

Insecurity on Economic and Business Climate; Empirical Evidence from Nigeria

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Abstract

Insecurity undermines the economic and business process of a nation. Tallying to the human cost, it sabotaged the right to life, liberty, and freedom. This study tests the long run effect and cause of insecurity from 2007-2017 in Nigeria. Using a framework of the Auto-Regressive Distributed Lag Model (ARDL) and Error Correction Model (ECM). Findings revealed that insecurity in Nigeria is majorly internal factors and government expenditure on security in Nigeria is far below the United Nations Standard. The ECM report that disequilibrium caused by internal factors instigating insecurity can be revised back to equilibrium at 25% annually. To improve the economic and business climate competitive advantage.

Keywords: ARDL; ECM; Insecurity; Economic; Business climate.

1. Introduction

Insecurity embraces activities tied to thoughtful harm to life, properties, and the economy. The cost of implication of insecurity on the global economic and business climate has become an issue of concerned. September 11, 2001, United States World Trade Center attack estimated this cost about US\$80 to US\$90 billion on compensation (Opoku, Sakah & Alupo, 2016). In Yemen, insurance companies increased their security premiums by 300% after the USS Cole and Limburg attacks (Aon's Guide, 2015). In Nigeria, the activities of Boko Haram in the (North), Militancy in the (Niger Delta), and Fulani herdsmen in the (Middle Belt) weakens the economic and business climate. The global investment climate is considered to be progressively volatile as a result of imminent anti-business and economic activity threats with more than N1.2 billion- ₦1.4 billion economic and business assets loss to Boko Haram insurgent and Militancy between 2015-2018. Daily oil production dropped from 2.2 million-1.7million barrel per day.

The investment climate is greatly traumatized declining security rating from 62.69% in 2007 to 49.49% in 2010, and 38.4% in 2018 (Mbasua, Muhammad & Abia, 2016). Global Terrorism Index 2018, rank Nigeria 1st out 54 Africans nations examine and 3rd in the world. Nigeria is known to house over 70% of Small Arms and Light Weapons of about 500 million estimated costs in West Africa (United Nations Regional Center for Peace and Disarmament in Africa 2018 report). African Development Bank, 2012 report revealed that economic development and growth in Nigeria and Africa doesn't translate to human capital development (Opoku, Sakah & Alupo, 2016). More than 68% of Nigerians live below \$2 per day. Poverty and income inequality gap in black controlled areas in South Africa, and in Angola 94% of the rural dwellers are generally considered poor living below \$2 per day (Human Capital Index ranks, 2016-2018) collaborate these claims. Insecurity in Nigeria is an end product of internal factors of; extreme poverty, meager security budget, income inequality, and regional marginalization among others.

Nigeria like most African States passed the Anti-Terrorism Act and other laws proscribing terrorism. Nigeria's 2017-2018 security budget of \$1.58 billion, accounts for a paltry of \$8 to each citizen, according to the United Nations report is below average standard comparable to an estimated population of over 180 million.

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Okonkwo, Ndubuisi- Okolo, and Theresa, (2015) and Onime, (2018) among other studies focused on insecurity on democracy, neglecting the root cause, the cost of implication and government expenditure on security. This study contributes to the extant literature by investigating the root of cause-effect of insecurity on the economic and business climate. Our estimation model is another apparent value addition. It differs from previous studies using OLS and correlation matrix predominantly. This study adopts the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) to test for the long and short run cause-effect relationship. The justification is that the ARDL procedure circumvents some diagnostic hitches associated with OLS. The model is dynamic and concurrently shows lagged and simultaneous correlation among the variables.

2. Review of Related Literature

According to the Neo-realist school of thought, “*security is the principal obligation of the government*”. The Neo-realist argument is buttressed by Section 14 sub (2b) of the Nigerian 1999 Constitution; “*security and welfare of the people (of Nigerians) shall be the primary purpose of government*”. The Postmodernist school of thought counter-argues that; “*security is the responsibility of non-government actors*” ignoring the government as a key provider of security. The protagonists of these approaches argue that security is far above emergent threats determination by security personnel, the government should focus on economic, and business security and internal factors instigating insecurity.

2.1. Internal factors:

1. Lack of institutions to drive economic and financial equality, provide favourable investment climate and grow the economy: Insecurity in Nigeria can best be described as a product of “*Resource Curse*” an economic status quo where a nation earns reasonable revenue from the sales of her natural endowment and nose-dive in channeling the earnings towards human capital. The argument here is Nigeria is vastly blessed with human and natural resources but human capital development is on the geometric decrease.
2. Inequality; Inequality either income, political, and social in the urban and rural settlement is traceable to resource curse factor. The frustration and aggression theory explains the undertakings of different groups agitation across the six zones in Nigeria and on foreign expatriate in Nigeria.
3. Poverty, unemployment, and Rural/urban drift; migration of over 60%-70% of rural unemployed and active youth, to the urban centers out of frustration and poverty post dire security challenge on social infrastructures, waste management and on business climate (Masoud, Mahdi & Hamed, 2018).

2.2 Insecurity on the Business and Economic Climate

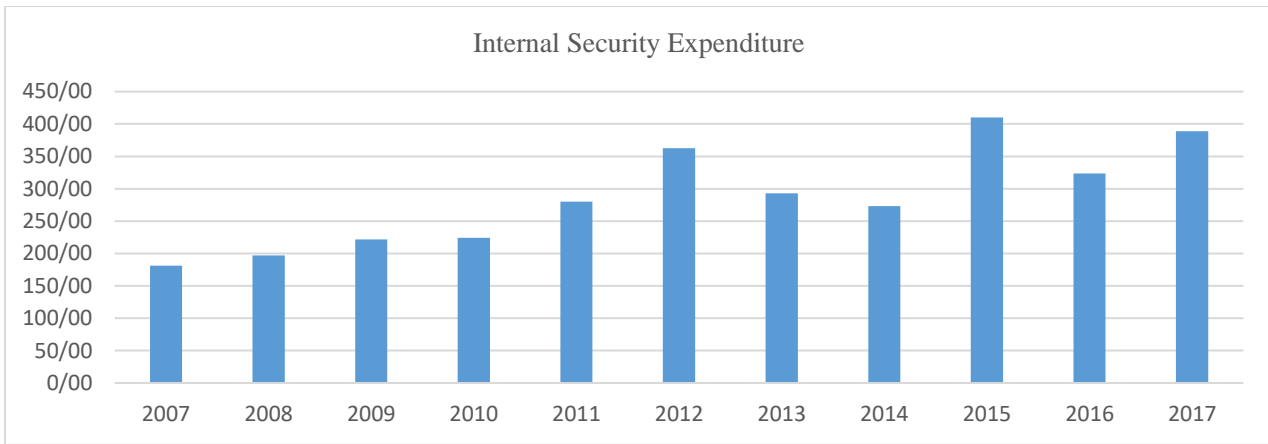
2.2.1. Prospective Businesses

Insecurity in Nigeria weakens prospective businesses and border countries of (Cameroon, Niger, and Chad). Insecurity in Benue State, Kaduna State, and Borno state collapse prospective business activities in major markets such as (the Monday Market and Tashan Baga market) in Borno state. World Bank study on African’s investment climate in 9 countries upheld that 29% of investors in Africa and 36% of investors in Nigeria acknowledged insecurity as the primary factor diminishing investment rate in Africa and Nigeria. This translates to a drop in FDI by 27% from \$4.7billion in 2014 to an estimated \$3.4billion in 2015 and in the 3rd quarter of 2018 drop to \$2.9billion (World Investment Report, 2018).

2.2.2. Prevailing Businesses

Insecurity in Nigeria has not only crowd-out over 56% of small and medium scale business and cut off the supply of raw materials. But has also affected the labour force, ease, and cost of doing business in Nigeria. Findings revealed that consumer goods companies in Nigeria suffer the direct effect of insecurity due to a shortage of raw materials and low customer’s patronage. States and local governments-impose curfew which led to early close down of businesses and cut-off financial inflow from banks (Somendra & Mahapatra, 2018). In the bid to improve internal security status quo, various administrations paid diverse attention to this problem. The diverse attention is evidence in the fluctuating internal security expenditure in Nigeria shown in figure (1) below:

The fluctuating internal security expenditure accounts for the failure and government inability to provide contemporary scientific security apparatus such as (Biometrics, Perimeter Control, Radio Frequency Identification (RFID) technologies, and Computer Security) and training of security operatives. The lack of scientific management of security apparatus inventory also affects security expenditure in Nigeria (John, Etim, & Ime, 2018).



Sources: Authors computation from CBN, report (2017)

Figure 1. Internal Security Expenditure (N=Billions)

2.3. Theoretical Review

The theoretical underpinning of this study is the Frustration-Aggression Theory: aggression begets frustration. In Nigeria, frustration evolves from marginalization, poverty, inequality, and failure to accomplish set goals due to direct and indirect economic, financial and climatic challenges. The theory was propounded in 1972 by Feierabend and Feierabend. They opined that aggression is the expected result of frustration. The frustration-aggression framework in Nigeria is authenticated in the activities of Boko Haram in the North and militancy in the South and MASSOB in the East.

2.4 Empirical Review

Mukolu and Ogodor (2018) affirm a linear relationship between economic growth and insurgency in Nigeria. Ewetan and Urhie (2014) report that insecurity thwarts business activities and depress foreign and domestic investors in Nigeria. Odita and Akan (2014) observe that insurgency is the fundamental factor in decreasing FDI and economic development in Nigeria. Adebanjoko and Okorie (2014) investigate the relationship between political and economic corruption of insecurity in Nigeria. Findings showed that corruption fuels insurgency through frustration. Garba (2014) acknowledged insurgency in Zaria metropolis as the prime factor thwarting operational economic and financial activities in Zaria metropolis. Largely studies in Nigeria focus on insecurity on economic growth, the sustainability of democracy and corruption ignoring the rippling down effect on the economic and business climate.

3. Methodology

This study adopts annualized times series data source from the Central Bank of Nigeria (CBN) and World Development database, from 2007-2017. The datasets were analysed using the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM). The underlying theory is that all variables are integrated Order I (1) and Order I (0).

3.1 Model Specification

$$Y^o_t = \beta_0 + \beta_1 SEC_t + \beta_2 CIN_t + \beta_3 EFC_t + \beta_4 GHI_t + \beta_5 HID_t + \mu_{t..}(i)$$

Where; Y = Economic Freedom Index,

SEC= Security Expenditure,

CIN= Corruption Index,

GHI = Global Hunger Index,

HID = Human Development Index

μ = Error Team and t = Time

The ECM model is modified from equation (i) the baseline long-run model.

$$\Delta Y_{t,j} = \beta_0 + \sum_{i=1}^{n1} \beta_{1i} \Delta Y_{t-1,j} + \sum_{i=0}^{n2} \beta_{2i,j} \Delta SEC_{t-1,j} + \sum_{i=0}^{n3} \beta_{3i,j} \Delta CIN_{t-1,j} + \sum_{i=0}^{n4} \beta_{5i,j} \Delta GHI_{t-1,j} + \sum_{i=0}^{n5} \beta_{5i,j} \Delta HID_{t-1,j} + \delta_{t-1,j} + \mu_{t..}(ii)$$

Where; Δ denotes change in lag lengths; i and j are;

n = number of lags;

δ = t-1 speed of adjustment integrated at Order I (0) and 1(1);

β_0 = constant term;

$\beta_1 - \beta_6$ = coefficients; and μ_t = error term.

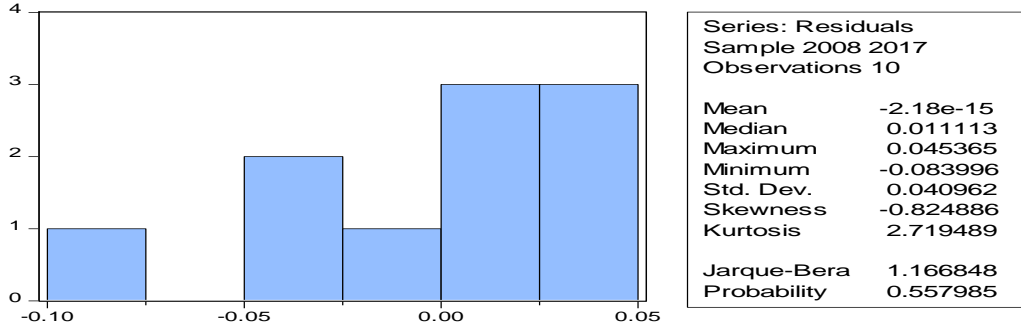
The δ_{t-1} is substituted in eq (ii) for lagged dependent variable B_7 and independent variables (B_8 - B_{12}) in the ARDL model is specified in Equation (iii).

3.2. The ARDL Model

$$\Delta Y_{t,j} = B_0 + \sum_{i=1}^{n1} B_{1,i,j} \Delta Y_{t-1,j} + \sum_{i=0}^{n2} B_{2,i,j} \Delta SEC_{t-1,j} + \sum_{i=0}^{n3} B_{3,i,j} \Delta CIN_{t-1,j} + \sum_{i=0}^{n4} B_{5,i,j} \Delta GHI_{t-1,j} + \sum_{i=0}^{n5} B_{6,i,j} \Delta HDI_{t-1,j} + B_7 Y_{t-1,j} + B_8 SEC_{t-1,j} + B_9 CIN_{t-1,j} + B_{10} EFC_{t-1,j} + B_{11} GHI_{t-1,j} + B_{12} HDI_{t-1,j} + \mu_t \dots \dots \dots (iii)$$

Equation (iii) is derived: By solving δ_t in equation (I).

3.3. Data Presentation and Results



Authors: 2019

Figure 2. Histogram normality test

Figure 2, shows the basic descriptive statistics of normality and the standard deviation and also measures the dispersion. The kurtosis, skewness and the Jacque Bera Statistics tests for normality of the distributions. The variables are majorly platykurtic. The kurtosis is less < 3 and p-values of the JB Statistics is > 5%.

Table 1. Summary of ADF Unit Root Tests

Variables	ADF Stat	Critical Values 5%	Order of Integration @ 5%	Inference
Y	-6.119	-4.246	I (1)	Stationary
CIN	-3.111	-1.988	I (1)	Stationary
ECF	-4.594	-3.259	I (0)	Stationary
GHI	-5.906	-4,107	I (1)	Stationary
HDI	-5.256	-1.988	I (1)	Stationary
SEC	-4.551	-1.988	I (0)	Stationary

Authors: 2019

Table 1 reports the stationarity levels of the dataset at various orders of integration I (1) and I (0).

Table 2. ARDL Model Long-Run Effect

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ECF(-1)	0.800	0.105703	7.569180	0.001
ECF(-2)	-1.041	0.225085	-4.628332	0.040
CIN	0.120	0.033459	3.590670	0.008
GHI	0.740	0.025988	2.851959	0.005
HDI	-83.691	23.89183	-3.502947	0.003
SEC	0.270	0.333002	0.812859	0.094
C	106.759	20.86908	5.115692	0.0362
R ²	Adjusted R ²	F-Stat	Durbin-Watson stat	P-value
.98	.93	20.366	2.69	0.004

Authors: 2019

Table 2 shows the goodness of the ARDL model at R² of 98%, which explains the variation in the dependent variable accounted for by the independent variables. F-statistics of (20.366), and P value (0.004) confirm the goodness of the model. The Durbin Watson Statistics of 2.69 rules out all possible suspicion of first-order positive autocorrelation. The results indicate that a 1% decrease in (HDI) increase insecurity by 83%. 1% increase in (CIN) and (GHI) increases insecurity by 74% and 12% respectively. (SEC) positively and significantly impact on the economic and business climate

at 27%. The model result supports the theoretical evidence of this discourse that insecurity is a function of frustration-aggression negatively affecting the economic and business climate.

Table 3. F-Bounds Test

		Null Hypothesis: No levels relationship		
Model Selection	2,0,0,0,0			
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	22.38	10%	2.2	3.09
K	4	5%	2.59**	3.49**
		2.5%	2.88	3.87
		1%	3.29	4.37

Authors: 2019

Table 3 reports that the F-statistic of (22.38) is higher than the lower and upper bounds at 5% significance level. From the result, it can be inferred that there is a significant long-run co-integrating relationship between insecurity and business climate in Nigeria.

Table 4. Short-Run Estimate Based on Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ECF(-1))	1.041	0.059	17.44	0.003
CoIntEq(-1)*	-0.241	0.057	-21.68	0.002
R ²	Adjusted R ²	Durbin-Watson stat		
.98	.98	2.69		

Authors: 2019

The short-run estimate in Table 4 shows that the ECM value of (-0.24; P-value 0.002) is statistically significant at 5%. The ECM indicates the speed of adjustment from short-run disequilibrium to long-run equilibrium at 24%. Deviation from equilibrium caused by insecurity is revised back on an annual basis.

4. Conclusion

Theoretically, there is a relationship between internal factors instigating insurgencies and the economic and business climate. The result of the tested hypothesis supports these claim reporting a positive and significant long run and short-run relationship. The findings are in agreement with the findings of Opoku, Sakah & Alupo (2016) and Onime (2018). Government security expenditure and internal control measures must be review to provide modern security gadget for the training, re-training of security personnel to combat threats.

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