of the link between domestic private investment and economic growth in Nigeria, using the Cob-Douglas model framework, the study estimated the model using Error Correction Modeling (ECM) approach with annual data covering 1970 to 2012. The study shows a significant relationship between domestic investment and real gross domestic product (RGDP) both in the long-run and short-run. The study thus recommends that foreign direct investment has a complimentary role to play in driving economic growth in Nigeria. This result though corroborates the findings of [13], it departs from it by documenting a short-run significant relationship between domestic investment and growth in Nigeria which clearly contradicts the report of the former.

Within the same discussion, [23] evaluates Nigerian domestic investment and its impact on Economic Growth. With Objective of ascertaining why domestic investment has remained stunted over the years, the study modeled economic growth as a function of domestic investment and government expenditure. By adopting the Co-integration test to determine the long run relationship between domestic investment and economic growth in Nigeria for the period of 1980-2016. The Granger causality test was utilised to determine the causality between domestic investment, and economic growth within the same period. The results reveal that a long run significant relationship exists between the domestic investment and growth. Under the period of investigation, Domestic Investment Granger cause economic growth in Nigeria and from the regression result, domestic investment positively influences real gross domestic product. The study thereby recommends that government should create an enabling environment for domestic investment to increase through the adoption of macroeconomic policies that will boost investment opportunities in Nigeria.

2.2.   THE HARROD-DOMAR GROWTH THEORY

The H-D model is popularly known as the two gap model in development literature. This theory was postulated by Sir Fredrick Harrods and Evsey Domar who attributed economic growth to total national savings, capital efficiency (MEC) and depreciation in capital stock. In their earlier analysis, the model for growth was limited to the closed economy [12].

Thus: $Y_g = f(s, k, \delta)$ (1)

$Y_g = \beta (s) - \delta$ (2)

In review of this theory, the early model of Harrod and Domar was built on the assumption of exogeneity of variables under consideration. Furthermore, technical progress was neglected as a key determinant of growth and finally, the assumption of fixed factor intensity which does not allow factor substitution is unrealistic.

In a revised work by the authors, the model was extended to the external sector where foreign capital inflow plays an amplifying role in achieving economic growth. This version of H-D model proves relevant to less developed countries (LDCs) like Nigeria which lacks the required savings capacity to stimulate the required minimum investment for growth. But, the extension of the scope to external sector opens up opportunities for LDCs to obtain funds from the international market for domestic investments to attain the desired growth rate.

The H-D model with international sector is:

$$Y_g = \beta \left(s + f \right) - \delta \tag{3}$$

Where $\beta \ldots. MEC$
$\quad s \ldots. savings$
$\quad f \ldots \ldots$ foreign capital inflow $\left(\frac{f}{y} \right)$
$\quad \delta \ldots \ldots depreciation$

This theory has become relevant to developing economies after the extension to international trade which serves as an integral source of foreign exchange inflow for LDCs to compliment domestic Investment. This theory provides the framework for your model specification.

3.0 METHODOLOGY OF THE STUDY
3.1 DATA SOURCE AND DEFINITION
The time series data on domestic investment, real gross domestic products, exports, exchange rate and inflation rate and government capital investment were collected between 1981 and 2017 from the Central Bank of Nigeria (CBN) online statistical publication, World Bank (WB) Data, and Index Mundi.

3.2 METHODS OF DATA ANALYSIS
The method of data analysis involves both descriptive and analytical procedures. The descriptive tools entail the use of graphs and tables. The analytical tools are based on econometric analyses. The empirical analyses involve the use of diagnostic tests such as unit root tests for stationary of each of the variables and co-integration to examine the long-run relationship among the variables. The parameters were estimated using Autoregression Distributed Lag (ARDL) technique. The choice of ARDL method of regression is based on its ability to simultaneously estimate the long run and short run dynamics of the model. In addition, so long as the variables are integrated of order zero and one, the result of the ARDL estimates posses the idea properties of unbiasedness, efficiency, consistency and sufficiency. The analyses were carried out using E-view 10.

Comment [c1]: Replace with Autoregressive

Comment [c2]: Use appropriate word

3.3 MODEL SPECIFICATION
RGDP = f(DIN, KEXP, OX, EXRT, INF)   (5)

$RGDP = b_0 + b_1 DIN + b_2 KEXP + b_3 OX + b_4 EXRT + b_5 INF + u$ (6)

$$LnRGDP = b_0 + b_1 LnDIN + b_2 LnKEXP + b_3 LnOX + b_4 LnEXRT + b_5 INF + u \qquad (7)$$

$$LnRGDP_t = b_0 + b_1 LnRGDP_{t-1} + b_2 LnDIN_t + b_3 LnKEXP_t + b_4 LnOX_t + b_5 LnEXRT_t + b_6 INF_t + u \quad (8)$$

Equation 3.4 above depicts the Autoregressive Distributed Lag Model to be estimated in the long run. However, in the short run, the error correction variable is incorporated to reflect the adjustment speed back to equilibrium in the short run. Therefore, the short run model is thus:

$$LnRGDP_t = b_0 + b_1 LnRGDP_{t-1} + b_2 LnDIN_t + b_3 LnKEXP_t + b_4 LnOX_t + b_5 LnEXRT_t + b_6 INF_t + ect_{t-1} + e_t \qquad (9)$$

A priori expectation

$b_o > 0$: The intercept term is expected to be positive

$b_1 > 0$: RGDP in previous year is expected to have a positive effect on economic growth

$b_2 > 0$: Domestic Investment is expected to have a positive effect on economic growth

$b_3 > 0$: Government Capital Expenditure is also expected to have positive impact on inclusive growth

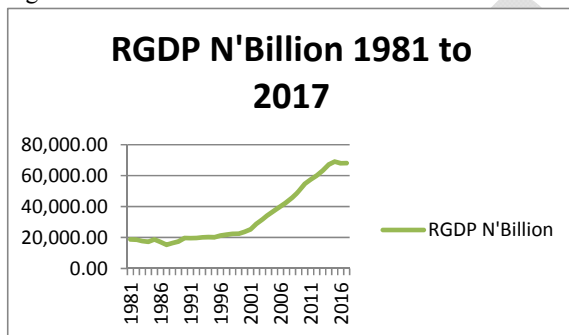$b_4 > 0$: Oil Export is expected to have negative impact on inclusive growth

$b_5 < 0$: Exchange Rate is expected to have a positive impact on inclusive growth

$b_6 < 0$: Inflation is expected to have a negative impact on inclusive growth

4.0 RESULTS DISCUSSION

4.1 Descriptive Analysis

Figure 4.1   Trends   in   Real   Gross   Domestic   Product   (RGDP)


RGDP N'Billion 1981 to 2017

Source: Author's computation using CBN data.

Real gross domestic product fluctuated between 1981 and 1990, however, it became stable from 1991 to 1996 and thereafter maintains a positive trend up to 2015 when the trend reversed due to the economic recession recorded as an aftermath of crude oil price fall. Though, this trend has reversed weakly but not convincingly.

Figure 4.2   Trends in Domestic Investment (DIN)

Comment [c3]: Include other causes of recession with reference because fall in oil price is not the only cause of recession that started in late 2015 in Nigeria. There are existing literatures on the causes of recession in Nigeria.

DIN N'Billion 1981 to 2017
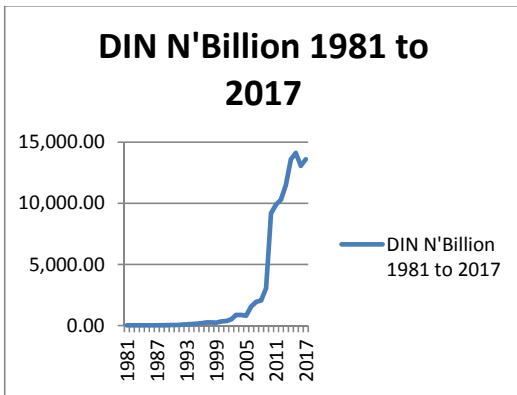
Source: Author's computation using World Bank data

The observed trend in Domestic Investment is similar to that of RGDP as earlier espoused. From figure 4.2 above, though unlike RGDP, exhibits a stable trend from 1981 to 1996, and the trend started rising from 1997 and got to its peak in 2014, thereafter, the trend reversed. This is very similar in cause as that of RGDP as earlier observed.

Figure 4.3   Trends in Capital Expenditure (KEXP)

KEXP N'Billion 1981 to 2017
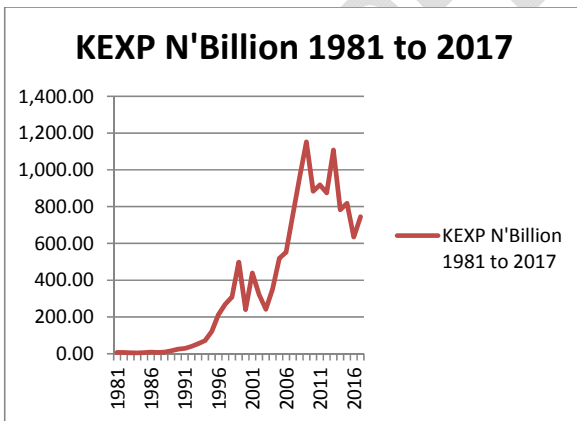
Source: Author's computation using World Bank Data

Capital expenditure of the Nigerian government has continued to vary with the variation in the value of export earnings and crude prices overtime. Periods of oil price stability is usually associated with stability in government's capital expenditure as volatility in oil price also makes capital expenditure fluctuates in the country. In this vain, from 1981 to 1989 capital expenditure was stable in the country, however, from 1990 to 1996 capital expenditure rose tremendously

reaching its first peak, afterwards, it fluctuated enormously up to 2004 and thereafter started rising till 2014 when due to economic recession and dwindling revenue inflow capital expenditure witnessed another stagger till date.

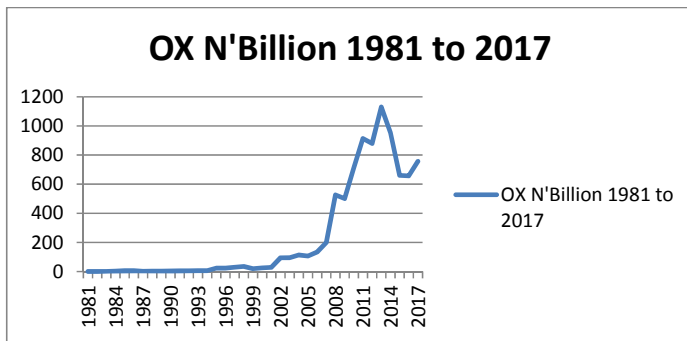Figure 4.4   Trends in Oil Exports (OX)

OX N'Billion 1981 to 2017

Figure 4.5   Trends in Exchange Rate (EXRT)

EXRT N:$ 1981 to 2017
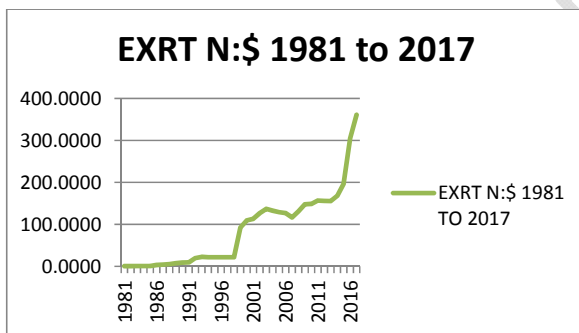
Source: Author's computation using CBN data

Figure 4.6   Trends in Inflation Rate (INF)

INF (%) 1981 to 2017
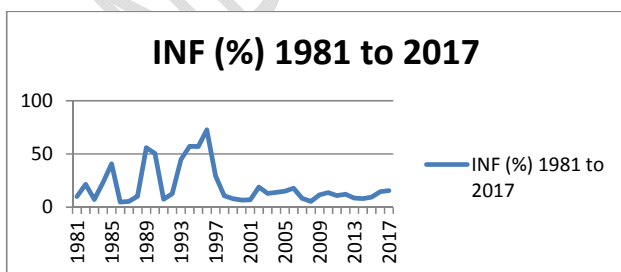
Source: Author's computation using World Bank data

Inflation rate in Nigeria has exhibited irregular trends over the years as shown in figure 4.3. In 1985 inflation stood at 40.7%, declined tremendously to 4.7% in 1986, rose again to 56% in

1989, but declined enormously to 7.5% in 1991. The irregular trend continued and got to its all time zenith in 1996 recording about 72.6%. In recent years, inflation rate has consistently declined as seen in the trends, with frequently fluctuations.

4.2 Summary Statistics

From the summary statistics, the measures of central tendency: mean, median and mode are computed as well as the measure of spread-standard deviation. The values of the means and standard deviation of each variable are compared to reveal the nature of distribution around the mean, and the real reveals that **RGDP**, **KEXP** and **INF** have mean values greater that their respective standard deviations, while the standard deviations of **DIN**, **OX** and **EXRT** are larger than their respective means. This implies a wider degree of spread for the latter series than the former. Again, the result reveal that all the variables are positively skewed within the range of 0.5816 and 1.5311, while the kurtosis values indicate that **DIN**, **OX**, **EXRT** and **INF** are normally distributed since their kurtosis values are at least 3, however, **RGDP** and **KEXP** have kurtosis values less than 3. An extension to Jarque-Bera statistics as shown by the value of its probability at 10% portrays all the variables to be significant except **KEXP**. The above statistics help us to conclude that the data are good enough for further analysis. We therefore progress to the pre-estimation analysis by testing for stationarity or otherwise of the data.

Comment [c5]: Reconstruct this interpretation to depict better communication and clearer understanding. Again if the values of the means varies greatly, this implies that the data should be transformed before using it for further analysis or else the result will be spurious.

Comment [c6]: Their kurtosis values are greater than 3 which indicates that they are not normally distributed.

Comment [c7]: In a normally distributed series, skewness is 0 and kurtosis is 3. Positive or negative skewness indicate asymmetry in the time series under study and kurtosis coefficient greater than or less than 3 suggest peakedness or flatness of the data respectively (Decarlo, 1997). Again the Jarque-Bera null hypothesis of normal distribution is rejected when the P-Value is <; 0.1 or 0.05 or 0.01 . Use this to reinterpret the result.

Comment [c8]: The highlighted assertion holds if the data are transformed to their natural logarithm, even if the null hypothesis of normal distribution is rejected.

Table 4.1: Summary Statistics

	RGDP	DIN	KEXP	OX	EXRT	INF
Mean	33313.81	2948.180	378.3383	233.9489	86.68251	19.98541
Median	22472.94	242.8998	269.6517	28.00000	92.52838	12.70000
Maximum	69023.93	14112.17	1152.796	1130.200	360.9660	72.80000
Minimum	15242.63	8.799480	4.100100	0.200000	0.636900	4.700000
Std. Dev.	18340.17	4887.702	372.3189	347.5131	88.61160	18.00978
Skewness	0.851749	1.423089	0.581649	1.260486	1.084005	1.531115
Kurtosis	2.182752	3.260826	1.961219	3.050491	4.118095	4.099847
Jarque-Bera	5.503439	12.59351	3.749836	9.801684	9.173541	16.32150
Probability	0.063818	0.001842	0.153368	0.007440	0.010186	0.000286
Sum	1232611.	109082.7	13998.52	8656.110	3207.253	739.4600
Sum Sq. Dev.	1.21E+10	8.60E+08	4990369.	4347553.	282672.6	11676.68
Observations	37	37	37	37	37	37

Source: Author's computation using CBN and World Bank Data

Table 4.2: Augmented Dickey Fuller (ADF) Unit Root Result

Variable	Method	At Level			At First Difference			Order
		T-statistics	5% critical value	Prob	T-statistics	5% critical value	Prob	
LnRGDP	ADF	-2.6242	-3.5403	0.2725	-3.9301	-3.5443	0.0211	I_1
LnDIN	ADF	-0.8186	-3.5403	0.9543	-5.0845	-3.5443	0.0012	I_1
LnKEXP	ADF	-0.6747	-3.5403	0.9675	-6.2782	-3.5443	0.0000	I_1
LnOX	ADF	-4.0602	-3.5443	0.0156	-	-	-	I_0
INF	ADF	-3.8043	-3.5443	0.0282	-	-		I_0
LnEXRT	ADF	-1.5930	-3.5403	0.7760	-5.6204	-3.5443	0.0003	I_1

Source: Author's computation using data extracted from CBN and WDI (Using eviews 10).
The unit root test shows that the variables are integrated of order zero and one. For instance, while LnOX and INF are stationary at levels, LnRGDP, LnDIN, LnKexp and LnEXRT are stationary at first difference. This therefore indicates that since the variables are integrated of different orders, a Co-integration test is required. However, since the stationarity test justifies the ARDL model, the bounds test approach for long run association is embarked upon.

4.3   Co-integration Test (Bounds Test Approach)

Table 4.3: ARDL Bound Co-Integration Test

Estimated Model: $LnRGDP_t = f(LnDIN_t, LnKEXP_t, LnOX_t, LnEXRT_t, INF_t)$		
Optimal Lags: (1, 0, 0, 0, 1, 1)		
F- Statistics: 7.89684*		
Level of significance	**Lower Bound**	**Upper Bound**
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

Source: Author's Computation using CBN and World Bank Data (Eviews10)

[24] recommends bounds for the critical value for the asymptotic distribution of the F-statistic. For various situation (e.g. different numbers of variables, (k+1)), they give lower and upper bound on the critical values. In each case, the lower bound is based on the assumption that all the variables are I(0), and the upper bound is based on the assumption that all the variables are I(1). If the computed F-statistic falls below the lower bound we would conclude that the variables are I(0), so no co-integration is possible, by definition. If the F-statistics exceeds the upper bound, we conclude that we have co-integration. Finally if the test statistic falls between the bounds, the test is inconclusive.

Table 4.3 shows that the F-statistics 7.215 is greater than the 1%, 2.5%, 5% and 10% lower and upper bound test and we can therefore conclude that there is a long run equilibrium relationship between economic growth, domestic investment and other determinants of growth as modeled in this study.

4.4 ARDL Estimation of Result

Table 4.4:   ARDL Long and Short Run Result
Dependent Variable: RGDP

Variable	**Long Run Estimates** Coefficient	t-stat	Prob	Variable	**Short Run Estimates** Coefficient	t-stat	Prob
				$\Delta (LnRGDP)_{t-1}$	0.8737*	8.9867	
$D(LnDIN_t)$	0.0531	0.2740	0.7861	$\Delta (LnDIN)_t$	0.0067	0.2305	0.8194
$D(LnKEXP_t)$	0.0463	0.2880	0.7755	$\Delta (LnKEXP)_t$	0.0058	0.3318	0.7426
$LnOX_t$	0.1557	1.2953	0.2062	$\Delta (LnOX)_t$	0.019**	1.7548	0.0906
$D(LnEXRT)_t$	0.0085	0.0653	0.9484	$\Delta (LnEXRT)_t$	-0.050**	-1.9648	0.0598
INF_t	-0.0022	-0.5612	0.1065	$\Delta (LnEXRT)_{t-1}$	0.051**	1.9216	0.0653
C	9.5258	26.316	0.0000	$\Delta (INF)_t$	0.0007	1.3559	0.1863
				$\Delta (INF)_{t-1}$	-0.001**	-1.9267	0.0646
Statistical Properties of Results				$CointEq_{t-1}$	-0.1262*	-7.8569	0.0000
R^2		0.994					
Adj R^2		0.993					

F-statistic	627.83
Prob(F-statistic)	0.0000
Durbin-Watson Stat	1.777
Akaike Info Criterion	-3.2592
Schwarz Criterion	-2.8633

* Implies significant at 10%   ** Implies significant at 5%
Source: Author's Computation using Data extracted from CBN 2016 Statistical Bulletin

4.5 DISCUSSION OF RESULTS

The estimation result in table 4.4 reveals that the estimated ECT coefficient in the short run is -0.12 (ECTt-1 = -0.1262) and significant at 1% level, thus indicating that over 12 percent of the dis-equilibrium due to the previous year's shocks is adjusted back to the long-run equilibrium in the current year.   This also indicates that, there is a significant long run relationship among the variables. The coefficient of DIN in the short run model at current period conforms to the expectation of positive relationship but it is not significant at 5%. Again, RGDP at previous period also conforms to theoretical expectation with positive sign and it is significant at 1% level. OX also conforms to a priori expectation with positive sign and it is also statistically significant at 10%. KEXP conforms to theoretical expectation but it is not significant in the short run. EXRT at current period conforms to a priori expectation with negative sign, but in previous period EXRT does not conform to theoretical expectation with positive signs. Both are statistically significant at 10% level. The alternate in signs between the coefficients of the current and previous exchange rate could be adduced to high rate of volatility in exchange rate of Naira. For the coefficients of INF, at current and previous periods, the former negates the expectation at showing a positive insignificant relationship between INF and RGDP, but the latter is in conformity with theoretical expectation with a negative sign that is significant at 10%. In summary, the short run estimates shows that all the variables are at one point or the other conform to theoretical expectation, while some were significant at one time, others were at another time.

In the long run, Domestic Investment (DIN) has a positive value of 0.0531 but not significant, showing that increase in domestic investment leads to increase in economic activities capable of promoting economic growth. The sized of the impact is as such, for every one percent rise in DIN, RGDP rises by 0.053 percent. This conforms to the a-prior expectation of a positive relationship. Though domestic investment have a positive impact on growth, it has failed to be significant as a result of the fact that domestic savings which translates into capital expenditure are low due to low income, low productivity (vicious circle). Within the same discussion, capital expenditure has a positive impact on economic growth in Nigeria, but it is not statistically significant. For every one percent point increase in KEXP, RGDP increases by 0.046 percent. The reason for this variable not having a significant impact on growth are widely due to the meagre budgetary provision for capital expenditure against recurrent expenditure and the preponderance of corrupt practices in executing capital projects. Oil export (OX) has a positive impact on growth but is statistically insignificant, with a 0.155 percent partial impact for every one percent rise in oil export earnings, while exchange rate (EXRT) indicates a positive effect on growth as rationalized by the J-Curve hypothesis and finally, inflation (INF) is negatively related to economic growth (RGDP).

Comment [c9]: Replace with the appropriate spelling.

The R^2 of 0.9946 for the model according to table 4.4 shows overall goodness of fit of the model and that 99% variation in the economic growth can be explained by the changes in the independent variables while the Durbin Watson test figure of 1.777 signifies the absence of serial correlation. The probability value of 0.00000 with F-Statistic value of 627.83 shows that the model employed in the analysis is of good fit.

5.0 CONCLUSION

This study re-examines the effects of domestic investment on economic growth in Nigeria from 1981 to 2017. The study adapts the models of previous researchers in same field [3; 23] by incorporating other explanatory variables to make the model robust. With adoption of a modern technique of data analysis (ARDL), as favoured by the pre-estimation unit root test depicts as departure for the convention Ordinary Least Square (OLS) technique adopted by previous studies. From the estimated coefficients, the found that in short run and long run, domestic investment has positive effects on economic growth in Nigeria, this finding is an improvement of previous studies' findings, however, it must be noted that DIN accumulation has been slow due to incidence of vicious circle of poverty in the country. The positive but insignificant impact of domestic investment variable on economic growth in the country portrays the fact that domestic investment is necessary for growth but overtime has not been sufficient. The study found that significantly, for domestic investment to champion the propensity of growth required moving Nigeria to developmental paths; it requires complements from both foreign and public sectors in terms of direct investments. Beyond this, obviously, in addition to vicious poverty circle, high rate of inflation which erodes the value of domestic currency has accounted for major capital investment outflow which depletes domestic investment. Within the same discussion, other key variables in addition to domestic investment which stimulate economic growth include: public capital expenditure, oil export earnings, and exchange rate, while inflation discourages growth.

This study which is significant on the basis of its policy implications to individuals, firms and the government of Nigeria recommends the following:

- All Nigerians should imbibe the savings culture which will help accumulate domestic savings which translates into domestic investment.
- Due to the insignificant but positive effect of domestic investment for the period investigated, the study recommends a compulsory national savings which will help promote domestic investment in the country and therefore stimulate economic growth.
- To attain higher growth of the economy, accumulated domestic investment should be complemented with improved capital expenditure directed at boosting the development of other sectors of the economy.
- Government should diversify into the non-oil sector as the oil sector alone cannot yield the desired growth and development that Nigerians are yearning for.
- Anti-Inflationary policies should be formulated and implemented by government so as to discourage capital/financial outflow which could have constitute investment in the economy.

REFERENCES

1. Akpokodje, J. G. (1998). Macroeconomic policies and private investment in Nigeria: Rekindling investment for economic development in Nigeria (pp.59-74). Proceedings of the Annual Conference of the Nigerian Economic Society.

2. Apostolo, N. G., & Crumbley, A. F. (1998). Handbook of Government. Accounting and Finance. New York, USA.

3. Bakari, S.(2017). The Impact of Domestic Investment on Economic Growth. New Evidence from Malaysia. Retrieved from https://mpra.ub.uni-muenchen.de/79436/

4. CBN Statistical Bulletin. (2016). Retrieved from http://www.cenbank.org/OUT/PUBLICATIONS/STATBULLETIN/ RD/2010/STABULL-2016.PDF

5. Delong, J. B., & Summers, L. H. (1990). Equipment investment and economic growth. The Quarterly Journals of Economics, 106(2), 445-502.

6. Devarajan, S., Swaroop, V., & Zou, H. (1996). The composition of public expenditure and economic growth. Journal of Monetary Economics, 37, 313-344.

7. Easterly, W., & Rebelo, S. (1993). Fiscal policy and economic growth: an empirical investigation. Journal of Monetary Economics, 32, 417-458.

8. Gbosi A. N. (2005). "Modern Public Finance and Fiscal Policy". Harey Publications Limited, Port Harcourt, Nigeria.

9. Ghazali, A. (2010). Analyzing the Relationship between Foreign Direct Investment, Domestic Investment and Economic Growth for Pakistan. International Research Journal of Finance and Economics, 47, 123-131.

10. Greenaway, D. & Morrissey, O. (1992), "Structural adjustment and liberalization in developing countries: What lesson have we learned? Kyklos, 46, 241 – 261.

11. Harrigan, J. & Mosely, P. (1991), "Evaluating the impact of World Bank Structural Adjustment tending. Journal of Development Economics 48, 419 – 427.

12. Harrod, R. F. (1948), Toward a Dynamic Economics: Some Recent Developments of Economic Theory and their application to policy – London: MacMillan.

13. Ilegbinosa, A.I, Michael, A. & Watson, I.S. (2015). Domestic Investment and Economic Growth in Nigeria: An Econometric Analysis. Canadian Journal of Social Sciences, 11(6), 70-79.

14. Kanu, S. I, Ozurumba, B.A &Anyanwu, F.A (2014). Capital expenditures and gross fixed capital formation in Nigeria. Journal of Economics and Sustainable development, the International Institute for Science, Technology and Education (IISTE).

15. Kalu, C. U & Mgbemena, O. N (2015). Domestic private investment and economic growth in Nigeria: Issues and further consideration. International Journal of Academic Research in Business and Social Sciences, 3(5), 302-313

16. Khan, M.S. & Reinhart, C. (1990), 'Private Investment and economic growth in developing countries" World Bank, 18 January, Pp. 19 – 27.

17. Mamatzakis, E. C. (2001). The Effects of Public Expenditure on private investment: an empirical application. In C. C. Paraskevopollos, T. Geogakopoulos & L. Michelis (Eds.), The assymetric global economy growth, investment and public policy (pp.68-79). Toronto: APF Press.

18. Musgrave, R. A., & Musgrave, P. B. (1978). Public finance in theory and practice. New York: McGraw-Hill Books.

19. Nasiru, I. (2012). Government expenditure and economic growth in Nigeria: Cointegration analysis and causality testing. Academic Research International, 2(3).

20. National Bureau of Statistics (2017). Federal Government of Nigeria: The Presidency - GDP Expenditure Report. National Bureau of Statistics available at www.nigerianstat.gov.ng

21. Nenbee, G. S., & Medee, P. N. (2011). Econometric analysis of the impact of fiscal policy on Nigeria's economic growth, 1960-2010. International Journal of Economic Development Research and Investment, 2(1).

22. Orji, A. (2012). Bank savings and bank credit in Nigeria: Determinates and impacts on economic growth. International Journal of Economics and Financial Issues, 2(3), 357-372.

23. Oyedokun, G.E & Ajose, K. (2018). Domestic Investment and Economic Growth in Nigeria: An Empirical Investigation. International Journal of Business and Social Sciences, 9(2), 130-138.

24. Pesaran, M.H., Smith, R.J., & Shin Y.,, Bounds Testing Approaches to the Analysis of Level Relationships, *Journal of Applied Econometrics,* **16**, (2001), 289-326.

25. Rashid, A. (2005). Public-private linkage. A multi variant co-integration analysis (pp.19-21). 21st Annual General Meeting and Conference, Pakistan Institute of Development Economics, Islamabad.

26. Serven, L., & Solimano, A. (1990). Private investment and macroeconomic adjustment: Theory, country experience, and policy implication. Unpublished, Macroeconomic Adjustment and Growth Division, World Bank.

27. Tan, B. W., & Tang, C. F (2011). The dynamic relationship between private domestic investment, the user cost of capital and economic growth in Malaysia. MPRA Paper No. 27964, Posted 08 January 2011/ 02:24. Online at http://mpra.ub.uni-muenchen.de/27964/

28. World Development Indicator (2018) World Bank Data.