Impact of Government Security Expenditure on Economic Growth in Nigeria

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Abstract

This study is an attempt to assess the impact of government security expenditure on economic growth in Nigeria from 1986-2018. The study was carried out using time series data, and econometrics tools were used for testing and estimation. Augmented Dickey-Fuller (ADF) was used to test the stationarity, the Ordinary Least Square (OLS) and Error Correction Model (ECM) techniques were used to estimate the impact of government security expenditure on economic growth in Nigeria and the causality test was also carried out to show the casual relationship among the economic variables using Granger test. From the study's findings, the data were stationary at various levels and the impact estimated result shows that government security expenditure has strong impact on economic growth in Nigeria given the R^2 Square of 0.97. While long run result revealed that Government Recurrent Defence Spending in Nigeria (GRDEXP), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP) were statistically significant at 5% level of significance. Also, ECM result revealed that all the independent variables were statistically insignificant in explaining the variation in Real Gross Domestic Products (RGDP) in Nigeria except Government Recurrent Defence Spending in Nigeria (GRDEXP). Therefore, the study recommends that government should design a mechanism to ensure all monies spent in Security in Nigeria are accounted for economic growth in Nigeria.

Keywords: *Security, Defense, Economic Growth, Capital and Recurrent Expenditure*

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Background to the Study

At the end of World War II, economists began to apply economic theory to defense related issues with research focusing on the activities of cold war, super power, arms race, military alliances, terrorism and nuclear weapons (Luca, 2008). The end of the cold war witnessed several analyses on disarmament, conversion and peace dividend. Yet, the World up till now remain a dangerous place with increasing regional and ethnic conflicts, threats from international terrorism, weapons of mass destruction and various forms of national crises. With the end of the Cold War, global defense and internal security spending has been decreasing and it was expected that this reduction in defense and internal security spending will lead to peace dividends for developing countries (Na Huo, 2009). However, many developing countries still spend a large amount of scarce resources on defense, because defense spending has increased because of the need to ensure peace and economic growth.

The role of government in an economy cannot be over-emphasized and two amongst these important duties as noted by Adam Smith are to protect the society from the violence and invasion of other independent societies and; protect every member of the society from the oppression of every member of it (Galvin, 2003). This established the basis for the economic need of security in countries of the world. Security of persons and property from domestic or foreign threats is essential for the operation of markets and the incentives to invest and innovate. Lack of peace and security constitute a distortion in economic activities. These results in local and foreign investors being skeptical of investing in the economy leading to a dearth in capital in-flow, government attention is shifted from more productive sectors to defense sector and a great disorder in the socio-economic structure (Dumas, 2002).

Defense and internal security spending are important in public budgets of all countries because defense sector is a major user of scarce resources. Although, there have been agitations for reduction in defense spending in recent years, most developed and developing countries in the last decade have high defense spending, implying the sacrifice of civil spending. In the views of Akpan (2005), developing economies are faced with increase size of government operations. This is particularly true of defense sector. Certainly, the past two decades have witnessed an alarming increase in defense spending in Nigerian. This situation has reduced the developmental needs of other sectors. Budgeting for defense in terms of the desire to adequately equip the defense sector and ensure a sustainable economic growth in Nigeria is of paramount interest to the government. Through defense spending, government protects the economy against external aggression and enhances the stability required for economic growth and development (Yildirim, Sezgin, and Ocal. 2005).

According to Otto and Ukpere (2012), the Nigerian society is getting more and more insecure, more people are getting into crimes and they are getting more ruthless, desperate and sophisticated. The Nigeria of today, especially since the advent of the present democratic dispensation, new forms of violent crimes have become common; these include kidnapping for ransom, pipeline vandalization, Boko Haram bombings, rape, political violence and more, which have affected the Nigerian economy adversely (Joseph, 2011), National security is a precondition for economic and social development as much as economic and social development is a precondition for national security.

The Nigerian nation is currently passing through some terrible challenges in the area of insecurity. In fact, the fear that the country is on the brick of total disintegrating appear to occupy many people's mind (Omojimite, 2012). The country economies are faced with increase size of fiscal operations and defense sector burden is high. In Nigeria, budgeting for defense in order to equip and make the defense sector combat ready to surmount the growing insecurity challenges is of paramount interest to the government of Nigeria. Most important, the Nigerian defense and internal security spending is one of the most resilient spending such that any downward trend in defense and internal security spending results to low performance in the economy (Shadare, 2011).

Based on the background is therefore imperative examine empirically the impact of government security expenditure on economic growth in Nigeria. To achieve this specific objectives are to:

I. Examine the impact of government defense recurrent expenditure on economic growth in Nigeria.
ii. Assess the impact of government internal security recurrent expenditure on economic growth in Nigeria.
iii. Evaluate the impact of government defense and internal security capital expenditure on economic growth in Nigeria.

Literature Review
Conceptual Review
According to Yilidirim, Sezgin and Ocal, (2005) the security expenditure budget value indicates funds allotted to the maintenance and strengthening of a standing military. Not all included nations have the luxury of a large expenditure budget and therefore must rely on affiliations and regional alliances to maintain a capable fighting force. It involves the running expenses of the defense departments and other governmental agencies engaged in defense projects. Internal security has to do with the protection of the domestic territory and citizens by security agencies such as the police, civil defense, legal vigilante, prisons, etc. (Oshio, 2009). Also, security expenditure is an important issue for the international economy. security expenditure could be measured by the contributions of security to the Nigerian economy. Security spending includes the payment of the salaries of armed forces personnel, thus enabling them to take care of their basic needs (Beijer, 2010). The security spending also encompasses medical services, education and training of both local and foreign security personnel as well as research and development. The bulk of security spending is on the procurement of materials and equipment such as ammunitions of all categories. While, National security and defense can be understood as preparedness for military action, protection of resources considered critical to the functioning of a nation to protect a country from attack or subversion (Otto and Ukpere, 2012).

On the other hand, the search for a satisfactory definition of economic growth by many economists has actually continued without an end. However, it is important to conveniently adhere to the convention that real per capita national income or output represents the most reliable indicator of a system's economic achievement at any point in time and that any change

in real per capita income signifies welfare (Oriavwote and Eshenake, 2013).Economic growth can be defined as an increase in the amount of goods and services produced by economy overtime. It is conventionally mentioned as the percent rate of increase in real gross domestic products, or real GDP. Growth is usually calculated in real terms, i.e. inflation adjusted terms; in other obviate the distorting effect of inflation on the prices of goods and services produced. In economics, "economic growth" or "economic growth theory typically refers to the potential output, i.e., production at "full employment", which is caused by growth in aggregate demand or observed output (Omojimite, 2012). Finally, Economic growth is an indication of society's welfare. It reflects the changes in its ability to attain any socially agreed upon set of goals, whether consumption, capital formation expenditure or national defense etc. Generally, growth can be defined as sustained increase in macroeconomic aggregates particularly real gross domestic product (RGDP).

Empirical Review
There are many studies on government expenditure and other macroeconomics indicators. In the study some related empirical studies on government security expenditure and economic growth. Among them is the work of Enimola and Akoko (2011) who examined the relationship between the level of economic growth and defense spending in the case of Nigeria from the period of 1977 to 2006. The result of the Granger causality test shows that there is a unidirectional causality running from economic growth to defense spending. This study suggests that for Nigeria, a policy of increasing the defense budget to promote economic development growth might be inappropriate, but that same funds channeled towards another governmental program. While the work of Olofin (2012) examined the relationship between the components of defense spending and poverty reduction in Nigeria between 1990 and 2010. Four models were estimated using Dynamic Ordinary Least Square (DOLS) method, two in which poverty index constructed from human development indicators serves as dependent variable and the others in which infant mortality rate serves as dependent variable. The result show that military spending per soldier, military participation rate, trade, population and output per capita square were positively related to poverty indicator and, military spending, secondary school enrolment and output per capita were negatively related to poverty level. The findings confirm the tradeoff between the well-being and capital intensiveness of the military in Nigeria, pointing to the vulnerability of the poor among the Nigerians

In the work of Otto and Ukpere (2012) which was carried out by examining the impact of national security on growth. Though this work is about national security and development in Nigeria, the work was able to juxtapose the national defense spending with economic growth to see, if there is any relationship between the spending pattern and growth. This is because growth is critical to development. A stagnating economy is not likely to offer welfare improvements which development proxies. The work observes that there is a positive relationship between security and development in accordance with literature. Also, the work of Anfofun (2013) who analyzed the macroeconomic determinants of defense spending in Nigeria. This study employed the technique of cointegration which helps to explain the long run relationship among variables. Also, the Granger causality test and vector autoregressive (VAR) model were utilized for the analysis of the study. The result of the VAR model provides

useful and reliable information about the response of a defense variable to innovations in another variable. The result was very robust as oil revenue, foreign exchange rate, real gross domestic product and non-oil revenue had an outstanding long-term influence on defense spending.

Similarly, Oriavwote and Eshenake (2013) examined the impact of defense spending on the level of economic growth in Nigeria. Using data covering the period between 1980 and 2010, the ECM result shows that the spending on defense has a negative impact on the level of economic growth. Spending on internal security played important role in generating the desired level of economic growth in Nigeria. The low elasticity indicates that the significance was below expectations. The result of the variance decomposition shows that the shocks to spending on defense did not significantly explain the changes in the level of economic growth in Nigeria. And, Apansile and Okunlola (2014) examined the effect of military spending on output in Nigeria both in the short-run and in the long-run period. In addition, it verified whether military spending is an economically non-contributive activity using ARDL bounds testing approach to co-integration. Results showed that military spending has negative and significant effect on output in the short-run but positive and significant effect in the long-run. Labour and capital have positive and significant effects both in the long-run and short-run. In addition, labour has the highest coefficient (3.0709) in the long-run. The study concludes that government should reduce its spending on defense and concentrate more on human capital development, since military spending contributes nothing to output in the short-run.

Khalid and Mustapha (2014) examined the effects of military spending on economic growth in India using annual data from the period of 1980 to 2011. The analysis is carried out within a multivariate setting that includes real GDP, real government military spending, population and real export. In this paper, the autoregressive distributive lags (ARDL) cointegration approach is used to reexamine the long-run relationships among the variables. We then employ the Granger causality test to identify the direction of causality. The results for ARDL tests indicate that there is a significant relationship between military spending and economic growth in the short run, while the long run results suggest otherwise. While the estimated granger causality outcomes, revealed a unidirectional relationship between GDP and military spending.

In the work of Mohammed and Lawong (2016) which examined the impact of insecurity on selected macroeconomic variables using dynamic modeling approach to analyze time series data for the period 1960-2014. Findings indicate the existence of a long run relationship between arms import, our measure of insecurity, and the variables considered. This observation was reinforced by the error correction terms in the parsimonious models, which revealed that the system is slow in reverting back to equilibrium for all the variables excluding openness and trade balance that were relatively faster. The results suggest that the impact insecurity cannot be downplayed in short-term macroeconomic policy formulation and implementation especially in terms of the external sector. Therefore, we conclude that the impact of insecurity is relatively higher on external sector and fiscal variables compared with domestic policy variables.

Taheer and Asmau (2017) measured the effects of defense and health expenditures on Economic growth in Nigeria from 1970 to 2015. The Error Correction Mechanism (ECM) and Granger Causality methods were methods of analysis used in the estimation of the models. Among other findings, the result of the ECM model shows that defense spending has positive and statistically significant impact on the Nigerian economy in the short run. Diagnostic tests such as Normality and autocorrelation tests were carried out on the model's outputs to establish the robustness or otherwise of it. It was found that the residuals were normally distributed and no autocorrelation present. The Granger causality result also revealed a unidirectional causality running from DSP to GDP but not the other way around. Also, there exists a one directional causal relationship between GDP and health spending in Nigeria. The result shows causality running from health spending to GDP but not the other way around. In summary, the studies reviewed were focused on the components of defense spending and the impact of military spending on other macroeconomic indicators. But this seeks to examine the impact of government security expenditure on economic growth in Nigeria.

Theoretical Framework

Adolp Wagner (1835 – 1917), a German economist who based his law on increasing state activities on historical facts, primarily of Germany, opined that there are inherent tendencies for the activities of different tiers of government (Federal, State and Local governments) to increase both intensively and extensively. There is a functional relationship between the growth of an economy and government activities with the result that the government activities with the result that government sector grows faster that the economy. From the original version of the theory, it is not clear whether Wagner was referring to an increase in absolute level of public spending, the ratio of government spending to GNP; or proportion of public sector in the economy. Wagner's law was based on historical facts.

It did not show the inner compulsions under which a government has to increase its activities and public spending as time passes. His law was applicable to modern progressive governments only; in which the state was interested in expanding the public sector of the economy and undertakes other activities for the general benefits. This general tendency of expanding state activities has a definite long-term trend, though in short run, financial difficulties could come in the way. But in the long run, the desire for development of a progressive people will always overcome these financial difficulties. The work of Oriavwote and Eshenake (2013) and Taheer and Asmau (2017) agreed that Adolp Wagner of government expenditure and economic activities is suitable for studies in developing Countries like Nigeria.

Methodology

Sources of Data and Method of Analysis

The nature of data for this research works is secondary data and the major source of data for this study is the statistical bulletin published annually by the Central Bank of Nigeria (CBN) 2018. The study employs the unit root test to determine the statistical properties of the variables to determine if they are stationarity at level or first difference. This is done in order to avoid spurious regression and misleading judgment. This is done using the Augmented

Dickey-Fuller (ADF). The study then proceeds to test whether there exists a long run relationship between population rate, unemployment and gross domestic product by adopting the Johansson Co-integration test since the study deals with multivariate models. The study used Ordinary Least Squares (OLS) and Error Correction Model (ECM) tools of analysis in the investigation of the impact and relationship among the economic variables, the Ordinary Least Squares (OLS) was used to test the impact among the economic variables in this study while the Error Correction Model (ECM) was used to test the short-run impact of interest rate indicators on economic growth in Nigeria.

Model Specification
The study adopts and modified the work of Mohammed and Abu (2016) on the interactional impact of defense expenditure and arms importation on economic growth in Nigeria: An Autoregressive Approach. The original functional model of Mohammed and Abu (2016) is stated as follows:

$$GDP = f\,(AI, DE, SE, PG, CF) \tag{1}$$

Where GDP is the Gross Domestic Product, AI is Arms Importation, DE is the Defence Expenditure, SE is the School Enrolment, PG is the Population Growth and CF is the Capital Formation in Nigeria. The model for the study is therefore given below:

$$RGDP = f(GRDEXP, GRISEXP, GSCAEXP) \tag{2}$$

The mathematical model is given as follows:
$$RGDP = \beta_0 + \beta_1 GRDEXP + \beta_2 GRISEXP + \beta_2 GSCAEXP + \mu \tag{3}$$

Where, RGDP is Real Gross Domestic Product in Nigeria; GRDEXP is Government Recurrent Defence Spending in Nigeria; GRISEXP is Government Recurrent Internal Security Spending in Nigeria, GSCAEXP is Government Security Capital Expenditure in Nigeria; β_0 is Constant term; β_1, β_2 and β_3 are the coefficient of the parameter estimate and μ is Error term/stochastic variable. While the Error Correction Model (ECM) that will be used in this study is specified as follows:

$$\Delta RGDP_t = \beta_0 + \sum_{g=1}^{m} \beta_{1i} RGDP_{t-i} + \sum_{h=1}^{n} \beta_{2i} \Delta GRDEXP_{t-i} + \sum_{i=1}^{o} \beta_{3i} \Delta GRISEXP_{t-i}$$
$$+ \sum_{j=0}^{p} \beta_{4i} \Delta GSCAEXP_{t-j} + \beta ECM_{t-1} + \varepsilon_t \tag{4}$$

The equation 4 above was used to adjust the estimation until the ECM turned negative. The negative sign of coefficient of the error correction term ECM (-1) shows the statistical significance of the equation in terms of its associated t-value and probability value. The fundamental variables that will be used to explain the impact between food security and economic growth were defined as they applied in the analysis. The variables in this study include; Economic growth as increase in output i.e. RGDP, Internal security as the rate government expenditure on internal security while Defense as the rate of government expenditure on defense.

The a priori expectation is based on the knowledge of economic theory, which refers to the sign, and size of the economic relationships. This criterion is concerned with determining the consistency of our parameter estimate with the signs and magnitude. As such it is our expectation that the parameter estimate of our study must be consistent with this signs and magnitude. All the variables are expected to have a positive relationship with real gross domestic product. i.e b_1 and $b_2 > 0$.

Presentation and Discussion of Results

To analyze the impact of fiscal policy on inflation rate in Nigeria, model estimation was carried out using annual time series data covering the period 1986 to 2018.

Descriptive Analysis of Variables

Table 1: Descriptive Analysis of Variables

Statistics	RGDP	GRDEXP	GRISEXP	GSCAEXP
Mean	41535.73	127.6696	155.2425	150.4604
Median	38735.23	71.88500	107.8800	160.9600
Maximum	69023.93	352.9000	410.2000	309.2000
Minimum	19979.12	4.210000	4.400000	8.790000
Std. Dev.	18071.23	120.1258	136.5961	102.8703
Skewness	0.270831	0.706052	0.463459	0.029270
Kurtosis	1.560269	1.833322	1.803279	1.519021
Jarque-Bera	2.366223	3.355177	2.291320	2.196727
Probability	0.306324	0.186824	0.318014	0.333416
Sum	996857.5	3064.070	3725.820	3611.050
Sum Sq. Dev.	7.510009	331894.7	429145.4	243393.1
Observations	33	33	33	33

Source: *Computed using E-Views 9 software, 2020*

The summary of descriptive statistics of relevant variables of study is as reported in Table 1. As may be observed from the table, the mean, median, standard deviation as well as the skewness and kurtosis measures of our variables of interest are given. The mean values of RGDP, GRDEXP, GRISEXP and GSCAEXP are 41535.73, 127.66, 155.24 and 150.46 respectively while their respective standard deviations are 18071.23, 120.13, 136.59 and 102.87. The Jarque-Bera test of normality shows that the error term in the specified model of study is normally distributed. This is evidenced by the respective insignificant Jarque-Bera statistics of the relevant variables based on the Jarque-Bera probability values of RGDP, GRDEXP, GRISEXP and GSCAEXP which are respectively greater than 0.05 (i.e., 5%) level of significance.

Table 2: Summary of Augmented Dickey-Fuller Unit Root Test

Variables	5% Level	ADF Statistics	Remark
RGDP	-2.967767	-5.884171	1(2)
GRDEXP	-3.012363	-4.471935	1(1)
GRISEXP	-3.020686	-6.494744	1(1)
GSCAEXP	-2.967767	-4.939709	1(1)
*Note: * Indicates the rejection of the null hypothesis of existence of unit root at 5% significance level. Lags are selected based on Schwarz Information Criteria (SIC).*			

Source: Computed using E-Views 9 software, 2020

The ADF unit root test results in table 2 shows that Government Recurrent Defence Spending in Nigeria (GRDEXP), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP) were stationary at first difference and at 5% level of significance. While Real Gross Domestic Product (RGDP) was stationary at second difference and at 5% level of significance.

Co-integration Test Results
Table 3: Co-integration Trace Statistic for all the Variables

Hypothesized No. of Cointegrated Equation(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	Probability Value**
None *	0.807846	79.91160	47.85613	0.0000
At most 1 *	0.648341	45.27297	29.79707	0.0004
At most 2 *	0.539546	23.32600	15.49471	0.0027
At most 3 *	0.284819	7.039599	3.841466	0.0080
*Notes: Superscript * denotes rejection of the null hypothesis of no cointegration at the 5% level of significance, while ** indicates MacKinnon-Haug-Michelis (1999) p-values. Trace test indicates 4 co-integrating equation(s) at 5% level of significance.*				

Source: Computed using E-Views 9 Software, 2020

Table 4: Co-integration Maximum Eigen value Statistic for all the Variables

Hypothesized No. of Cointegrated Equation(s)	Eigen value	Maximum Eigen Statistic	5 Percent Critical Value	Probability Value**
None *	0.807846	34.63863	27.58434	0.0053
At most 1 *	0.648341	21.94698	21.13162	0.0383
At most 2 *	0.539546	16.28640	14.26460	0.0236
At most 3 *	0.284819	7.039599	3.841466	0.0080
*Notes: Superscript * denotes rejection of the null hypothesis of no cointegration at the 5% level of significance, while ** indicates MacKinnon-Haug-Michelis (1999) p-values. Trace test indicates 4 co-integrating equation(s) at 5% level of signifcance.*				

Source: Computed using E-Views 9 Software, 2020

From Tables 3 and 4, it is observed that both the trace and maximum Eigen value test statistics indicate 4cointegrating equation(s) at the 5% level of significance. Based on this evidence, we can safely reject the null hypothesis of no cointegrating vectors and conveniently accept the alternative hypothesis of the presence of cointegrating vectors among all the variables in the specified error correction model. This implies that a long-run relationship exists between the variables that have entered the specified model of study. That is there is a long run relationship between economic growth and government security expenditure in Nigeria.

Presentation of Regression of Results
Table 5: Ordinary Least Squares Regression of Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19214.41	1281.803	14.99014	0.0000
GRDEXP	52.33684	20.15796	2.596336	0.0173
GRISEXP	58.60800	22.82048	2.568219	0.0183
GSCAEXP	43.47349	13.86597	3.135266	0.0052
R-squared	0.969923			
Adjusted R-squared	0.965412			
Durbin-Watson stat	2.300000			
F-statistic	214.9873			
Prob(F-statistic)	0.000000			

Source: Computed using E-Views 9 Software, 2020

From the estimated regression model, we observed that the a priori expectations were totally satisfied. The coefficients of explanatory variables (GRDEXP, GRISEXP and GSCAEXP) were observed to be positive; implying that a percentage changes in Government Recurrent Defence Spending in Nigeria (GRDEXP), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP) on the average will cause 52.3, 58.6 and 43.4 unit increased in Real Gross Domestic Product (RGDP) respectively. Furthermore, given the probability values of Government Recurrent Defence Spending in Nigeria (GRDEXP), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP) it was revealed that three explanatory variables were statistically significant at 5% level of significance. This conclusion was based on the t-test statistic values corresponding to the explanatory variables and their respective probability values.

The coefficient of determination (R^2) shows that about 97 percent of variation in Real Gross Domestic Product (RGDP) was explained by the changes in the explanatory variables (Government Recurrent Defence Spending in Nigeria, Government Recurrent Internal Security Spending in Nigeria and Government Security Capital Expenditure in Nigeria) of the estimated model. This implies that the estimated model has a good fit. The adjusted coefficient of determination (R^2) also shows that the estimated model has a good fit (R^2 adjusted=96%). The value of the Durbin-Watson (d) statistic (i.e., d=2.3) suggests the absence of positive autocorrelation. This implies that the forecasting power of the estimated model is more reliable in the absence of autocorrelation. Lastly, from the estimated regression model, the

high value of the F-statistic (i.e., F=214.98) indicates that the parameters of the estimated model are jointly or simultaneously statistically significant. This implies that the estimated model is good for prediction, forecasting and policy analysis purposes.

The Error Correction Model Results
Table 6: The Error Correction Model Results

Selected Model: ECM				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(RGDP(-1))	0.673255	0.203209	3.313123	0.0212
D(GRDEXP(-1))	-25.104606	8.495374	-2.955091	0.0317
D(GRISEXP)	0.853281	9.882090	0.086346	0.9345
D(GSCAEXP)	12.868091	6.375057	2.018506	0.0996
D(GSCAEXP(-1))	-3.844409	13.143513	-0.292495	0.7817
ECM(-1)	-0.591874	0.156973	-3.770543	0.0130

Source: Output from E-views 9.0 (2020)

From the short-run regression results obtained in Table 6 the following interpretation can be inferred; Since the variables were found to be cointegrated implying that they have long run equilibrium relationship, it is necessary to test for short run relationship. In Table 6, the ECM parameter is negative (-) and significant which is -0.5918, this shows that 59 percent disequilibrium in the previous period is being corrected to restore equilibrium in the current period.It has been established that the variables are cointegrated and also have short run relationship established from the ECM.

The lagged value of Real Gross Domestic Products (RGDP-1), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP) were positively related Real Gross Domestic Products (RGDP) in Nigeria. While Government Recurrent Defence Spending in Nigeria (GRDEXP) and lagged value of Government Security Capital Expenditure in Nigeria (GSCAEXP-1) were negatively related Real Gross Domestic Products (RGDP) in Nigeria. Finally, all the independent variables were statistically insignificant in explaining the variation in Real Gross Domestic Products (RGDP) in Nigeria except the lagged value of Real Gross Domestic Products (RGDP-1) and Government Recurrent Defence Spending in Nigeria (GRDEXP) that were statistically significant in explaining the variation in Real Gross Domestic Products (RGDP) in Nigeria.

Therefore, the H_{01} which stated that Government Recurrent Defence Spending in Nigeria (GRDEXP) has no significant impact on economic growth in Nigeria is **rejected** since the OLS result revealed that Government Recurrent Defence Spending in Nigeria (GRDEXP) has a positive and a significant impact on Economic Growth in Nigeria. Similarly, the H_{02} which stated that Government Recurrent Internal Security Spending in Nigeria (GRISEXP) has no significant impact on economic growth in Nigeria is **rejected** since the OLS result revealed that Government Recurrent Internal Security Spending in Nigeria (GRISEXP) has a positive and a significant impact on Economic Growth in Nigeria. Finally, the H_{03} which stated that

Government Security Capital Expenditure in Nigeria (GSCAEXP) has no significant impact on economic growth in Nigeria is **rejected** since the OLS result revealed that Government Security Capital Expenditure in Nigeria (GSCAEXP) has a positive and a significant impact on Economic Growth in Nigeria.

Stability Test

To determine the stability of the estimated coefficients of the relationship between Government Security Expenditure and Economic Growth in Nigeria, the cumulative sum of recursive (CUSUM) test, developed by Brown et al. (1975), was adopted. The CUSUM test is as shown in figure 1 below.
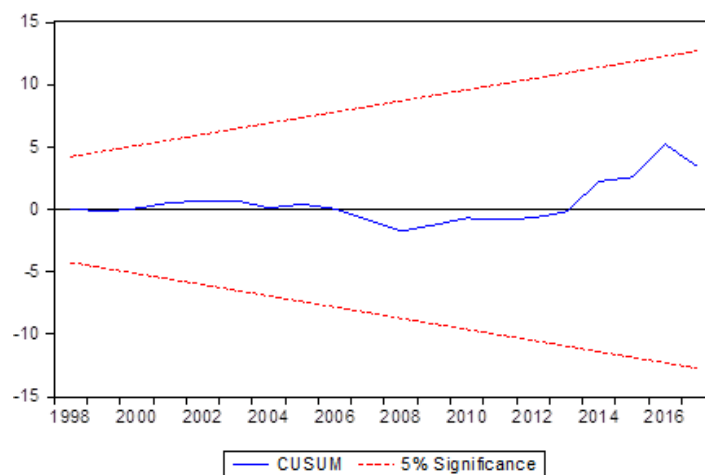

Figure 1: CUSUM Test of Stability

From the figure 1 above the CUSUM plot do not cross the 5% critical lines, implying that over the entire sample period of investigation, the stability of the estimated coefficients exists, so that the regression coefficients are reliable and suitable for policy making.

Conclusion and Recommendations

From the result it was shown that there is strong relationship between Real Gross Domestic Products (RGDP) in Nigeria and Government Security Expenditure in Nigeria. The Johanson Co-integration test shows that there is co-integration among the economic variables under review. The Ordinary Least Squares (OLS) and the Error Correction Models show that there is strong relationship between Real Gross Domestic Products (RGDP) in Nigeria and Government Security Expenditure in Nigeria. This implies that Government Security Expenditure in Nigeria has positive impact on Real Gross Domestic Products (RGDP) in Nigeria.

The probability values of the long run result revealed that Government Recurrent Defence Spending in Nigeria (GRDEXP), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP)

were statistically significant at 5% level of significance. The coefficient of determination (R^2) shows that about 97 percent of variation in Real Gross Domestic Product (RGDP) was explained by the changes in the explanatory variables (Government Recurrent Defence Spending in Nigeria, Government Recurrent Internal Security Spending in Nigeria and Government Security Capital Expenditure in Nigeria) of the estimated model. The findings agreed to the work of Oriavwote and Eshenake (2013) examined the impact of defense spending on the level of economic growth in Nigeria. Using data covering the period between 1980 and 2010. Both studies reveal that there is positive impact and relationship between Government Security Expenditure and Economic Growth in Nigeria.

Error Correction Model results shows that 59 percent disequilibrium in the previous period is being corrected to restore equilibrium in the current period. It has been established that the variables are cointegrated and also have short run relationship established from the ECM. While the lagged value of Real Gross Domestic Products (RGDP-1), Government Recurrent Internal Security Spending in Nigeria (GRISEXP) and Government Security Capital Expenditure in Nigeria (GSCAEXP) were positively related Real Gross Domestic Products (RGDP) in Nigeria. While Government Recurrent Defence Spending in Nigeria (GRDEXP) and lagged value of Government Security Capital Expenditure in Nigeria (GSCAEXP-1) were negatively related Real Gross Domestic Products (RGDP) in Nigeria. All the independent variables were statistically insignificant in explaining the variation in Real Gross Domestic Products (RGDP) in Nigeria except the lagged value of Real Gross Domestic Products (RGDP-1) and Government Recurrent Defence Spending in Nigeria (GRDEXP) that were statistically significant in explaining the variation in Real Gross Domestic Products (RGDP) in Nigeria.

Based on the findings of the study, the following recommendations were proffered:
  i.   Government Recurrent Defence Spending in Nigeria (GRDEXP) has significant impact on Economic Growth in Nigeria. Therefore, government should design a mechanism to ensure all monies spent for Recurrent Defence Spending in Nigeria are accounted for in order to improve Economic Growth in Nigeria.
  ii. Since Government Recurrent Internal Security Spending in Nigeria (GRISEXP) has significant impact on Economic Growth in Nigeria. Therefore, government should design a mechanism to ensure all monies spent for Government Recurrent Internal Security Spending in Nigeria are accounted for in order to improve Economic Growth in Nigeria.
  iii. Similarly, since Government Security Capital Expenditure in Nigeria (GSCAEXP) has significant impact on Economic Growth in Nigeria. Therefore, government should design a mechanism to ensure all monies spent for Government Security Capital Expenditure in Nigeria are accounted for in order to improve Economic Growth in Nigeria.

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