Inflation, Interest Rate and Domestic Investment in Nigeria: Auto-Regressive DistributedLag (ARDL) Approach.

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ABSTRACT: Investment is the commitment of resources made with the hope of realizing benefits which are expected to occurover a reasonably long period of time. Achieving this at local level is often determined by some certain macroeconomic variables.

The study therefore, examined theinter-relationship between inflation, interest rate, and domestic investment in Nigeria (1986-2018). Thereafter, the study employed Augmented Dickey Fuller (ADF), Phillip Peron (PP) unit root test and Johansen Co-integration for pre-test, while Auto-Regressive Distributed Lag(ARDL) was used for the formulated objective.

The ADF and PP unit root test confirmed stationanary of the variables at level and at first level difference, the Johansen Co-integration established two co-integration relationships at 5% level of significance. The ARDL discovered that both previous performance of domestic investment and inflation rate increased domestic investment by 82.9% and 13.7%; while interest rate and public expenditure reduced it by 61.1% and 28.6% respectively.

The study therefore, concluded that over the years, the pastperformance of local investment, stable and steady increase in general price level encourage domestic investment in the country, while deficiency in government spendingand arbitrary increase in interest rate discourage domestic investment. It was recommended that government should formulate policies that would encourage local investor by spending more oninfrastructural facilities in order to create conducive environment for business, there should also be a regular interest rate reforms to discourage large disparity between lending and

deposit rate.

Keywords: Domestic investment, inflation, interest rate, Auto-Regressive Distribution Lag

I. INTRODUCTION

Domestic investment is very essential to economic growth and economic development, and it reveals the economic performance of a country. As such, the role of investment in an economy can hardly be overemphasized in both developed and developing economies(Chhibber, 2016). Investment is a central issue in macroeconomic theory and it plays an important role in economic growth and capital formation of a country which raises productive capacity of the economy and also promotes technological progress embodiment of new techniques. According to Akanbi (2010), investment can be used to solve economic problems such as, poverty, unemployment, recession, insecurity and so on. Thus, the level of investment becomes imperative to an economy.

Studies such as, Dornbush, Rudiger, Fisher, Stanley and Richard(1999); Pettinger (2019) opined that domestic investment is volatile because it depends on many variables such as, interest rate, inflation, exchange rate, savings, government policies, political instability and so on. These factors are responsible for the preponderance in the fluctuations of Gross Domestic Product (GDP) over the business cycle and thisaffirms thatinvestment is the mainstream of economic development of any nation. Nigerianeconomy classified as low savings and lower investment economy. One of the objectives of government is fostering sustained economic growth through improved domestic investment. Economic growth can only be attained by balancing



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investment and factors influencing investment (Ajakaiye, 2002).

Similarly, Oyedokun Ajose (2014) asserted that domestic investment in Nigeria is low compared to any country in BRICS economies Russia, India, China and Africa). Despite policies such as, protection and tax holidays for infant industries, liberal credit facilities for industrial and agricultural investments, interest rate policies and so on that have been implemented to improve domestic investment in the country reverse is the case. Because none of the policies and strategies have yielded the desired result of accelerated increase in domestic investments. Nigeria domestic investment as well as capital accumulation deficiency has unemployment, led to underemployment, decrease in government earning, poverty, insecurity challenges amongst others. Furthermore, in 2016, Central Bank of Nigeria (CBN) Statistical bulletin revealed that domestic investment performance in Nigeria is pitiable from 1986 till date. For instance; domestic investment declined from 12.3% in 1991, 8.3% in 1992 and increased in 1993 and 1994 respectively by 12.5% and 16.0%, it declined to 8.9% in 1996. Also, domestic investment witnessed subsequent increased between 2001 and 2010, with an average rate of 13%; investment reached its peak at 16.2% in 2002 but fell again to 15.2% in 2010 (CBN. 2015).

Also, inflation has been considered in literature has not necessary an enemy especially the creeping one which is required to boost economic activities. It becomes concerned when it increases progressively otherwise known as jumping inflation. An investor often considers inflation and interest rate. According to Charles (2012), the demand for funds depends on the opportunities available for using borrowed funds efficiently and profitably. This implies that profitability of funds determines it usage and need for its high demand. One of the factors responsible for its usage to investors especially locals is inflation. In Nigerian setting for instance, an investor that invests in real estate business would do so with the hope of expected appreciation in land and others goods in the future. Meanwhile, a one-digit inflation rate is both idea for investors and the economy because it encourages economic growth and return on investment for investors. Given this, Jossy (2020) remarks that absence infinitesimal rate of inflation makes economy dull. In Nigerian of today, inflation rate is a two-digit number. For instance, 15.68% and 16.52% in 2016 and 2017 respectively. As at August 2020, it was 13.22%.

II. STATEMENT OF THE PROBLEM

Many studies have been conducted on the relationship between domestic investment and macroeconomic variables. Studies likeWerigbelegha and Igbodika (2018), Anokwuru (2016), Okumoko and Akarara (2016), Ojima and Emerenini (2015), Ominyi and Okoh (2015), and Ologunde (2006) found a negative relationship between macroeconomic variable and domestic investment; while, Ifionu and Ibe (2015), Sajid and Sarfraz (2008) found no causal relationship between domestic investment and macroeconomic variables. Although, most of the reviewed studies focused on the impact of domestic investment on interest rate or domestic investment on inflation, only few studies considered the effect of domestic investment on interest rate and inflation. This study adds to the existing literature by looking at the relationship among interest rate, inflation and domestic investment in Nigeria. Also, most studies revealed spanned between 1980-2016, a part from Werigbelegha and Igbodika (2018) and George-Anokwuru (2016). Hence, this present study intends to investigate the inter-relationship between inflation, interest rate, and domestic investment in Nigeria (1986-2018).

III. LITERATURE REVIEW

Investment is the commitment of resources made with the hope of realizing benefits which are expected to occurover a reasonably long period of time. It involves an economic activity in which a government, individual and group buysassets with the hope of receiving adequate risk premium (returns) overtime. However, investment serves as a propellant of economic growth of most economies. On the other hand, domestic investment deals with asset acquisition that is often carried out by local financial inventors in order to forgo present consumption for future wealth creation. One major advantage associated with domestic investment is that, it discourages repatriation of profit earns by local investors to foreign land otherwise known as capital flight. Given this, Ayeni (2004) remarks that measures are taken by government of various countries Nigeria inclusive to encourage it for the purpose of improving productivity, employment generation, standard of living, innovation and reduce poverty level. Investments in various sectors of the economy

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examine causality between investment and exchange rate. The result showed that there is no causal relationship between investment and exchange rate.

stimulate aggregate employment output, demand income which also lead to increase in the government annual revenue for delivery of socio and industrial needs towards the growth and development of an economy. This entails that investment has a multiplier increase on national income which in turn increases savings for investment, consumption and aggregate demand level.

Domestic investment, interest rate and inflation have generated lots of contradictions in economic thinking. Some studies opined that inflation and interest rate have positive relationship with domestic investment, whereas others argued that inflation and interest rate have negative relationship with domestic investment. The study by George-Anokwuru (2016)studied the relationship betweeninterest rate and domestic private investment in Nigeria from 1980 to 2015 using Ordinary Least Square (OLS) technique on variables such as; Gross Domestic Product (GDP), real interest rates and prime lending rates. The findings showed that the real interest rate and prime lending rates are negatively related to domestic investment and statistically significant at 5%. Similarly, Ojima and Emerenini (2015) examined the effect of interest rate on investment in Nigeria using OLS on variables. Findings reveled high interest rate negated investment as an increase in interest rate by 1% reduced investment by 14%. Thus, there exist an inverse relationship between investment and interest rate in Nigeria.

Olubanjo, Atobatele and Akinwumi (2010) researched the inter-relationships among interest rates, savings and investment in Nigeria between 1993 and 2010 using two stages least square method(2LS). Result showed that decrease in the real lending rate would not result automatically into increased domestic investment in Nigeria.

Hitlar (2015) investigated the impact of interest rate liberalization on investment in Nigeria from 1970-2012, using Vector autoregressive model (VAR) on macroeconomic variable such as; interest rate, market capitalization rate, public expenditure, trade openness and investment. The result indicated that a long run relationship exists among the variables. The result further revealed that all the variables (interest rate, market capitalization rate, public expenditure and trade openness) have significant impact on investment.

Sajid and Sarfraz (2008) investigated the causal relationship between investment and exchange rate using vector error correction model (VECM) to

Okumoko and Akarara (2016) carried out a research on the impact of monetary policy rate on savings and investment in the Nigerian economy for the period of 1960-2016 using Vector autorgressive technique on variable such as; monetary policy rate (MPR), Saving rate (SAVR), total investment (TIVR) and Gross Domestic Product (GDPR) proxy for growth. Findings revealed that increase in MPR increases both SAVR and TIVR in short run and long run. More so, MPR has positive relationship with GDPR. It found unidirectional causality between MPR to GDPR and a unidirectional causality run from SAVR and GDPR.

Osundina and Osundina (2014) carried out a research on interest rate as a link to investment decision in Nigeria using Mundell Flemming Model and OLS technique, interest rate was used as a dependent variable and other variables such as; gross domestic product, investment level, government spending, debt and exchange rate were the independent variables. It was found that there is a link between interest rate and investment decision in Nigeria.

Using four indicators Ucan and Ozturk (2011) studied the financial determinants of investmentin Turkey using the Vector Autoregressive (VAR) Model. The indicators used were total liquid liabilities of financial intermediaries, domestic credit to the private sector, and credit provided by banks, and a composite index combining all the three indicators. The results specified a direct relationship between all four indicators of financial development identified and domestic investment. The results also established that inflationand real interest rate negatively affected private investment, while private investment was positively affected by real per capita GDP growth.

Agwu (2015)used Autoregressive Distributed LagModel (ARDL) to examine the determinant of investment inNigeria. The result showed that past income level, capital investment, government size and interest rate were therobust major determinants responsible for domestic investment in Nigeria with these variables having a positive effective on private investment. Exchange rate and inflation had a non-significant effect on private investment in Nigeria.

Ahmad and Qayyum (2008) investigated effect of government spending and macro-economic

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uncertainty on private investment in services sector in Pakistan from 1972 to 2005, using Autoregressive Distributed Lag (ARDL) on macroeconomic variables like; real private fixed investment in services, real gross domestic product, real government consumption expenditure. The results showed that government spending and interest rate affect private investment in services sector in Pakistan. Also, macroeconomic instability and uncertainty affect the private investment negatively.

IV. THEORETICAL FRAMEWORK AND **METHODOLOGY**

This study adopted the neo-classical theory of investment and Keynesian theory of investment as presented by Ofori and Asumadu (2018) and Keynes (1937). Ofori and Asumadu (2018) assume that investment in an economy depends on three factors which are interest rate, inflation and income; while, Keynes (1937) assumes that investment is purely determines by interest rate with the assumption that interest rate is a purely monetary phenomenon which its decrease leads to increase in investment. Ofori and Asumadu (2018) model is expressed mathematically below:

 $I_t = f(R_t \text{ , INFL}_t, Y_t) \ldots \ldots i$

 I_t = Investment, R_t =Rate of Interest, INFL $_t$ = Inflation, Y_t = Level of Income

The Keynesian model is expressed as follow

 $I_t = f(i) \dots ii$

Where

i = interest rate

The schema for the Keynesian theory holds as follow

 $\uparrow I_t = \downarrow i \dots iii$

The model for this study was built on Ofori and Asumadu (2018)'s model with additional variables that influence domestic investment. The basic mode of Ofori and Asumadu (2018) is given below as follow;

 $I_t = f(R_t, INFL_t, Y_t) \dots iv$

Modifying equation iv to accommodation other variables we have

 $DINV_t = f(INFL_t, INTR_t, PUBE_t, MS_t)....v$

DINV_t = Domestic investment, INFL = Inflation rate, INTR_t = Interest rate, PUBE_t= Public expenditure, MS= Money supply.

Putting equation v in econometric form, we have;

 $DINV_t = \pi_0 + \ \pi_1 INTR_t + \pi_2 INFL_t + \pi_3 PUBE_t + \pi_4 MS_t + \mu_t \dots \quad \dots \quad vi$

The autoregressive distributed lagged bound co-integration test of equation v is presented below as:

$$\begin{split} \Delta \text{DINV}_t = \ \omega_1 \text{DINV}_{t-1} \ + \omega_2 \text{INFL}_{t-1} + \omega_3 \text{INTR}_{t-1} \ + \omega_4 \text{PUBE}_{t-1} \ + \omega_5 \text{MS}_{t-1} \ + \beta_0 \ + \sum_{i=1}^p \beta_1 \ \Delta \text{DINV}_{t-i} \\ + \sum_{i=0}^p \beta_2 \ \Delta \text{INFL}_{t-i} \ + \sum_{i=0}^p \beta_3 \ \Delta \text{INTR}_{t-i} \ + \sum_{i=0}^p \beta_4 \ \Delta \text{PUBE}_{t-i} \ + \sum_{i=0}^p \beta_5 \ \Delta \text{MS}_{t-i} \ + \delta t \end{split}$$

Where: ω_1 - ω_5 are the long run multipliers and δt is the white noise error

The rationale for modifying the equation with the additional two variables was because of two reasons. First, government expenditure especially capital expenditure plays a vital role on level of investment at national level. For instance, the neoclassical growth model affirms that continuous deficit spending is an essential tool to increase capital accumulation and steady state level of output per

capital in an economy. Secondly, apex bank determines level of investment in the economy through the use of their different monetary policy such as increase or decrease in money supply. As a result of these two factors, those variables were included in the model in order to empirically validate their effect on domestic investment.

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The related a priori expectations are: $\omega_1>0$, $\omega_1<0$, $\omega_3>0$, $\omega_4>0$ and $\omega_3>0$ **Table 1: Measurement of Variables**

Variables	Measurement	Source
$DINV_t$	Expressed as a ratio of total investment in	International Monetary
	current local currency and GDP in current	Fund
	local currency	
INTR _t ,	Real interest rate is the lending interest rate	Word Bank Development
	adjusted for inflation as measured by the GDP	Indicator, 2018
	deflator.	
INFL _t	Inflation is measured by the consumer price	Word Bank Development
	index reflects the annual percentage change in	Indicator, 2018
	the cost to the average consumer of acquiring	
	a basket of goods and services that may be	
	fixed or changed at specified intervals, such as	
	yearly.	
$PUBE_t$	Current and capital expendituresto GDP	CBN Statistical Bulletin
		2018
MS_t	The sum of currency outside banks to GDP	CBN Statistical Bulletin
		2018

Researchers' compilations (2020)

Presentation of Results and Interpretation.

Table 2: Descriptive Statistics

Table 2. Descriptive Statistics					
	DINV _t	INFL _t	INTR _t	PUBE _t ,	MS _t
Mean	31.76906	20.16281	0.245625	1938.038	5333.082
Median	30.16000	12.55000	4.280000	1018.087	1387.643
Std. Dev.	13.09067	18.53154	17.55367	2070.027	7120.177
Jarque-Bera	2.278644	14.47070	5.181608	4.273369	7.235491
Probability	0.320036	0.072100	0.074096	0.011804	0.206843
Observations	32	32	32	32	32

Source: Researchers' Compilation from E-view 9

Table 2 shows the descriptive statistics of the five variables identified in the model from 1986 to 2018. The mean values of domestic investment, inflation rate, public expenditureand money supplywere relatively high. Implying that over the year there was an increase in number of local investors that are investing in every sector of the country, persistent rise in general price level, deficit spending and high volume of money in circulation. Whereas, interest rate had lowest mean value, implying that lending rates is infinitesimal over the years. The same conclusion was reached for the median value for all the variables. One of the

assumptions of the regression model is that the error term should be normally distribution. The Jarque Berra statistics used to confirm the normality of the variables showed that all the variable excerpt public expenditure had p-value less than 0.05 significance level. Therefore, in the model above domestic investment, interest rate, inflation, and money supply were all normally distributed. Since their p-values were greater than 0.05 the null hypothesis was rejected. Therefore, implying that the population residual is normally distributed which fulfills the assumption of a good regression line.



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Table 3: Unit root test

Augmented Dickey Fuller unit root test				Phillips-Per	ronunit root t	est		
Variable	Test Statistic	5% critical	Level	S/NS	Test	5% critical	Level	S/NS
		value			Statistic	value		
DINV _t	/-5.502089/	/2.960411/	I(1)	S	/5.839669/	/2.960411/	I(1)	S
INFL _t	/-4.400313/	/-2.991878/	I (0)	S	/6.340606/	/2.963972/	I(1)	S
INTR _t	/-5.523656/	/2.957110/	1(0)	S	/-5.523656/	/2.957110/	I(0)	S
PUBE _t	/3.020686/	/1.756434/	I(1)	S	/4.123055/	/2.960411/	I(1)	S
MS _t	/2.963972/	/1.054882/	I(1)	S	/2.960411/	/1.752098/	I(1)	S
S indicates Stationary								

Source: Researchers' Compilation from E-view 9

The findings showed that all the variables in the model displayed absence of unit root problems at level and first level difference. Therefore, confirmed

the used of auto-regressive distribution lag as stated by Pesaran, Shin and Smith (2001).

Table 4: Johansen Co-integration

Trace Statistics			Maximum Eigenvalue			
\mathbf{H}_{0}	Trace Statistics	Critical value at 5% level	Prob	Max-Eingen Statistics	Critical value at 5% level	Prob
r = 0	106.7641	69.81889	0.0000*	53.79606	33.87687	0.0001*
r = 1	52.96803	47.85613	0.0153*	25.95904	27.58434	0.0795
r = 2	27.00899	29.79707	0.1014	15.64063	21.13162	0.2465
r = 3	11.36836	15.49471	0.1898	9.264070	14.26460	0.2648
r = 4	2.104294	3.841466	0.1469	2.104294	3.841466	0.1469
* deno	* denotes rejection of the hypothesis at the 0.05 level			* denotes rej 0.05 level	ection of the hypo	othesis at the

Source: Researchers' Compilation from E-view 9

The Johansen's result in table 4confirmed long-run relationship between the variables in the model at null and at most one. Implying that all the variables were capable of cause changing among them both now and the future.

VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	НО
0	-862.6189	NA	9.070978	57.84126	58.07479	57.91597
1	-742.4203	192.3178*	1.639876*	51.49468	52.89588*	51.94294*
2	-717.2453	31.88829	1.889126	51.48302*	54.05188	52.30482

^{*} indicates lag order selected by the criterion

Finding from the VAR lag order shows that majority of the lag selector criteria chose optimal lag length of one. Therefore, the study selected optimal lag of one in running the ARDL.

Table 5: Long-run Auto-Regressive Distributed Lag (Dependent Variable; Δ (DS)

			5 (1 - 1 - 1 - 1 - 1 - 1	
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DINVT(-1)	0.8290	0.1240	6.6851	0.0000**
INFLT(-1)	0.1365	0.0458	2.9803	0.0069**
INTRT(-1)	-0.6106	0.2070	-2.9498	0.0356**
GEXP(-1)	-0.2859	0.1020	-2.8029	0.0456**
MST(-1)	0.0006	0.0004	1.4086	0.1729

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1.0753	0.2939

 R^2 =0.962176; Adjusted R-squared = 0.952720; Prob(F-statistic) = 0.000304

** indicates significance @ 5% level

Source: Researchers' compilation from E-view 9

6.3585

The findings from Table 5 shows the longrun auto-regressive distributed lag result using maximum lag period of one. Domestic investmenthad a coefficient value of 0.8290 with the t-statistic (6.6851) greater than the student t-test $(t_{0.05}=2.042)$ at 5 % level with corresponding p-value of 0.0000. This shows that domestic investmentwas statistically significance at 5% level. The economic implication of this finding is that current performance of domestic investment in Nigeria is often determined by the previous year performance of local asset or item acquired by local investor to generate income.

The coefficient of inflation ratewas 0.1365 which was positive with p-value of 0.0069 and tstatistic (2.9803) greater than the student t-test ($t_{0.05}$ = 2.042) at 5 % level. The positive sign of the inflation rate was in consonance with the a priori expectation. This finding has two economic implicationson domestic investment. First, creeping increase in general average price level of goods and services produces within the economy encourage local financial inventors to forgo present consumption for future wealth creation which encourage investment. For instance, an investor that intends investing in real estatewould do so with the hope of expected appreciation in land and others goods associated with it. Secondly, creepy inflation is not harmful to an investor especially local ones and the economy. For an investor, it makes it easy to off-set debt with appreciation on fixed assets; while to the economy it encourages growth, since zero inflation or deflation will make economic activities dull. Also, it has been argued and approved in the literature that not more than 3% level of inflation is necessary or required to boost economic activities. Study carried out by Ucan and Ozturk (2011) discovered a contrary finding with the conclusion that inflation and real interest rate negatively affected private investment, while private investment was positively affected by real per capita GDP growth.

The coefficient of interest rate was -0.6106 and significant at 0.05 level. The negative sign of the interest rate was in consonance with a priori expectation. In the case of interest rate, its economic implication is that increase in lending rates would reduce the demand for funds by local investors;

therefore, reduce productivity levelwithin the economy. Also, according to Charles(2012) the demand for funds depends on the opportunities available for using borrowed funds efficiently and profitably. That is, the rate of return on investment determines its usage and demand. Also, demand for and the supply of funds determine the general interest rate level. This finding was also in line with the study of George-Anokwuru (2016), Ojima and Emerenini (2015) and Ucan and Ozturk (2011) that confirmed that interest rate negatively affected investment which have adverse effect on real GDP growth.

expenditure Total government had anindirect (-0.2859) relationship on domestic investment and statistically significant at 5% significance level. This finding against the a prioriexpectation.The negative natureof government expenditure could be attributed to two main reasons in Nigerian context. First, Nigerian recurrent expenditures are often greater than capital expenditure. Therefore, this reduces the rate at which investments such as infrastructure like; electricity, road and so on could encourage local investors to invest. Secondly, funds meant for capital expenditure are not judiciously spentfor the purposes. Also, reduction in government expenditure reduces the money in circulation therefore serve as an essential fiscal policy toolemploy by governments to stabilize the economy. All these factors could be responsible for inverse relationship that was confirmed between expenditure domestic total government and investment. Study like Agwu (2015) discovered a contrary conclusion on it and confirmed that government size influenced domestic investment in Nigeria.

The coefficient of one lagged period of money supply was 0.0006which was positive and non-significant at the conventional level of 0.05 and 1.0 level with p-value of 0.1729. The implications of this findings on domestic investment is that stock of money within the economy at a point in time that include demand deposit, currency in circulation and fixed account do not jointly influencetotal domestic investments in current local currency. The nonsignificance of money supply in Nigerian situation could be attributed to low capital based of Nigerian

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financial institution. According to Falade, Aladejana and Oluwalana (2018) developing countries like Nigeria are characterized with local financial markets that lack sufficient funds to stimulate economic

growth and development. So, this contributes infinitesimal percentage to domestic investment which drastically reduced economic growth.

Diagnostic Checks for the ARDL bounds model

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.433123	Prob. F(1,23)	0.5170
Obs*R-squared	0.572984	Prob. Chi-Square(1)	0.4491

Source: Researcher's Compilation (2020)

The LM test confirmed that no problem of serial correlation in model because its p- value was greater than 0.05 which implies that the model has no serial correlation.

F-statistics for testing the existence of long-run co-integration

Model	F-statistic			
$DINV_t = f (INTR_t, INFL_t, PUBE_t, MS_t)$	4.263298			
Narayan (2005)	K= 4, n=33			
Critical Value	Lower bound	Upper bound		
1%	4.768	6.670		
5%	3.354	4.774		
10%	2.752	3.994**		
K indicates number of independent variables & n number of years, ** denote significant at 10%,				

Source: Researcher's Compilation (2020)

The findings confirmed that the F-statistic > critical upper bound value at 10% significance level; there established a long-run co-integration relationship among domestic investment and the independent variables identified in the model.

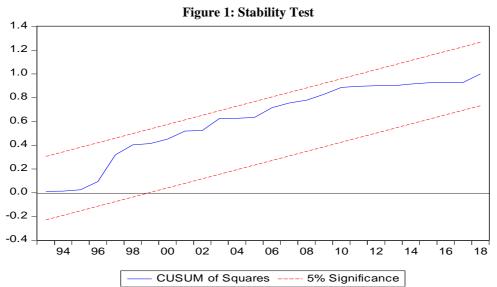


Figure 1 shows that the CUSUM of square chart lies within the 5% significance boundarywhich proved that the variables in the model were stable.

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V. CONCLUSION AND RECOMMENDATIONS

From the findings, it was obvious that performance previous of domestic investment, inflation rate, interest rate and public expenditure were the significant factors that affected domestic investment in Nigeria. Given this, the study concludes that over the years, the past performance of local investment, stable and steady increase in general price level encourage domestic investment in the country, while deficiency in government spendingand arbitrary increase in interest rate discourage domestic investment. Therefore, the study recommends that government and policy makers should formulate policies that would encourage local investor by spending more oninfrastructural facilities in order to createconducive environment for business, there should also be a regular interest rate reforms to discourage large disparity between lending and deposit rate, and provision of effective economic policy to ensure that inflation rate is kept at minimum level especially at 1-digit unit.

REFERNCES

- [1]. Abbas, V. (2004). What determines private investment in Iran? International Journal of social Economics, 31(5), 457-468.
- [2]. Agwu, C. (2015). Determinant of investment in Nigeria: An econometrics analysis. Journal for studies in Management and Planning, 1(3), 418-430.
- [3]. Ajaikaiye, D. O. (2002). Economic development in Nigeria. A review of experience during 1980s. Niger monograph services, 1.
- [4]. Ahmad, I. & Qayyum, A. (2008). The effect of government spending and macro-economic uncertainty on private investment in services sector: Pakistan institute of development Economics ISSN 1450-2275.
- [5]. Ayeni, R. K. (2004). Macroeconomic determinants of private sector investment – ARDL approach: Evidence from Nigeria. Global Advanced Research Journals, 3(1), 4-12.
- [6]. Badawi, A., (2004) Private Capital Formation and Macroeconomic Policies in Sudan: Application of a Simple Co integrated Vector Autoregressive Model. Department of Economics, University of Khartoum.

- [7]. Central Bank of Nigeria (2015). The Nigerian financial system, in briefs, 1997 special edition, CBN, Abuja.
- [8]. Central Bank of Nigeria (2016): Education in economics seriesNo. 3 Interest Rate.
- [9]. Chhibber, A. (2016). Reviving private investment is key. http://www.business-standard.com/article/ opinion/ajay-chhibberreviving-private-investment-iskey-116051400709 1.htm
- [10]. Dapaah-Yeboah, A. (2016). The impact of interest rate on domestic investment in Ghana. A Master's thesis submitted to the department of economics, Kwame Nkrumah University of science & technology.
- [11]. Dornbush, Rudiger, Fisher, Stanley and Startz Richard (1999). Macroeconomics, Mc Graw-Hill International Editions, New York, 1(70):960-971.
- [12]. Falade, A. O. O., Aladejana, S. A. & Oluwalana, F. A. (2018). External debt in Nigeria: How sustainable using Heavily Indebted Poor Countries (HIPC) indicators? AAU Anal of Accounting, Educational and Social Research, 5(2), 34-43.
- [13]. George-Anokwuru, C.C.(2017). Interest rate and domestic investment in Nigeria. IIARD International Journal of Economics and Business Management ISSN 2489-0065, 3(5)1-7.
- [14]. Greene, J. & Villanueva, D. (1991). Private investment in developing countries. IMF Staff Papers 38 (1), 33-58.
- [15]. Jossy, E. P. (2020). Selected macroeconomic variables and their effects on manufacturing sector performance in Nigeria. A long project submitted to the department of Economics, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria
- [16]. Hitlar, I. (2015). The impact of interest rate liberalization oninvestment in Nigeria; An M.Sc. dissertation submitted to theDepartment of Economics Faculty of the Social Sciences, University of Nigeria, Nsukka.
- [17]. Ifionu, E. P. & Ibe, R.C. (2015).Inflation, interest rate, real gross domestic product and stock prices on the Nigerian stock exchange: Research Journal of Finance and Accounting, 6(14), 1-9.
- [18]. Muhammad, H., & Mohammed, N. (2004). Determinants of interest rate spread in Nigeria: An empirical investigation. NDIC Quarterly.



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- [19]. Nkurikiye, J. & Uwizeyimana, E. (2016). Effect of GDP, interest rate and inflation on private investment in Rwanda. International Academic Journal of Economics, ISSN 2454-2474. 3(1):1-17.
- [20]. Ojima, D.& Emerenini, F. M. (2015). Impact interest rate oninvestment Nigeria. Developing Country Studies, 5(3), 103-109.
- [21]. Ofori, D. & Asumadu, G.(2018). Real interest rate and investment nexus: Global Journal of Management and Business Research Finance, 18(3).1-22.
- [22]. Olokgunde, A., Elumilade, D.& Saolu, T. (2006). Stock market capitalization and interest rate in Nigeria: A time series analysis.International research Journal of finance and economics, 4(1), 54-67.
- [23]. Okumoko, T. P. & Akarara, E. A. (2016). The impact of monetary policy rate and investment in the Nigerian economy. FUNAIJournal of humanities and social science, 2(1), 39-53.
- [24]. Ominiyi, S.O.& Okoh, I.E. (2015) Savings as a predicator forsustainable economic growth in Nigeria. International research Journal of finance and economics, 1(1), 285-294.
- [25]. Osundina, J. A. & Osundina, C. K. (2014). Interest rate as a link to investment decision in Nigeria (Mundell - FlemmingModel). Journal of Economics and Finance (IOSR-JEF) 2(4), 08-14.
- [26]. Oyedokun, G. M. & Ajose, K.(2018). Domestic investment and economic growth in Nigeria.International journal of business and social science, 9(2):130-137.
- [27]. Pesaran, M. H., Shin, Y. & Smith, R. J.(2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16(2), 289–326.
- [28]. Pettinger, T. (2019). What would Keynes do? Octopus press, ISBN 978-1844039807.
- [29]. Sajid, & Sarfraz M. (2008). Saving and economic growth in pakistan: An issue of causality. Pakistan Economicand Social Review, 64(1), 2-17.
- [30]. Ucan, O., &Ozturk, O. (2011), Financial determinants of investment for Turkey. Journal for Economic and Social Studies, 1(1), 21-32.
- [31]. Uremadu, S. (2006). Real interest rate and savings mobilization in Nigeria, www. eajournals.org.

- [32]. Werigbelegba, A.& Igbodokia, M. (2018). The analysis of interest rate determination and its effect on economic growth in Nigeria. European Journal of Accounting, Auditing and Finance Research, 6(7), 46-53.
- [33]. Vaish, A. S. (2007). Macroeconomic Theory. India: McGraw Publishers.