INSECURITY AND DOMESTIC INVESTMENT IN NIGERIA

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ABSTRACT
The paper sought empirically to answer the question, of whether insecurity significantly affects the value of domestic investment in Nigeria during the period 1999-2020. Specifically, the paper examined the effect of insecurity, interest rate, inflation rate, and money supply on investment. Annual time series data were extracted from the CBN statistical bulletin and World Development indicator. Using the terrorism index as a proxy for insecurity, the OLS multiple regression model captured domestic investment as a function of insecurity and selected macroeconomic variables. Results indicated a significant effect of insecurity, interest rate, inflation rate, and money supply on domestic investment in Nigeria. However, money supply velocity had a positive effect on domestic investment, while interest rates, inflation rates and insecurity adversely affected domestic investment during the period. The paper recommends deliberate and frontal political will by the government to curb insecurity and food inflation to attract investments in the domestic economy.
Keywords: Domestic investment, Money supply velocity, Inflation, Insecurity
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INTRODUCTION
The Nigerian economy witnessed tremendous growth in the early and late 1970's as a result of the oil boom which increased investments especially in the public sector (Ayeni, 2014). However, following the oil glut and consequent decline in market price of oil in the mid- 1980's, investments equally declined drastically resulting in decline in economic growth. For example, during the oil boom, gross investment as a percentage of GDP was 16.8% whereas it declined to 9.5 and 8.7 percent in 1984 and 1985 due to the depression (World Bank, 1986). Soludo (2004), observed erratic trend in aggregate domestic investments since independence as the share of GDP rose from about 10.7% in 1960 to 18.3% in 1995 representing a growth rate of 11% within the period. Evidently, gross domestic investments declined to 6.5% in 1984 and 5.8% in 1995; as a result of civil war and advent of petroleum.

Various reasons such as low level of investments, inadequate investment funds, weak policy framework, and hostile investment climate have been alluded as possible causes of slow growth and inadequate investment in Nigeria. Investment would not strive in a country characterized by social disorder, macroeconomic instability, political unrest or inefficient resources allocation (Soludo, 2004). Guadagno (2013) pointed out that low investments are the key problem of economic growth and development in Nigeria.

Insecurity characterized by separatist agitation, financial panic, and political tension is capable of

reducing the level of domestic investment. According to Adamu (2010), insecurity may trigger fear and reduce domestic investment. In 2009, the global financial crisis (GFC) and the resurrection of the Boko Haram insurgency inundated the huge revenue inflow from oil receipt with an unprecedented decline in investment, growth and development (Atoi, 2018). Additionally, the mayhem created by the activities of ethnic militia like the Niger Delta militants, Oduduwa People's Congress and of recent, the end SARS protest in 2020 affected economic activities and consequently disrupted peace in Nigeria. This unhealthy williwaws and political hullabaloo created hostile environment for domestic investors. The prevailing insecurity in the country and other macro-economic challenges have continued to hamper investment, with foreign investors pulling out ₦1.64 million from the market in three years. In 2018, ₦642.6 in foreign portfolio investment outflow was recorded, while foreign investors withdraw ₦523.42 billion and ₦481.93 billion during the corresponding period in 2019 and 2020 (Diamond, 2019).

Most empirical studies on domestic investment in Nigeria have neglected the peculiarity of insecurity as a threatening factor of investment particularly in Nigeria. See for example, Atobatale and Akinwunmi, (2010), Bonga and Nyoni (2017), Ayeni (2014). In the light of the above the paper the impact of insecurity on domestic investment in Nigeria

THEORY AND EMPIRICAL REVIEW
Acceleration theory
The theory, propounded by Thomas Nixon and Albert Aftalion in the 1940's holds that total output or income representing gross domestic product can bring about additional investment expenditure. Therefore, increase in national income often results in a proportionate increase in investment spending. The theory is relevant to this work, because insecurity affects national income as well as investment expenditure.

Financial contagion theory
The theory developed by Gustave le Bon in 1896 holds that the crowd can cause a hypnotic impact on individuals and the risks of financial difficulties at one or more financial system(s) spill over to a large number of other banks or the financial system as a whole. Therefore, contagion theory believes that transfer of shocks with a financial system breeds financial panic with adverse effect on investment income and expenditure.

Empirical review
Agu (2015) reviewed the determinants and structure of interest rate in Nigeria and noted the experience of low nominal and negative rate interest rate during most of the review period (1970-2015). Result showed negative effect of low interest rate on savings and investment. Similarly in Tanzania, Moshi and Kilindu (2001) found that credit from investment bank had significant 5% effect on investment. In developing countries like Nigeria, private investment is also playing a prominent role in investment. Khan and Khan (2001) attempted an analysis of determinants of private investment using ARDL co-integration technique to check the existence of long run equilibrium relationship as well as short run dynamic of investment. Results supported the idea of providing a suitable environment for market e.g. protection of policy rights, enforcement of contract and voluntary exchange at market determined prices. In a study by Fang (2006) on the role of investment in OECD countries ED and euro areas in cross-section data collected from (1971-2002). The study concluded that the country dependent savings investment model is the best

performing model. Wahid et al (2008) used a Panel data for five Asian countries over the period (1973-2012). The study found the existence of low positive correlation between saving and investment in three selected Asia countries. Bayrakfar (2007) derived a formal specification of a private investment function in sub-Sahara Africa. Using the Tobin Q theory and the neo-classical theory of investment, results pointed to the significant role of aggregate profits by financing investment consisted of public investments.

METHODOLOGY

Ex-post facto research design with annual time series data from CBN statistical bulletin and World Development indicator from 1999-2020 was employed. Data were analyzed using ordinary least square (OLS) regression technique with the aid of E-views 12.0 statistical software.

Model specification
The OLS model is specified thus:

$$DI = f(INT, INFL, MSV, TER)\dots\dots\dots\dots\dots(1)$$

While in its econometric form it is represented as thus;

$$DI = a_0 + b_1 INT + b_2 INFL + b_3 MSV + b_4 TER + m\dots\dots\dots\dots(2)$$

Where; DI = Domestic Investment, INT = Interest Rate, INFL=Inflation Rate, MSV = Money Supply Velocity (MS deflated by GDP), TER = Proxy for Insecurity/Insurgency, a_0 = Constant Term, b_1-b_4 = Parameter Estimate, m = Error Term

Apriori expectation

Variables	Expected sign
Interest rate	+/-
Inflation rate	-
Money supply	+
Terrorism index	-

DATA ANALYSIS AND RESULTS

Table 1 depicts descriptive statistics. Domestic investment stood at 22.87986, for the period 1999 to 2020. The maximum value of DI was observed at 38.34181 while minimum value was observed at 14.90391. The standard deviation for DI was 10.51786. This demonstrated that DI was stable and did not deviate significantly from the mean. The value of interest rate (INT) shows its minimum and maximum values of 15.1400 and 24.8500; with a mean value and standard deviation of 17.87682 and 2.169109 respectively. Further analysis of the descriptive statistics revealed that the mean inflation rate (INFL) was 12.73955 for the same period with its standard deviation of 3.534842. The maximum and minimum values were 23.79000 and 6.60000respectively. Money supply velocity revealed its mean value as 18.57273 with a standard deviation of 4.932952 having its minimum value as 11.4100 and its maximum value as 24.9000. Finally, the average value for terrorism index stood at 7.334545 with a standard deviation of 1.485917, having its minimum value of 4.53000 and its maximum value of 9.310000 in 2015.

Table 1: Result of descriptive statistics

	DI	INT	INFL	MSV	TER
Mean	22.80000	17.87682	12.73955	18.57273	7.334545
Median	21.64500	17.42000	12.19500	20.68000	7.880000
Maximum	38.34000	24.85000	23.79000	24.90000	9.310000
Minimum	14.90000	15.14000	6.600000	11.41000	4.530000
Std. Dev.	6.938426	2.169109	3.534842	4.932952	1.485917
Skewness	0.200848	1.218560	1.092617	-0.354946	-0.354946
Kurtosis	2.537486	4.310813	3.863922	2.307749	2.307749
Jarque-Bera	0.406552	8.295934	5.981742	1.065089	1.065089
Probability	0.816053	0.015797	0.050244	0.587109	0.587109
Observations	22	22	22	22	22

Pearson Correlation
Correlation test was conducted to examine the possible degree of association among the variables.
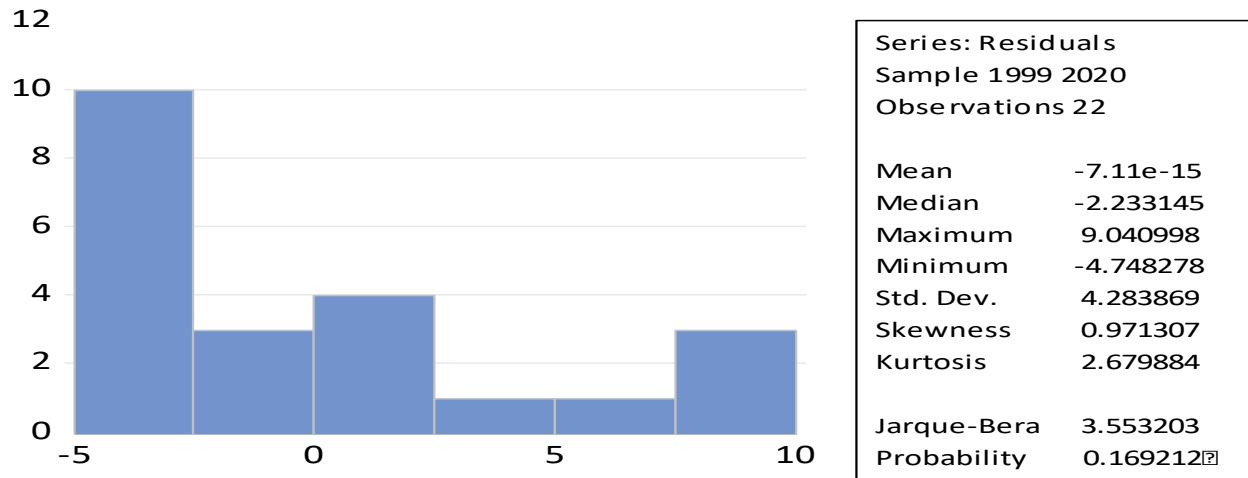
Table 2: Correlation Results

	DI	INT	INFL	MSV	TER
DI	1.0000				
INT	-0.5536	1.0000			
INFL	-0.1761	0.2312	1.0000		
MSV	0.7486	-0.5719	0.0519	1.0000	
TER	-0.7556	-0.5457	-0.2689	0.8501	1.0000

Table 2 shows the correlation results that only MSV (0.7486) conform to the apriori expectation of a positive relationship on domestic investment while interest rate (-0.5536), inflation rate (-0.1761) and terrorism index (-0.7556) were negatively related at 5% significance level. Furthermore, the value of the independent variables appears to be less than 0.80 which implies no multicollinearity problem.

Normality test
A Jarque-Bera normality test was conducted to identify whether the data set is well modelled by a normal distribution.

Chart 1: Jarque-Bera Normality Test

Series: Residuals	
Sample 1999 2020	
Observations 22	
Mean	-7.11e-15
Median	-2.233145
Maximum	9.040998
Minimum	-4.748278
Std. Dev.	4.283869
Skewness	0.971307
Kurtosis	2.679884
Jarque-Bera	3.553203
Probability	0.169212

Source: E-views 12.0 statistical software

The Jarque-Bera's value indicates that the residuals are normally distributed having the value 0.169 which is greater than 0.05. The p-value given at the bottom of the normality test screen should be bigger than 0.05 to fail to reject the null hypothesis at the 5% level (Brooks, 2008). Hence, the residuals are normally distributed.

Stability test
Chart 2: CUSUM Test
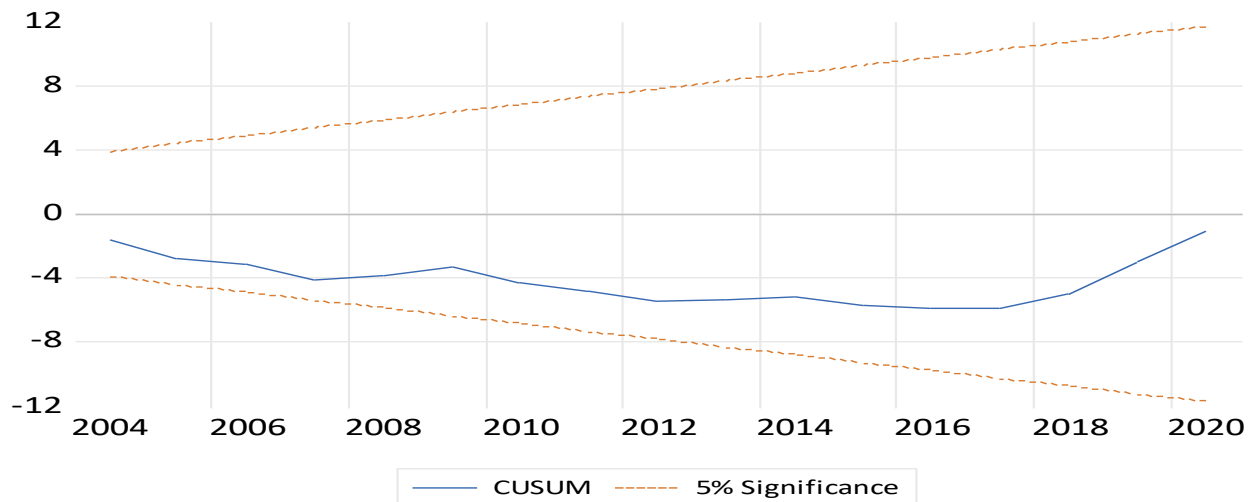
Source: E-views 12.0 statistical software

To test for stability of the estimated model, the CUSUM test presented in chart 2 above show that the estimated model for the study is stable because the parameter line lies in between the two recursive estimates.

Discussion of regression results
Result in table 4.4 shows that the constant term (12.13314) will experience a 12.13 percentage increase, all variables (interest rate, inflation rate, money supply velocity and terrorism index) held constant. Further, estimated coefficient for interest rate (INT) shows that a percentage increase in

INT (-0.342123) will cause a corresponding percent decrease to domestic investment in Nigeria and was found to be statistically significant. Therefore, increase in interest rate will lead to a decrease in domestic investments, indicating an inverse relationship between interest rate and domestic investment in Nigeria.

Additionally, the coefficient of inflation rate (INFL) {-0.00164} with a corresponding probability of 0.0102 shows that inflation rate negatively and significantly affected domestic investment, thus, one unit increase in INFL decreases DI by -0.00164 units, hence domestic investments decrease with increase in inflation rate. Money supply velocity (MSV) affected domestic investment negatively with MSV coefficient of 0.8327, thus, one unit increase in MSV increases DI by 0.8327 units, hence increasing money supply stimulates aggregate demand because consumers' expenditure on goods and services increases. Finally, the coefficient for insecurity (terrorism) stood at -0.37525 with a significant probability value of 0.0004, thus, a unit increase in terrorism will decrease domestic investment by 37.52 percent, and hence domestic investment is adversely affected by insecurity in the country.

Table 3: OLS multiple regression result

Variable	C	INT	INFL	MSV	TER
Coefficient	12.13314	-0.342123	-0.000164	0.832749	-0.375251
Std. Error	0.651211	0.455544	5.834305	0.185175	0.104039
t-Statistic	18.63166	-0.751020	-2.809114	4.497097	-0.204707
Prob.	0.0000	0.0360	0.0102	0.0003	0.0004

R-squared		0.818015	Mean dependent var	13.70955
Adjusted R-squared		0.775195	S.D. dependent var	1.517866
F-statistic		19.10354	Durbin-Watson stat	1.050866
Prob(F-statistic)		0.000004		

CONCLUSION AND RECOMMENDATIONS

This study reported that all the explanatory variables (interest rate, inflation rate, money supply and insecurity) had significant effects on domestic investment in Nigeria. Therefore, the question as to whether insecurity affects domestic investments is sufficiently answered. These results are consistent with theoretical and empirical predictions. From the foregoing, insecurity breeds financial panic, uncertainty and political tension. This is a psychological and material disincentive to economic progress and prosperity. Therefore, a deliberate and frontal political will by the government to curb insecurity and food inflation to attract investments in the domestic economy.

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