Security Expenditure: Implications on Economic Growth in Nigeria

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Nteegah, Alwell

Department of Economics, University of Port Harcourt, Nigeria.
Email: nteegah@yahoo.com Tel: +2348069284958

ABSTRACT

The increasing level of insecurity and the consistent rise in budgetary allocation to security issues make it imperative to examine how funds expended on security have affected economic growth in Nigeria. To achieve this purpose, data on external, internal security expenditure, education and health care expenditure and growth of GDP were sourced from the CBN bulletin and analysed using the Autoregressive and distributed lag (ARDL) model. The results show that security expenditure (external and internal) stimulated real economic growth significantly in the long run and in the short run at lags levels. However, at level in the short run, security expenditure retarded economic growth significantly. This implies that security expenditure has serious implications on the growth of Nigeria's economy. The outcome of this study tends to corroborates the high budgetary allocation to security at all the tiers of government and the stunted growth recorded in Nigeria. The result further shows that expenditure on education spurred real economic growth both in the long and short runs. This implies that educational spending drives productivity and growth. However, health care spending was found to have retarded real economic growth both in the long and short run. The low budgetary allocation to the health sector, decay in health infrastructure and brain drain in the sector may have accounted for this result. Based on this findings, the paper recommends: an improvement and proper utilisation of security funds and an increase in budgetary allocation to the education sector as ways of stimulating growth in Nigeria.

Keywords: *Economic growth, Internal security expenditure, External security expenditure, Education expenditure, Health expenditure.*

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Highlights of this paper

- This paper investigated the impact of security spending on economic growth in Nigeria over the period 2001 – 2019 using the ARDL methodology.
- The paper finds that security expenditure has serious implications on the growth of Nigeria's economy.
- That educational spending drives productivity, output and economic growth in Nigeria.
- The paper recommends: an improvement and proper utilisation of security funds and an increase in budgetary allocation to the education sector as ways of stimulating growth in Nigeria.

1. INTRODUCTION

According to Lippman (1973) and Wolfers (1962) a geographical area is regarded as been secured when it is able to protect its critical national interests and core national values. To these authors, critical national values are not only concern about routine security issues, such as the maintenance of territorial integrity and national independence, but also about the safety and welfare of the citizens as well as the sustenance of cultural values such as tolerance and rule by the people.

Security of lives and properties are germane for achieving sustainable growth and development in an economy. This is because an economy tends to grow more when people and investors are free to live and invest in any part of the country of their choice and also sure their lives and investments are guaranteed in such places. Early philosophers like Thomas Hobbes argued that security is the prime responsibility of the state. Also the 1999 constitution of the Federal Republic of Nigeria, provides that "the safety and welfare of those living in the country shall be the fundamental objective of the government" Though this cardinal function of government as enshrined in the constitution of Nigeria has not been repealed, the threat to lives and property as currently experienced in Nigeria show that government seems to have relaxed in its responsibility of securing lives and providing conducive environment for investment and economic prosperity.

Though no society is free of crimes, the liberalization of politics in 1999 was used for the mobilization of primordial sentiments and identity in politics and governance in Nigeria (Alubo, 2011). It is pertinent to note that since 1999 no day passes without violent destruction of lives and properties in Nigeria. According to Ewetan and Ese (2014) the alarming level of insecurity in Nigeria has fuelled the crime rate and terrorist's attacks in different parts of the country, leaving a devastating consequences for the nation's economy and its growth.

The Nigerian government over the years recognises the critical role of security in enhancing growth and development and has instituted law/policies and even earmarked funds to curbing insecurity in the country. For instance, the government both at the centre and its components units had enacted the Anti-Terrorism Act. Statistics from the Central Bank of Nigeria shows that federal government expenditure on internal security increased from 4.4billion in 1994 to 25.15billion in 2000. By 2005, it increased to 81.95billion, 196.90billion in 2008, 224.20billion in 2010, 410.20billion in 2015 and a whopping sum of 4.9trillion in 2019. This spending is outside what the 36 states and 776 local government areas in Nigeria also spent on security in the area of jurisdiction. Though security expenditure has been rising, economic growth seems not to follow a rising trend security spending as economic growth during same period. For instance, growth rate of real GDP in 1994 was 0.3 percent, increased to 5.5 percent in 2000 by 2005 real GDP growth rate rose to 7.0 percent, 11.3 percent in 2010 felled to 2.7 percent in 2015, declined further to 1.9 percent in 2018 and 2.2 percent in 2019 (International Monetary Fund, 2019).

The index gauges for global peace which uses three broad themes: the level of safety and security in society, the extent of domestic and international conflict and the degree of militarization in the assessment of peace in a country, in 2008, reported a global peace index of 2.57 in Nigeria. In the ranking by global peace index including 162 countries, Nigeria has the 15th rank that is close to the positions of countries like Democratic People's Republic

of Korea and the Lebanon. The global peace index of Nigeria deteriorated further to 2.63 in 2010, 2.91 in 2015, 2.87 in 2018 and 2.89 in 2019. This high level of insecurity as evidence in the lower global peace index has affected the investment climate and the growth in the economy of the country.

During same period under review, global competitiveness index (which measures the strength of a country's investment climate) for Nigeria in 2008 was 95 in the ranking of 138 countries. Nigeria was ranked 12th which is close to the positions of countries like: Madagascar and the Zimbabwe. By 2010 global competitive index for Nigeria declined to 99. It worsens further to 127 by ranking in 2015, improved marginally to 115 in 2018 and 116 in 2019. Compared to Yemen which is at the top of the ranking with global competitiveness rank of 138 rank in 2018, Nigeria has 7.97 % percent lower global competitiveness rank. This poor investment climate due to dearth of basic infrastructure, political instability, weak judicial system which does not enforce contract terms amongst others have weaken investment and the growth of the economy. National Bureau of Statistics (NBS) (2016) shows that growth rate of GDP oscillates from 5.17 percent in 2013 to 6.77 percent in 2014. It however, fell to 2.35 percent in 2015 and became negative in 2016.

Though the growth of an economy cannot be entirely explained by security issues of a country, it is necessary to examine the extent to which security expenditure has affected the growth of the Nigerian economy over the period 1985 – 2019. We shall continue our study by reviewing related literature on the topic in order to understand what other scholars have done and also identify possible gap(s) this study intends to bridge. This shall be followed by the research methodology, results of data analysis, findings and concluding remarks.

2. LITERATURE REVIEW

Both theoretical and empirical evidences abound in literature on the link between security/insecurity and economic growth. Akpo and Hassan (2015) argued in their study on national security and sustainable development in Nigeria, that national security is a precondition for economic and social development as much as economic and social development is a precondition for national security. Other studies by Adam (2009) and Beijer (2010) however, posited a trade-off between national security and economic development. This implies that the cost of security reduces development.

Beijer (2010) specifically argued that the process of maintaining security, investment required for sustainable growth could be reduced. Claudia (2010) however, did not support the position of Beijer. To Claudia, the cost of security may affect development only in a very short period. Over time, security expenditure promotes growth and development of the economy. He further stressed that the prosperity of a nation in terms of income earnings and improvements in healthy living and literacy are not possible without national security. Both internal and external investments are induced to embark on business activities in an economy with maximum security for life and property, and low risks. The expected gains on business ventures cannot be accrued if there is insecurity. Also, government development projects cannot be realized when there is insecurity, which implies that security is essential for development as asserted by Yero (2010) and Zingel (2010).

Otto and Ukpere (2012) in their work studied the effect of national security on the growth of the Nigeria's economy. Using government spending on security as gauge for security and the GDP as proxy for economic growth. They found from their study that there is a direct nexus between security spending by the government and the growth of the Nigeria's economy. In a related study, Odesuwa (2011) found that insecurity reduces the level at which external investors are willing to do business in Nigeria. This is evidenced in the flow of FDI in Nigeria which averaged 42 percent between 1990 to 1999 but fell to 28 percent over the period 2000 to 2009 which negatively affected exports and growth in the country.

Also, Shadare (2011) in his study found that insecurity retarded the level of investment in Nigeria. The argue that insecurity affect both domestic and foreign investment including the transport sector. Claudia (2010) in his study used Granger-Causality test to detect the direction of causation between insecurity and growth and found that there is a bi-directional causality between cost of security and economic growth.

Ikpe and Nteegah (2014) investigated the effects of social insecurity, foreign direct investments on Nigeria's economic growth trajectory. The outcomes of their research show that social insecurity is friendly to FDI inflow. However, an indirect relationship was reported between FDI and economic growth in Nigeria from the study. The authors attributed this scenario to the combinations of various types of social insecurity challenges in their study. Other findings from the study show that the myriad of security crises in Nigeria like: The Niger Delta Militancy, the Boko Haram Islamic sect among others have contributed to discouraging investors from investing in the Nigerian economy.

The UNCTAD investigation on global investment in 2010 shows that foreign investment inflow into Nigeria fell from US$8.65billion in 2009 to US$6.1billion in 2010 as a result of insecurity caused by the Boko Haram sect. Also adversely affected is the tourism sub sector. The sector which was estimated to worth about N80billion yearly, has fallen by almost 50 percent of its revenue and worth due to the insurgency caused by the Boko Haram sect and high level of kidnapping in the country. The real sector of agriculture and manufacturing are not left out of the menace. Funds accruing to the real sector by local firms and investors have been lost due to high level of insecurity in Nigeria.

Empirical findings are uncertain on the impact of security and funds expended on security on economic growth. In a study by Aderemi, Olayemi, Ebere, and Adeniran (2018) on security expenditure, FDI and the growth of the Nigerian economy using the cointegration, DOLS and Granger Causality approaches over the period 1994 – 2016, a bidirectional causality was reported between security spending and economic growth. This shows that security expenditure causes economic growth and economic growth could also improve security.

Another study on funds expended on security concerns and improvement in human capacity in Nigeria over the period 1970 – 2014 by Obasi, Asogwa, and Nwafee (2018) reported a negative relationship between military spending and human capital development using the autoregressive and distributed lag approach. This suggests that military spending retarded human capacity building and economic prosperity in the long run.

Masoud and Munadhil (2015) studied the effect of funds expended on security on economic growth in the United States of America (USA) using time series date spanning from 1970 – 2011. The authors discovered an indirect nexus between funds expended on security and economic growth in USA. The analysis was done using the ARDL approach.

Similarly, Umar and Abu (2016) investigated the effect of defense expenditure and political unrest on economic growth in Nigeria using time series data spanning from 1980 – 2013. The results show a direct nexus between defense expenditure and political instability and a negative link between political instability and economic growth using the Toda and Yamamoto dynamic Granger causality test.

Ayange, Abner, Ishaka, and Ndubuaka (2020) investigated the impact of security expenditure on economic growth in Nigeria using the ARDL method to analysed quarterly data spanning from 2010 – 2018. The study reported a long run co-integrating nexus among security expenditure, economic growth and human capacity building and an indirect nexus between security spending and economic growth in Nigeria in the short run. The study concludes that security is key to enhancing conducive business climate and growth hence security spending is a contributive spending.

Otani and Villanueva (1993) studied the impact of educational spending on economic growth in 55 developing countries using cross sectional and time series data and found that vocational training and health training have stimulating effect on economic growth and income level in the countries. In a similar study, Fiszbein, Giovagnoli, and Patrinos (2007) investigated how spending on education affects economic prosperity in Venezuela. The result of the study revealed that spending on basic schooling have very significant impact on economic growth than spending on tertiary education. However, in a study using 43 developing countries for the period of 20 years by Devarajan, Swaroop, and Zou (1996) they reported an inverse nexus between spending on education and economic growth using panel analysis.

Aurangzeb (2001) reported a positive relationship between economic growth and health expenditure in both short and long run using a modified Solow's growth and Error correction models for data spanning from 1973 – 2003 in a study on education spending and economic growth in Pakistan. In a similar study in Nigeria by Bakare and Sanmi (2011) the authors reported a positive and significant nexus between spending on health care and economic growth using the OLS method. However, the investigation by Ogundipe and Lawal (2011) found a negative relationship between health care spending and economic growth in a study on the impact of health care expenditure and economic growth in Nigeria. Review of literature shows that studies on security expenditure and economic growth are inconclusive. This is because some older studies on the topic show that security spending retarded economic growth (Rothschild, 1977; Smith, 1977) while others found military spending to be a propeller of economic growth (Ando, 2009; Atesoglu, 2009; Kaldor, 1976).

Though this paper appreciates these contending views and also adopted previous methodology due to the nature and behaviour of data sourced and utilised for this study. Its deviated from previous studies as the paper incorporated social spending into security spending in its investigation. Basically, education and health spending are classified as social spending but security expenditure is not an end in itself just like education and health expenditure. Hence they all tend to help provide the environment and skills necessary for production and economic growth. Hence in this paper, expenditure on internal and external security, education and health form the explanatory variables for this study.

3. METHODOLOGY

Security constitutes a public good because of its no excludability status hence it is the duty of the government (state) to provide security for the protection of lives and properties. This implies that investment in security is usually carried out by the government with the intention of not deriving profit from such investment. However, security of lives and property create the enabling environment for investment and economic growth. Early economists like: Smith (1977) and Rothschild (1977) see security expenditure as unproductive venture because it does not add value to the productive process. However, the endogenous growth model argue that economic prosperity emanates basically from internal factors, rather than external forces (Romer, 1994). The proponents of this theory submit that increase in productivity could be traced to improvement in innovation and increase investments in education, health and security from both private and public institutions. This argument has created very crucial role on social capital in the economic growth process and equation. Given this background, an economic growth equation incorporating social and social expenditures is stated thus:

$$Gdpr = f(\text{Sexp}, \text{Isexp}, \text{Edxp}, \text{Hexp}) \quad (1)$$

To enhance proper estimation, Equation 1 could be expressed in a mathematical form below incorporating the error term and parameters

$$Gdpr_t = \chi_0 + \chi_1 S\exp_t + \chi_2 Is\exp_t + \chi_3 Edxp_t + \chi_4 H\exp_t + U_t \quad (2)$$

Where: χ_0 = economic growth independent of security and social spending; $\chi_1 - \chi_4$ = parameter estimates; $Gdpr_t$ = growth rate of GDP in Nigeria; $Sexp_t$ = expenditure on security in Nigeria; $Isexp_t$ = expenditure on internal security in Nigeria; $Edxp_t$ = expenditure on education in Nigeria; $Hexp_t$ = expenditure on Health services in Nigeria; U = disturbance term. Apriori theoretical expectation is that $\chi_1 < 0, \chi_2 < 0, \chi_3 > 0, \chi_4 > 0,$. The data utilised are time series data sourced from the World Bank and Central Bank of Nigeria Statistical bulletin 2019.

The error correction model ARDL version for the variables in Equation 1 is stated thus:

$$\Delta Gdpr_{t-1} = \sum_{i=1}^{n} \chi_0 \Delta Gdpr_{t-1} + \sum_{i=1}^{n} \chi_1 \Delta S\exp_{t-1} + \sum_{i=1}^{n} \chi_2 \Delta Is\exp_{t-1} + \sum_{i=1}^{n} \chi_3 \Delta Edxp_{t-1} + \sum_{i=1}^{n} \chi_4 \Delta H\exp_{t-1} + \eta_0 \Delta Gdpr_{t-1} + \eta_1 \Delta S\exp_{t-1} + \eta_2 \Delta Is\exp_{t-1} + \eta_3 \Delta Edxp_{t-1} + \eta_4 \Delta H\exp_{t-1} + \mu_t \quad (3)$$

Parameter η_i, i =1,2,3,4 are the corresponding long-run multipliers, whereas, for the parameter χ_i, i =1,2,3,4 are coefficients of the short-run dynamic of the ARDL model. $\mathbf{u}_t$ is serially uncorrelated stochastic term with zero mean and constant variance, and Δ is the first difference operator. Since the long-run relationship amongst the variables has been established, we proceed to estimate the long-run equation of economic growth thus:

$$Gdpr_t = \eta_0 + \eta_1 Gdpr_{t-1} + \eta_2 S\exp_{t-1} + \eta_3 Is\exp_{t-1} + \eta_4 Edxp_{t-1} + \eta_5 H\exp_{t-1} + \mu_t \quad (4)$$

The study adopted the Akaike Information Criterion (AIC) due to the nature of the data and sample size in estimating the lag length of the ARDL model. This was achieved using the lag of 3 for both the dependent and independent variables. In estimating the short-run dynamics, the ARDL error correction equation was formed thus:

$$\Delta Gdpr_{t-1} = \sum_{i=1}^{n} \chi_0 \Delta Gdpr_{t-1} + \sum_{i=1}^{n} \chi_1 \Delta S\exp_{t-1} + \sum_{i=1}^{n} \chi_2 \Delta Is\exp_{t-1} + \sum_{i=1}^{n} \chi_3 \Delta Edxp_{t-1} + \sum_{i=1}^{n} \chi_4 \Delta H\exp_{t-1} + \sum ECM_{t-1} + \mu_t \quad (5)$$

Where: χ_i; i=1,2,3,4 are the short-run parameters. ECM is the lagged error correction term estimated from the long-run dynamics. It shows the adjustment in the coefficient, and it is usually negative and most times statistically significant in order to confirm the existence of cointegration relationship.

4. RESULTS AND FINDINGS

The descriptive statistic result reported in Table 1 shows that the Nigerian economy grew at an average of 5.1 percent over the period 1995 – 2019. The federal government spent an average of N161.49billion on external security while during same period expenditure on internal security stood at an average of N192,01billion. During same period under consideration, the government spent an average of N184.24billion on education and just about N110.12billion on health care. The huge expenditure on internal security to some extent signal the volatility of

Nigeria's security system while the low expenditure on education and health compared to security shows the poor attention of government to human capital development in the country.

Table-1. Descriptive statistics.

Statistic	GDPR	SEXP	ISEXP	EDXP	HEXP
Mean	5.13	161.49	192.01	184.24	110.12
Median	5.14	74.21	149.63	128.07	72.08
Maximum	14.60	588.99	668.63	593.33	388.37
Minimum	-1.62	4.21	4.40	7.38	2.09
Std. Dev.	3.81	162.09	180.37	169.40	109.61
Skewness	0.47	0.98	0.86	0.750	0.87
Kurtosis	2.89	2.95	2.97	2.39	2.71
Jarque-Bera	0.97	4.20	3.18	2.83	3.35
Probability	0.62	0.12	0.20	0.24	0.18
Sum	133.47	4198.74	4992.36	4790.29	2863.06
Sum Sq. Dev.	363.13	656809.8	813371.7	717448.7	300375.4
Observations	26	26	26	26	26

The result also shows that there was a high level of fluctuation in economic growth and education expenditure compared to security expenditures and that of health care. The consistent rise in security expenditure could further be explained by the line graph in Figure 1. Nigeria has experienced serious internal security challenge over the years due to injustices, religious conflict and political tension. These may have affected the growth of the economy over the years

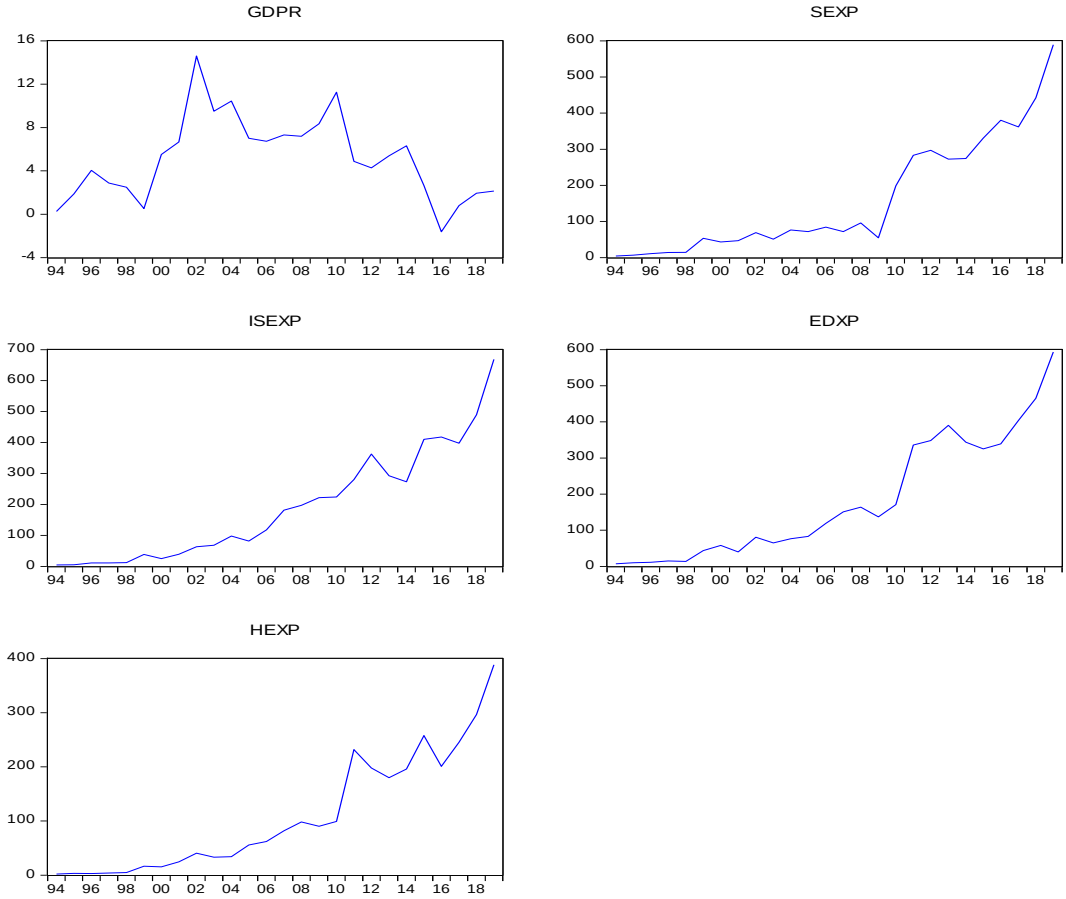

Figure-1. Trend in Real GDP growth rate, security expenditure, internal security spending, education and health spending in Nigeria.

The unit root test result reported in Table 2 indicates that external security, internal security and health care expenditures were stationary at level. This implies that the variables were stable without differencing. However, growth rate in real GDP and education expenditure were stationary at first difference. This implies that the variables were stable after first differencing. The different order of stationarity exhibited by the variables under investigated led to the use of the autoregressive and distributed lag (ARDL) in estimating the short and long run behaviour of the variables. Feridun (2016) posited that in case where the presence of structural breaks introduces uncertainty as to the true order of stability of the variables, the autoregressive distributed lag (ARDL) bounds testing procedure introduced by M Hashem Pesaran (1997); M. H. Pesaran and Shin (1999) and M H. Pesaran, Shin, and Smith (2001) is applicable.

Table-2. Unit root test – philip perron procedure.

Variable	PP Statistic	1%	5%	Decision
GDPR	-5.7896	-3.7379	-2.9919	Stationary@ i(1)
SEXP	3.7241	-3.7241	-2.9862	Stationary@ i(0)
ISEXP	5.8804	-3.7241	-2.9862	Stationary@ i(0)
EDXP	-3.3873	-3.7379	-2.9919	Stationary@ i(1)
HEXP	4.5099	-3.7241	-2.9862	Stationary@ i(0)

The ARDL bounds test reported in Table 3 indicates an F- statistics of 5.75, revealing the rejection of the null hypothesis of no long run relationship among the variables at all critical levels (lower and upper bounds). This implies that there exists a long run relationship between economic growth security and social expenditures in Nigeria. The confirmation of long run dynamics among the variables gives credence for the estimation of the extent of the relationship between the dependent and explanatory variables.

Table-3. ARDL Bounds Test.

Test Statistic	Value	K
F-statistic	5.75	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Note: Null Hypothesis: No long-run relationships exist.

Table-4. ARDL Cointegrating and long run form: Selected Model ARDL (3, 3, 3, 3, 3).

Variable	Coefficient	t-Statistic	Prob.
D(GDPR(-1))	0.365146	1.405947	0.2544
D(GDPR(-2))	1.177906	3.887220	0.0302
D(SEXP)	-0.078841	-2.757384	0.0703
D(SEXP(-1))	-0.198158	-3.515139	0.0391
D(SEXP(-2))	0.066117	1.274887	0.2921
D(ISEXP)	-0.008673	-0.144264	0.8944
D(ISEXP(-1))	-0.035130	-0.876720	0.4452
D(ISEXP(-2))	-0.158732	-3.079468	0.0542
D(EDXP)	0.139297	2.694408	0.0741
D(EDXP(-1))	-0.072348	-1.062171	0.3661
D(EDXP(-2))	-0.170402	-3.141778	0.0516
D(HEXP)	-0.173340	-1.462681	0.2397
D(HEXP(-1))	0.466889	3.818331	0.0316
D(HEXP(-2))	0.373091	3.070163	0.0546
CointEq(-1)	-0.949528	-4.514178	0.0203
Cointeq = GDPR - (0.1154*SEXP + 0.4128*ISEXP + 0.5101*EDXP -1.6299*HEXP -4.5765)			

Table-5. Long run coefficient. (Continue)

Variable	Coefficient	t-Statistic	Prob.
SEXP	0.115435	2.132857	0.1227
ISEXP	0.412836	4.015554	0.0277
EDXP	0.510093	3.734078	0.0335
HEXP	-1.629884	-3.988396	0.0282
C	-4.576467	-1.527259	0.2241

The long run coefficient of the variables reported in Table 4 indicates that external security expenditure has positive and insignificant relationship with economic growth. This implies that increase in external security expenditure stimulated economic growth minimally over the period. This study is in tandem with that of: Otto and Ukpere (2012); Ando (2009) and Masoud and Munadhil (2015) who reported a positive link between security spending and growth. Though the sign of the coefficient of this variable deviated from theoretical expectation with a positive sign, a stable external security is necessary for investment, increasing output and growth. Nigeria has enjoyed less aggression from her external neighbours since independence to the present day. Internal security expenditure is also positively related to economic growth in the long run. This implies that internal security spending adjusts positively to long run dynamics in economic growth. The sign of the coefficient of this variable also deviated from theoretical expectation because increasing security expenditure is a disincentive for investment and growth but it is in agreement with earlier studies by; Kaldor (1976); Ando (2009) and Atesoglu (2009). The increase spending on the Niger Delta agitators and the stabilisation of oil production in the Niger Delta region may have accounted for the behaviour of this variable. Educational expenditure in the long run is positively and significantly related to economic growth. This implies that increase in educational spending stimulated economic growth in Nigeria. The sign of the coefficient of this variable agrees with theoretical apriori expectation. Improvement in knowledge and skills as a result of increase in public expenditure on education stimulate productivity and growth. Earlier studies by Otani and Villanueva (1993); Psacharopoulous and Patrinos (2018) reported a positive relationship between educational spending and growth. Expenditure on health bears a negative sign but it is significant. This implies that health expenditure significantly retarded economic growth in Nigeria over the period under study. Health care spending coefficient deviated from theoretical expectation but it is in consonance with study by Ogundipe and Lawal (2011). Nigeria has experienced a low budgetary expenditure on health care. This had led to brain drain in the health sector and a fall in life expectancy in the country.

Table-5. Parsimonious error correction ARDL result: Selected model ARDL (3, 3, 3, 3, 3).

Variable	Coefficient	t-Statistic	Prob.
GDPR(-2)	1.329414	5.205298	0.0012
GDPR(-3)	-1.325793	-4.413850	0.0031
SEXP	-0.082950	-2.854041	0.0245
SEXP(-2)	0.191088	3.904623	0.0059
ISEXP	-0.099539	-3.371568	0.0119
ISEXP(-1)	0.254774	4.538237	0.0027
ISEXP(-3)	0.190968	4.191880	0.0041
EDXP	0.067940	2.028607	0.0821
EDXP(-1)	0.120403	3.063103	0.0182
EDXP(-3)	0.137712	3.005768	0.0198
HEXP(-1)	-0.436053	-4.669857	0.0023
HEXP(-2)	-0.386805	-3.994174	0.0052
HEXP(-3)	-0.384574	-3.969487	0.0054
ECM(-1)	-0.668424	-0.918963	0.3887
C	-0.619371	-0.276260	0.7903
R^2 =0.89; $R^2_{adjusted}$ =0.66; F-statistic = 3.89: Prob(F-stat)=0.039; DW Statistic=2.03; AIC=4.70; SC = 5.44			

The parsimonious error correction model result report on Table 5 indicates that external security expenditure is negatively and significantly related to economic growth at level but positively related to real GDP growth rate at lag 2. The result at level is in tandem with the views of classical scholars and earlier works by: Smith (1977) and Ikpe and Nteegah (2014). The consistent treat to lives and investments by the Boko Haram and Armed Bandits in the north and criminal elements in the south may have accounted for this result. However, at lag 2, external security expenditure affected economic growth positively. The significance of the variable implies that external security spending has serious implication on changes in economic growth in Nigeria. internal security spending retarded real growth significantly at level but significantly stimulated real growth at lags 1 and 3. The lags results conform with findings of: Otto and Ukpere (2012); Ando (2009) and Masoud and Munadhil (2015). Increase spending on internal security may stimulate consumption and investment especially, if the security apparatus are produced locally. Nigeria has over the years invested heavily in internal security via the amnesty programme in order to stimulate investment and growth.

Expenditure on education was significant in explaining changes in real economic growth at level, lags 1 and 3. This implies that educational spending adjusts positively to changes in economic both in the short run and long run. Otani and Villanueva (1993) Fiszbein and Psacharopoulos have found education expenditure to be a driver of productivity and real economic growth in their studies. Education improves knowledge, skills and spurs productivity and output. Health care expenditure unlike the education spending retarded economic growth significantly at lags 1,2 and 3. This implies that health care spending adjusts negatively to growth in the short and long runs. This result conforms with that of Ogundipe and Lawal (2011) which found health spending to be growth retarding. Nigeria's government at all tiers, budget very little to health and education. This had led to decay in basic infrastructure in these sectors and brain drain. The resultant effects are increase in mortality rate and decline in productivity and growth.

The error correction mechanism bears the appropriate negative sign but it is insignificant. This implies that security and social expenditure do not adjust speedily to changes in economic growth in the short run. However, the goodness of fit of the economic growth model reveals that about 89 percent of the systematic change in economic growth is explained by security and social expenditure in Nigeria.

Table-6. Diagnostic test for economic growth model.

Test	Statistic	Prob	Decision
Serial Correlation (Breush-Godfrey LM test	0.21	0.82	Accept H_0
Breusch/Pagan heteroscedasticity test (chi2)	0.74	0.70	Accept H_0
Ramsey RESET test (F)	1.17	0.29	Accept H_0
Jarque-Bera test for normality	0.91	0.63	Accept H_0

The diagnostic test result reported in Table 6 reveals the acceptance of null hypotheses for all the diagnostic tests conducted. For instance, the result shows no evidence of autocorrelation given the Breush-Godfrey LM statistic (Ljung & Box, 1978). In like manner, the result indicated that the error term is normally distributed, while the test for heteroscedasticity shows that it is absent in the model (see (Engle, 1982; Jarque & Bera, 1980)). Furthermore, the Ramsey RESET test indicated that no variable is missing in the model. These results provide evidence that data conform to the basic assumptions of ordinary least squares estimation.

5. CONCLUDING REMARKS/RECOMMENDATIONS

This paper investigated the impact of security spending on economic growth in Nigeria over the period 2001 – 2019 by employing the ARDL methodology. The results show that security expenditure (external and internal)

stimulated real economic growth significantly in the long run and in the short run at the lags levels but at level in the short run, it retarded economic growth significantly. This implies that security expenditure has serious implications on the growth of Nigeria's economy. The outcome of this study seems to corroborates the high budgetary allocation to security at all the tiers of government and the unstable and stunted economic growth recorded in Nigeria during the period of this study see Table 1 and Figure 1. Education expenditure spurred real economic growth both in the long and short run with its positive coefficient. This implies that educational spending drives productivity, output and growth. However, health care spending was found to have retarded real economic growth both in the long and short runs. The low budgetary allocation to the health sector, decay in health infrastructure and brain drain in the sector may have accounted for this result. Based on this findings, the paper recommends: an improvement and proper utilisation of security funds and an increase in budgetary allocation to the education sector as ways of stimulating growth in Nigeria.

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