Impact of Defense Allocation on Education and Health Sectors in Nigeria

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Abstract
This paper investigated the budgetary allocation to defense sector and its effect on education and health sectors in Nigeria over the period 1980-2023. The facts from the nature of tradeoffs and the size of fall between defense expenditure and non-defense expenditure like education and health remained inconclusive. This aspect, needs to be re-examined, considering the continued increase in defense allocations and to guide against likely misdirected policy interventions. The paper uses the autoregressive distributed lag (ARDL) model to reconcile the long-run and short-run equilibrium relationships among the variables. Findings revealed that the long-run estimates are positively signed and are highly statistically significant. A unit increase in defense spending will, over the long-run, increase education and health by about 1.68 units and 68 units respectively. This, probably, supports the view that a strong defense sector reduces tension and creates a peaceful society on which other sectors depend. On the other hand, most of the short-run estimates show that government allocations to defense sector in all the periods investigated, have negative impacts on her allocation to education and health sectors. This, by implication, suggests the existence of trade-off between allocations to defense and allocation to education and health sectors. Based on the findings, and considering the deteriorating security situation in the country whereby more fund is required, it is suggested among others that government should establish a fund like TETFUND dedicated to financing defense sector thereby increasing education and health sector in budgetary allocations.

Keywords: Defense, tradeoff, education and health, ARDL,
JEL Codes: H45, K50, N10

1. Introduction

Budgetary allocations to the various sectors of an economy is one of the key responsibilities of the executive arm of government. In Nigeria, the budget is prepared yearly by the Executive and submitted to the joint session of National Assembly for deliberation and approval. The various sectors in Nigeria that receive annual budgetary allocation include education, health, agriculture, manufacturing and defence, etc Available records from National Bureau of Statistics (NBS) (2022) shows that defence sector remains one of the sectors in the Nigeria economy that enjoys huge allocation. The reason for the continued increase in defence budget, as Aiyedogbon (2012) Eme and Anyadike (2013) argue, is not unconnected to the rising internal threat such as drug trafficking, kidnapping, religious crisis, proliferation of weapons, banditry and activities of the Boko Haram sect in Nigeria.

However, despite increases in defence budgetary allocation over the years, these vices continue to hamper the pace of economic prosperity in the country. For example, the criminal activities of bandits, unknown gunmen, and kidnapping in Nigeria is yet to be abated. Also, there are rising concerns about the trade-off between budgetary allocation to the defence sector and allocations to other sectors of the economy such as the health and education sectors, among others. The trade-off suggests that the opportunity cost of

rising defence expenditure is the falling government expenditures education and health sectors of the economy. This has serious implications on real sector of the economy and its output. For example, the falling standard of education in Nigeria, together with poor and inadequate health facilities in the hospitals, had been blamed on inadequate budgetary allocation to these sectors. According to Ogungbele and Edogiawerie (2020), in the education sector, only 55 percent of school age children are in school and only 47 percent of women or 67 per cent of men are literate.

The nature of the trade-off between defence expenditure and non-defence expenditures, such as expenditure on education and health sectors effect on the real sector output has resulted in many studies demonstrating the need for reduction in budgetary allocations to the defence sector and an increase in spending on the non defence sector such as education and health. Although, the studies of Yildrim and Sezgin (2002), Looney (1986) and Frederick and Looney (1994), have conflicting results on the nature of the tradeoffs, they all submit that increasing defence spending will automatically lower government expenditure on non-defence sectors such as education and health sectors. However, there is no consensus among researchers on the magnitude of fall in non- defence expenditure following a rise in defence expenditure. What could be responsible for the varying results by different studies, perhaps, the nature of the data employed, the scope of coverage and sophistication of the methodologies. This aspect, which remains inconclusive, needs to be re-examined to guide against likely misdirected policy intervention.

Against this backdrop, the objective of this study is to examine the budgetary allocation to the defence sector and its effect on allocations to education and health sectors in Nigeria over the period 1980-2023. The contribution of the education and health sector to human capital development cannot be over emphasized. The remaining part of the paper is structured as follows: section two reviewed literature relevant to the study, conceptual clarification and theoretical framework while section three is the research methodology. Section four presents and discusses the major findings while section five provides conclusion and Recommendations.

2. Literature Review

2.1 Conceptual Clarification

Several studies on the relationship between defense sector allocation and other sectors allocation exist in the literature. The aim has been to understand the impact of increased allocation to the defense sector on the non-defense sector. Although, the findings of previous studies, are mixed, a good number of the studies support the view that increased defense spending deprives the non-defense sector like education and health of financial resources from the government.

Harris, Mark and Pranowo (1988) used cross sectional data to test for the existence and strength of budgetary trade-offs among large number of less developed countries (LDCs), they found that few countries

which were low defense spenders were high spenders on education/health and vice versa. Defense expenditure were no less vulnerable to overall budget cuts, nor more likely to gain from budget increases than education and health.

Adebiyi and Oladele (2019), in their study, examined the empirical relationship between public education expenditure and defense spending in Nigeria, using annual time series data from 1970 to 2016. A regression analysis of the relationship was positive and statistically significant in all the techniques employed. Thus, concluded that in the short and long run, the impact of military expenditure on Nigeria's stock of human capital, particularly education, is positive. Yildrim and Sezgin (2015) investigate the possible trade-offs between Turkish defense spending and spending on education and health during the Turkish Republican era. The main findings are that while defense spending decisions are made independently of health and education expenditure, there are trade-offs between defense and welfare spending. While the trade-offs is negative between defense and health, it is positive between education and defense.

Fredickson and Looney (1994) in assessing the short run impacts and long run adjustments of budgetary consequences of defense expenditures in Pakistan showed that the deficit, the debts service and the military burden are often interrelated in such a complex manner that the impact of any specific programmes is difficult to predict. In the short run, most infrastructure programmes increased as the military burden declined. The opposite was generally true for programs such as social security, welfare and housing.

Aron and David (2014) in their study examined whether defense spending limit the growth of public health investment. Using comparative data from 31 OECD countries between 1980 and 2010, they found little evidence that defense crowds out public health spending. To investigate the possibility that countries with high security needs such as Israel exhibit differing patterns, they also compared crowd-out among countries experiencing violent conflicts as well as current high military-spending countries, and observed a greater positive correlation between changes in health and defense spending among conflict-countries than in non-conflict countries.

Olurankise (2017) describes a budget as a framework of revenue and expenditure outlays over a specified period usually one year. It is an instrument stipulating policies and programmes aimed at realizing the development objectives of a government. The budget of a government is a summary or plan of the intended revenues and expenditures of that government. Ogungbele and Edogiawerie (2021) opine that a budget is a plan for saving, borrowing and spending. It is a financial or quantitative statement prepared and approved prior to a period of time of the policies to be pursued during those periods. The budget is usually quantified in monetary terms, prepared and approved prior to a defined period of time usually showing planned income to be generated and/or expenditure to be incurred during that period and the capital to be employed to attain a given objective.

According to the Central Bank of Nigeria (2022) Defense budget can simply be seen as expenses, which the public sector incurs for the maintenance of the military for the benefit of the economy. There are several ways of classifying defense budget. For government budgeting purposes, however, it is broadly classified into recurrent and capital expenditures. Each class is further subdivided according to "function" or sector such as administration, economic services, social and community services, and transfer etc.

2.2 Theoretical Review

Neoclassical Supply side explanations of the relationship between defence expenditure and economic growth revolve around the basic neoclassical growth model derived from the aggregate production function. Generally, the model is one in which national income or output is expressed as a function of capital (K), labour (L) and technology (T).

$Y = f(L, K, T)$

This study adopted the Neo-classical growth model as a guide. The adoption was on the basis that Neo-classical school of thought holds a largely supply side argument wherein defence expenditure provides social security which is considered a pure public good. This characteristic of defence, as a public good, thus makes it essential that it be provided for through government expenditure. Therefore, according to the Neo-classical economists increased defence spending is a burden, slows economic growth and crowed-out expenditures in other growth stimulating sectors of the economy like health and education.

3. Methodology

3.1 Data Source

Annual time series data for the period 1980 to 2023 was used in the study. The variables of the study on which data were collected were government allocation to defence sector (GADS), government allocation to education sector (GAES) and government allocation to health sector (GAHS). Data on GAES and GAHS were collected from the publications of the Central Bank of Nigeria (CBN), while data on GADS was sourced from the Military Balance publication of the International Institute of Strategic Studies and the year book of Stockholm International Peace Research Institute (SIPRI). The data from these two sources were compared in order to confirm their accuracy

3.2 Model Specification and Estimation Procedure

This study uses the autoregressive distributed lag (ARDL) model developed by Pesaran (2001) and employed by Akinboade, Zirabe, Kumo (2018). The ARDL is an improvement on the traditional Error Correction Model (ECM) which reconciles the long-run and short-run equilibrium relationship of a time series data. The choice of ARDL was on the basis that it allows the study to incorporate the effect of

Nigeria's government expenditures on defence during the previous years (backward lag) on her current expenditures on other sectors, the education and the health sectors in particular.

The ARDL model used in this study is stated in two forms as shown in equation (1) and equation (2). Equation (1) shows the effect of government expenditures on defence for the past eleven lag periods on government current expenditures on education while equation (2) shows the effect of government expenditures on defence for the past eleven lag periods on government current expenditures on health. The choice of maximum lag length of eleven period was on the basis that the statistical software (eviews 9) used for the analysis has maximum lag of twelve but one lag is usually truncated automatically by the software for ARDL modeling. The model is stated as follows:

$$GEXE_t = \alpha + \beta GEXD_t + \beta_1 GEXD_{t-1} + \beta_2 GEXD_{t-2} + \text{-- -- -- -- } + \beta_{11} GEXD_{t-n} + \mu_\beta \quad \ldots\ldots\ldots\ldots (1)$$

$$GEXH_T = \lambda + \gamma GEXD_T + \gamma_1 GEXD_{T-1} + \gamma_2 GEXD_{T-2} + \text{-- -- - -- } + \gamma_{11} GEXD_{T-N} + \mu_\gamma \quad \ldots\ldots\ldots (2)$$

Where: μ_β and μ_γ = error correction terms. α and $\boldsymbol{\lambda}$ = vector of the intercepts. n, N = maximum lag lengths. GEXE= government expenditure on education. GEXH= government expenditure on health. GEXD= government expenditure on defence. To capture non-linear properties of the data set and to correct for heteroscedasticity, the variables employed were all transformed into logarithms.

3.3 Diagnostic Tests and Methods of Data Analysis

Stationary Test

The Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP), were used in this study to investigate the stationarity status of the time series data set. The choice of two unit root methods was informed by the imperatives of comparison and consistency. According to Hamilton (1994), the PP unit root test is generally considered to have a greater reliability than the ADF because it is robust in the midst of serial correlation and heteroscedasticity. According to Murthy (1993), a time series X_t, is said to be integrated of order *d*, denoted as I(*d*), if it becomes stationary after differencing *d* times. Thus, X_t contains *d* unit roots. A series that is I(0) is said to be stationary.

Usually, the unit root is conducted on individual variables and stated in three forms as model without intercept and trend, model with intercept but no trend and model with intercept and trend. The specified models are as shown below:

$$\Delta Y_t = Y_t + \beta \sum_i^k \boldsymbol{\mu t}_i \quad \ldots\ldots\ldots\

$\Delta Y_t = \beta_0 + \beta\sum_i^k \mathbf{Yt} + e_{2i}$ ……..……...……. (4)

$\Delta Y_t = \gamma_0 + \gamma_1 t + \beta\sum_i^k \mathbf{Yt}_i + e_{3i}$ ……..……..…….. (5)

Where:

e_i = (GADS, GAES and GAHS) representing the variables used for the unit root test.

Equation (3) represents random walk model without intercept and no trend; equation (4) represents random walk model with intercept but no trend tile equation (5) represents random walk model with intercept and trend.

Testing for Co-integration and Vector Error Correction Model

The Bound test of cointegration developed by Pesaran (1991, 2001) was used to test the existence of long-run relationship among the variables of the study. From the equation (1) and (2) the null hypothesis (H_0) of no co-integration was stated against the alternative hypothesis (H_1). Next step is to compare the calculated F-statistic with lower critical bound (LCB) and upper critical bound (UCB) by Pesaran *et. al.* (2001). There is co-integration among the variables if calculated value of F-statistic is more than UCB. If LCB is more than computed F-statistic then hypothesis of no co-integration may be accepted. Finally, if calculated F-statistic is between lower and upper critical bounds then decision about co-integration is inconclusive, in such situation, we will have to rely on the lagged error correction term to investigate long run relationship. If long run relationship exists, short run behavior is investigated using error correction method (ECM) as given below in equation (6).

$$\Delta GAES_t = \alpha_0 + \sum_{i=0}^{n} \alpha_1 \Delta GADS_t + \sum_{i=0}^{n} \alpha_2 \Delta GADS_{t-1} + \sum_{i=0}^{n} \alpha_3 \Delta GADS_{t-2} + - - - - - + \sum_{i=0} + \sum_{i=0}^{n} \alpha_6 \Delta GADS_{t-n} + \delta ECT_t \quad + \varepsilon_t \ldots\ldots (6)$$

The residual term (ECT) in equation (6) indicates the changes in dependent variable. These changes are not only due to the two levels of disequilibrium in the cointegration association but also in the other explanatory variables which points to the convergence of the dependent variable from short to long runs equilibrium. In such situation, the error correction term causes the dependent variable to converge to the long span of time for stable equilibrium caused by the variations in the independent variables.

4. Empirical Analysis

Conducting a test of stationarity on time series data is necessary in order to avoid spurious regression. Table

1 shows the result of Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) tests conducted using a method of 'general to specific' lag option. This means that lag was not selected in the optimal lag option available in the software used for the test. The test was conducted with individual intercept and trend being included in the test equation. This is because both intercept and trend were found to be significant and robust compare to other test equation options.

Table 1: Unit Root Test of Stationarity; H_0: The Series has a Unit Root

Variables	ADF Levels	ADF Difference	PP Levels	PP Difference	Remarks
GADS	-1.6130	-5.1271**	-1.6663	-5.1927**	**I (1)**
GAES	-1.6038	-5.0246**	-1.1913	-5.1689**	**I (1)**
GAHS	-2.3458**	----------	-3.5962**	---------	**I (0)**
ADF Critical Value at 5% = -3.5443;			**PP Critical Value at 5% = -3.5445**		

** indicates significant at 5%

Source: E-views 9 Output

The ADF and PP results indicate all the GADS and GAES are not stationary at levels since their calculated values, in absolute terms, are less than the critical values at 5%. However, at first difference, the variables (GADS and GAES) are stationary both ADF and PP tests. It is also seen that GAHS is stationary at levels and as such there is no need to confirm its stationarity status at first difference. Hence, GADS and GAES are integrated of order one (I(1)) while GAHS is integrated of order zero (I(0)). Though the presence of unit root in the series suggests the need for a further test for co-integration, however, the usual technique of Johansen co-integration may be ineffective given the variable of the study do not have the same order of integration. Therefore, the bound test of co-integration suggested by Pasaran (1991) was used for the test of co-integration in this study.

Table 2: Lag Selection Criteria for the Test of Co-integration

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-546.1725	NA	3.81e+16	43.85380	43.95131	43.88084
1	-497.3375	85.94960	1.06e+15	40.26700	40.55953	40.34814
2	-493.5545	6.052834	1.08e+15	40.28436	40.77191	40.41958
3	-483.0248	15.16275	6.56e+14	39.76198	40.44455	39.95130
4	-470.8627	15.56742*	3.54e+14	39.10902	39.98661	39.35243
5	-469.7668	1.227417	4.75e+14	39.34135	40.41396	39.63884
6	-464.9522	4.622030	4.90e+14	39.27618	40.54381	39.62776
7	-455.9521	7.200085	3.81e+14	38.87617	40.33882	39.28185
8	-441.4161	9.303019	2.05e+14	38.03329	39.69096	38.49306
9	-428.8417	6.035712	1.46e+14	37.34734	39.20003	37.86120
10	-423.5610	1.689824	2.36e+14	37.24488	39.29259	37.81283
11	-368.1681	8.862864	1.22e+13*	33.13345*	35.37618*	33.75549*

Source: E-views 9 Output

Co-integration test becomes necessary given the presence of unit root in the time series data of the study. Therefore, optimal lag length for the test of co-integration was first decided using the lag selection

criteria reported in table 2. A maximum lag length of 11 was tested for optimality to meet the required condition of adequate lags for ARDL model specified for this study. The table 4.3 shows that, for all the five information criteria, the optimal lag length for co-integration test is 11. Therefore this study uses a lag length of 11 for bound test of co-integration and for the ARDL model specification.

Table 3: Bound F- Test for Co-integration

Variables	F- values	Remarks
D(GAES)	7.757**	co-integration
D(GAHS)	3.230**	co-integration
D(GADS)	2.015	No co-integration

Pesanran Critical values	***Lower bound***	***Upper bound***
	1.70	*2.83 (10%)*
	2.47	*3.18 (5%)*
	2.54	*3.91 (1%)*

** denotes existence of two co-integrating vector in the system of equations.

Source: E-views 9 Output

Table 3 shows the result of the bound test for co-integration which became necessary given the presence of unit root in the time series data used for the study. The test was conducted in three iterative stages. In the first stage, GAES was used as dependent variable while GADS and GAHS were used as independent variable. In the second stage, GAHS was used as dependent variable while GADS and GAES were used as independent variable. The results show that co-integration exists in the first two stages of iteration. This follows from the fact that the computed F-values of 7.757 for GAES and of 3.230 for GAHS are greater than the lower and upper bound limits at 5%.

On the converse, no long-run relationship is found when GADS was employed as the dependent variable as its computed F-values of 2.015 is lower than the lower and upper bound value at 5 percent levels of significance. Hence there are two co-integrating equations in the system, implying that the variables of the study have a long-run equilibrium relationship.

Table 4: Long-run and Short-run ARDL Models of Impact of GADS on GAES and GAHS
Impact of GADS on education Sector

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GAES(-1)	-0.184038	0.218505	-0.842261	0.4241
GAES (-2)	0.583269	0.281668	2.035264	0.0762
GAES (-3)	0.882318	0.332185	2.625999	0.0304
GAES (-4)	0.904311	0.605413	1.497014	0.1728
GAES*(Long-run)**	1.678977	0.026523	62.54789	0.0000
GADS (-1)	0.092965	0.340882	0.272719	0.7920
GADS (-2)	-0.869238	0.460533	-1.887460	0.0958
GADS (-3)	-1.392576	0.564245	-2.468034	0.0388

GADS (-4)	-1.385842	0.948461	-1.461148	0.1821
GADS (-5)	0.223313	0.078614	2.840629	0.0218
GADS (-6)	-0.115198	0.036819	-3.128802	0.0140
GADS (-7)	0.187201	0.061671	3.035484	0.0162
GADS (-8)	0.030713	0.080458	0.381734	0.7126
GADS (-9)	-0.138700	0.081421	-1.703496	0.1269
GADS (-10)	-0.056183	0.075340	-0.745729	0.4772
GADS (-11)	-0.470266	0.139718	-3.365817	0.0098
Impact of GADS on Health Sector				
GAHS(-1)	-0.184061	0.218505	-0.842365	0.4240
GAHS (-2)	0.573267	0.281666	2.035270	0.0762
GAHS (-3)	0.872328	0.332186	2.626021	0.0304
GAHS (-4)	0.906308	0.605410	1.497015	0.1728
GAHS* (Long-run)**	0.678977	0.026523	24.84556	0.0000
GADS (-1)	-0.091058	0.125079	-0.728009	0.4874
GADS (-2)	-0.295971	0.181505	-1.630652	0.1416
GADS (-3)	-0.520261	0.235530	-2.208893	0.0582
GADS (-4)	-0.479528	0.345261	-1.388885	0.2023
GADS (-5)	0.223308	0.078612	2.840616	0.0218
GADS (-6)	-0.115194	0.036818	-3.128721	0.0140
GADS (-7)	0.187200	0.061669	3.035545	0.0162
GADS (-8)	0.030716	0.080456	0.381778	0.7126
GADS (-9)	-0.138703	0.081419	-1.703577	0.1269
GADS (-10)	-0.056186	0.075339	-0.745784	0.4771
GADS (-11)	-0.470259	0.139717	-3.365795	0.0098
C	437.3352	317.0233	1.379505	0.2051
ECT (-1)	-0.221443	0.066456	-3.332315	0.0011
R-squared	0.899847	Mean dependent var	70600.81	
Adjusted R-squared	0.839842	S.D. dependent var	62561.10	

** denotes long-run estimates

Source: E-views 9 Output

Table 4 shows the impact of government allocations to the defense sector (GADS) on her allocations to education sector (GAES) and health sector (GAHS) in Nigeria. It shows that the estimated error correction term is consistent with the expected negative sign and significant at 5% level. This suggests that there is feedback adjustment from short-run to long-run equilibrium among the dependent and the independent variables. The coefficient of ECT (-0.221443) indicates an annual speed of adjustment from long-run disequilibrium of about 22 per cent per annum. This suggests that about 22 per cent of the disequilibrium errors, which occurred the previous year, are corrected in the current year.

The long-run estimates (GAES and GAHS) are positively signed and are highly statistically significant. A unit increase in GADS will, over the long-run, increase GAES and GAHS by about 1.67 units and 0. 67 units respectively. This, probably, supports the view that a strong and powerful defense sector reduces tension and creates a peaceful society on which other sectors depend. However, the result seems to

be at variance with Nigerian experience as increasing defense expenditure by the government over the years has not reduce social tensions and ethnic conflicts in the country, but stifle expenditure of Education and Health sectors

The results also show that allocations to education during the previous years, except GAES (-1) have positive impact on the current allocation to education sector. For example, a unit increases in GAES (-2), GAES (-3) and GAES (-4) increased current GAES by about 58 per cent, 88 per cent and 90 per cent respectively. These results are as expected except that, while GAES (-2) are GAES (-3) significant at 10 per cent and 5 per cent respectively, GAES (-4) was found to be insignificant. Similar result is observed in government allocation to defense sector in relation to her allocations to health sector of Nigerian economy. All the estimates, except GAHS (-5), GAHS (-7) and GAHS (-8), are negatively signed suggesting a trade-off between GADS and GAHS.

Furthermore, most of the short-run estimates show that government allocations to defense sector, over 11 periods investigated, have negative impacts on her allocation to education and health sectors. This, by implication, suggests the existence of trade-off between allocations to the defense and allocation to other sectors of the economy, the education and health sectors. In other words, government allocation to the defense sector reduce allocations to education sector over the periods investigated. This is evident in the estimated negative results for GADS (-2), GADS (-3), GADS (-4), GADS (-6), GADS (-9), GADS (-10) and GADS (-11). Also, the entire negative estimates, except GADS (-4) and GADS (-4), are statistically significant. What could be inferred from the results is that increased government allocation to defense over the years reduced government's ability to improve education and health sectors in the country. This finding agrees with Ogungbele and Edogiawerie (2020) that inadequate funding of the education sector deters growth of tertiary institutions in Nigeria. The findings is in agreement the views of neo-classical economists that increased defense spending is a burden, slows economic growth and crowed-out expenditures in other growth stimulating sectors of the economy like health and education.

5. Conclusion and Recommendations

This paper examines the budgetary allocation to the defence sector and its effect on allocations to education and health in Nigeria over the period 1980-2023. Although it is contended by some in the literature that defence spending may contribute towards the promotion of the modernization of developing societies through the enhancement of the quality and quantity of human capital by, *inter alia*, dismantling social rigidities, there is limited conclusive evidence to support this view. In fact, a negative trade-off between defence spending and welfare spending (education and health) is generally expected.

Findings reveal that government allocations to the defence sector during the period of study have negative but significant impacts on the education and the health sectors in the short-run but over the long-

run, the impact on them is positive. This is evident from the estimated short-run and long-run ARDL models. While the long-run estimates support the view that a strong and powerful defence sector creates a peaceful society on which other sectors depend, the short-run estimates reveal the existence of trade-off between allocation to defence sector and allocation to education and health sector in Nigeria. Therefore, increased government allocation to defence over the years have contributed in no small amount to retarding the growth of education and the health sectors in Nigeria.

Based on this findings, and considering the deteriorating security situation in the country whereby more fund is required, government should establish a fund outside the budget dedicated to financing defence sector thereby increasing other sectors such as education and health in budgetary allocations.

In addition, since there is a trade-off between defence expenditures and education and health sector the government should be able to strike a balance between these sectors by identifying the sector that require more financial resources at a particular time than others. Such decision should be taken based on the outlook of the economy.

References

Adebiyi and Oladele (2019). Government Expenditure and Economic Growth in Nigeria: A Disaggregated Approach.CBN Economics and Financial Review:43(1).

Aiyedogbon, J. O. (2012). Military expenditure and gross capital formation in Nigeria, 1980 – 2010. *European Journal of Humanities and Social Sciences*. www.Journalsbank.com/ejhss_7_4.pdf.

Akinboade, A. Zirabe, E., and Kumo, W. (2018). The demand for gasoline in South Africa: an empirical analysis using co-integration techniques. *Energy Economics, 30*(6), 3222–3229.

Aron and David (2014). Defence Budgeting in a Democracy: Nigeria's Experience 1999-2003. Project for award of Fellow War College (fwc), National War College, Nigeria.

Deger, S. (1985). "Economic development and defence expenditure". *Economic development and cultural change, 35*(1):179-195.

Eme, O. and Anyandike, N. (2013); Security challenges and security votes in Nigeria 2008-2013. *Kuwait chapter of Arabian journal of Business And Management Review, 2*(8).

Frederiksen, P. C. and Looney, R. E. (1994). Budgetary consequences of defence expenditures in Pakistan. Short run impacts and long-run adjustments. *Journal of Research, 31*(1): 1118.

Hamilton J. D. (1994). Time series Analysis. Princeton University press. ISBN 0-691-O4289-6

Harris, G., Mark, K. and Pranowo (1988). Trade Offs Between Defence and Educaton/Health Expenditures in Developing Countries". *Journal of Peace Research*, *25*(2), pp 165-177.

Kaigama B. K. (2003). "Public Expenditure and Defence Budgeting" Lecture Delivered at Armed Forces Command and Staff College, Jaji, Nigeria.

Looney, R. E. (1986). The Political Economy of Latin American Defense Expenditures: Case Studies of Venezuela and Argentina, Lexington, MA: Lexington Books.

Mark, M. J. (2015). Budgeting in modern Economy. New york USA Mgraw Hill Books company.

Murthy, N. R. (1993). Further Evidence of Wagner's Law for Mexico: An Application of Cointegration Analysis, Public Finance/Finance Publiques, 48: 92-96.

National Bureau of Statistics (2015). The Nigerian Statistical Fact Sheets on Economic and Social Development.

Ogungbele, S. K. and Edogiawerie, M. (2020). Budgetary Allocation and Development in Nigeria Tertiary Institution:*Igbinedion university journal of Accounting, 2*, 377.

Olurakinse, F. (2017). Due process and Budget implementation: An evaluation of Nigeria public sector Auditing. *Asian journal of finance and accounting*, ISSN 1946-052X.

Oyinlola, O. (1993). Nigeria National Defence and economic development: An impact analysis; *Scandinavian journal of development alternative, 3* (12).

Pesaran, H. M., Shin, Y. and Smith, J. R. (2001). Bond testing approach to the analysis of long run relationship.*Journal of the American Statistical Association, 94* 621634. http://dx.doi.org/10.1080/01621459.1999.10474156.

Schick, A. D. (1998). Contemporary Approach to Public Expenditure Management World Bank Document, World Bank.

Steiss, A. W. (1989). Financial Management in Public Organizations. California: Brooks/Cole Publishing Company.

World Bank (2014). World Development Report, Oxford University Press.

Yildirim, J and Selzgin, S. (2015). Defence, Education and Health Expenditure in Turkey, 1924-96. *Journal of Peace Research, 39*(5), pp 569-580