

# Moderating Effect of Corruption and Easy of Doing Business on the relationship between Defence Expenditure and Economic Growth in Nigeria

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#### Abstract

The global economy has witnessed terrific increase in security challenges in recent years; this has informed a green-eyed attention on the defence expenditure of many nations across the globe with a view of mitigating the challenges. In Nigerian, the situation seems to be at variance with defense expenditure been on a steady increase but more security challenges witnessed on daily basis. Given this particular challenge and the gap existing in literature, this study seeks to examine the moderating effect of corruption and ease of doing business on the relationship between defence expenditure and economic growth in Nigeria. In this studycorruption is measured using the World Bank corruption index, ease of doing business is measured using World Bank ease of doing index while economic growth is measured using GDP. The study adopted an expost facto research design and time series data was collected from Nigerian Code of Conduct Bureau and SPRI from 1988-2018. The study aligned with Keynesian Public Expenditure Hypothesis. The study also, adopted the use of ordinary least square regression for the purpose of data analysis after all times series assumptions were met. The result shows that, the interacting effect of corruption have positive and significant effect on the relationship between defence expenditure and economic growth in Nigeria. Also, that the moderating effect of ease of doing business have positive but insignificant effect on the relationship between defence expenditure and economic growth in Nigeria. The study recommended that government should strengthen its fight against corruption by consistently monitoring public expenditures especially, expenditures that directly affect economic stability and growth such as defence.

Keywords: Corruption, Economic Growth, Expenditure JEL Codes: M20, M21, M31

#### Introduction

The global economy has witnessed terrific increase in security challenges in recent years; this has informed a green-eyed attention on the defence expenditure of many nations across the globe with the view of mitigating the challenges. Defense is an important territorial guard that ensures the safety of lives and properties of any economy against internal and external threats that could cause harm to the smooth operation of the activities of an economy. A well-defended economy creates a level plain field for economic activities such as foreign direct investment and the production of goods and services

to strive within the economy. This is obviously one of the reasons why developed and developing nations budget huge sums of money for expenditure on defense. Defense expenditure is a military expenditure in terms of the amount of financial resources dedicated by a state to raise and maintain an armed force for the purpose of defense. Defense expenditure could also be seen as the quantity of society's resources that is allocated for the acquisition and management of military capability which are classified into recurrent and capital expenditures of the Armed Forces namely: The Army, Navy and the Air Force (source). It involves the running expenses of the defense departments and other governmental agencies engaged in defense projects

Also, a nation with high security challenges is capable of recording low stability in terms of concentration on production of goods and services, provision of educational facilities and training for citizens; the absence of these activities could lead to poor economic growth. Economic growth can be seen as the increase in the amount of goods and services produced per head of the population over a period of time measured by the country's gross domestic product (GDP). Economic growth can be enhanced by attracting investments in the economy, boosting the ease of doing business and mitigating corruption to forestall confidence among operators in the economy.

Under normal circumstances, the increase in defense expenditure is expected to provide the needed logistics and manpower needed to curb external and internal threats that would create security challenges against economic growth in an economy. On the contrary, the Nigerian situation seems to be at variance with the ideal because the defense expenditure has been on a steady increase but more security challenges are witnessed on daily basis. The area of defense and economic development has been researched by several scholars like Fatih and Esra 2016; jelivo and Musa 2016; Kurt and Karagoil 2015 and Saroja and Eliyathamby 2014. These researchers have found that defense expenditure has positive and significant effect on economic growth. However, this does not seem to be the case in the Nigerian context where defense expenditure is rising with increase in security challenges. A critical review of literature indicates that the varying situation between extant literature and this study is the fact that previous studies did not factor in the fact that corruption could be a factor that may affect the effect of defense expenditure on economic growth but corruption is a dangerous menace that if allowed to interact with the defense expenditure may dissuade the aim of the expenditure leading to spurious results.

Corruption has been alleged to be inherent with defense expenditure as alleged by the case of the arms deal in Nigeria by Dasuki in 2014. The ease of doing business is another variable left unstudied by previous researchers. However, the ease of doing business is a major factor in determining the conducive operation of business organizations because when business organizations conducive have а environment, the business booms otherwise, the business suffer retardation at the expense of economic growth. The recurrent and capital defense expenditure which has been on the increase over the years in Nigeria has also been studied to see how they both affect economic growth in Nigeria. Based on the above gaps in literature, this study has interacted corruption index with defense expenditure to see how the interaction affects economic growth in Nigeria. Also, the ease of doing business has been moderated against defense expenditure to ascertain the outcome on economic growth. The interaction of these variables as stated above is knowledge creation that has contributed to the existing body of knowledge on the effect of defense expenditure and economic growth in Nigeria.

The study will be built on two hypotheses;

 $Ho_1$  Moderating effect of corruption has no significant effect on the relationship between defense expenditure and gross domestic product in Nigeria.

Ho<sub>2</sub> Moderating effect of the ease of doing business has no significant effect on the relationship between defense expenditure and gross domestic product in Nigeria.

#### Literature Review

#### Defence Expenditure

International Monetary Fund (IMF) (1974) defined defence expenditure as all expenditures, whether by defence or other departments, for the maintenance of military forces, including the purchase of militarv supplies and equipment (including the stockpiling of finished items but not the industrial raw materials required for their production), military construction, recruiting, training, equipping, moving, feeding, clothing and housing members of the armed forces, and providing remuneration, medical care and other services for them. Also included are capital expenditures for the provision of quarters to families of military personnel, outlays or military schools, and research and development (R&D) serving clearly and foremost the purpose of defence. Military force also include paramilitary organizations such as gendarmerie, constabulary, security forces border and customs guards, and others trained, equipped and available for use as military personnel. Also falling under this category are expenditures for purposes of strengthening the public services to meet wartime emergencies training civil defence personnel, and acquiring materials and equipment for these purposes. Included also are expenditures for foreign military organizations and alliances. This category excludes expenditure for nonmilitary purposes, though incurred by a ministry or department of defence, and payments or services provided to war veterans and retired military personnel.

The North Atlantic Treaty Organization (NATO) (1976) defined defence expenditure as all current and capital expenditure on the armed forces, in the running of defence departments and other government agencies engaged in defence projects as well as space projects, the cost of paramilitary forces and police when judge to be trained and equipped for military operations, military R&D, tests and evaluation costs, and costs of retirement, pensions of service personnel, including pensions of civilian employees. Military aid is included in the expenditure of the donor countries. Excluded are items on civil defence, interest on war debts and veterans' payment.

This must have been the stirring point when United Nations Organization (UNO) (1986), gave the most detailed aggregated categorization in terms of three major groups namely: operating costs, procurement and construction and research and development. From the categorization of the UNO, the operation costs which harbours military personnel, operations and maintenance including civilian pay is concern with operating or expenditure, consumption whereas procurement and construction and research and development is associated with investment expenditure. Of the three definitions given, that of UNO stands out since it clearly distinguishes among the three functional categories that have specific opportunity costs: man power and operational items, investment in

weapons and current assets, and investment for the future. The categorization suggests the structure of defence expenditure.

In the Nigerian context, there have been several modifications in the presentation of the Ministry of Defence's breakdown of expenditure. For example; the departments that makes up defence sector includes ministry of defence, defence headquarters, Nigerian army, Nigerian navy, the Nigerian air force, Nigerian defence academy, national defence college, armed forces staff college, Nigerian armed forces rehabilitation centre, defence intelligence agency, military pension board, defence intelligence military school and defence industry corporation of Nigeria (Federal Ministry of Finance (FMF), 1996). The breakdown of the Nigerian defence sector showed that both IMF and NATO definitions of defence expenditure exclude some unique features. While defence in IMF excludes military pension personnel, that of NATO excluded civilian personnel pension. These on exclusions, are taken into consideration for the defence sector in Nigeria. The definition of what constitute military expenditure is unique and relative from one country to another. For the purpose of this study, the United Nations Organization (1986) definition is adopted.

#### Corruption

The definition of corruption used in this paper is, as put forward by Transparency International (TI) (2002), as the abuse of entrusted power for private gain. As a consequence, actions are assumed to be corrupted if they entail the misuse of some aspect of entrusted, public power for private gain. According to Ngouo (2000) corruption is the exploitation of public positions for private benefits. She also, stated that the lack of any civil spirit among any categories of civil servants leads to corruption and misappropriation of public funds.

Gray and Kaufmann (1998) defines acts of corruption to include bribery and extortion which necessarily involves at least two parties and other malfeasances that a public official can carry out alone including fraud and embezzlement. For them it manifests in government activities something that the bribe receiver is required to do by law, constitute the former. The latter, on the other hand is a bribe paid to oblation services to bribe receiver is prohibited from providing. In Asian Development Bank perspective of corruption as cited by Agbu (2001), corruption in defined as the behavior of public and private officers who improperly and unlawfully enrich themselves and/or those closely related to them, or induces others to do so, by measuring the position in which they are placed.

#### Easy of Doing Business

Ease of doing business was created by Simeon Djankov at the World Bank group in 2001. The academic research for the report was jointly done with professors Oliver Hart and Andrel Shieifer. Ease of doing business is an aggregate index published by the World Bank. Ease of doing business is an index published by the World Bank which aggregates figures that includes different parameters which define the ease of doing business in a country (World Bank Group, 2000). The index aggregates scores country by country which become the ease of doing business index (Djankov, Hart & Shieeifer. 2001). This study conceptualizes the ease of doing business as the measurable factors that are put in place by an economy to make business opportunities effective and efficient. Indicators such as distance to frontier,

construction permits, registration, getting payment mechanism, credit, tax infrastructure are computed. Thus, higher rankings (a low numerical value) indicate better position usually indicating simpler regulation for business and stronger protection of property rights, whereas a high numerical value indicate deteriorating conditions (Ani, 2015). Ease of business has been critiqued for lack of generally accepted methodologies for determining in the indices used and peculiarities of each country (Ashraf, 2015).

#### Economic Growth

The search for a satisfactory definition of economic growth by many scholars of public finance 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. 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 defence etc. Generally, growth can be defined as sustained increase in macroeconomic aggregates particularly real gross domestic product (RGDP). According to Bello (1995), developing countries resources are concentrated in the hands of a few powerful capitalist and because of this; the success of the above definition must take into cognizance the issue of proper income distribution devoid of all forms of manipulation and exploitations. A further weakness of the above definition is the fact that a number of national output indicators such as housewife services, smuggling etc are

not recorded or adjusted for in national income accounting.

Perhaps, a more detailed effort at defining and explaining economic growth is that of Kuznets (1955) which is: "modern economic growth of nations has two distinctive features: in all cases, it involves a sustained and substantial rise in produce per capita and in almost all cases it involves a sustained and sustained rise in population. For the purpose of measuring economic growth particularly that of least developed countries (LDCs) Kuznets maintain that: Modern economic growth implies maior structural changes and correspondingly large social and institutional conditions under which the greatly increased product per capita is attained. Yet for purposes of measurement, the changing components must be reduced to a common denominator, otherwise it would be impossible to compare the product of the united states with that of china or the product of an advanced country today with its output a century ago.

Economic growth is also, used to imply a movement from a lower equilibrium condition to a higher one. Neo-classical economics however, assumes that economic development could be achieved if a country whose original economic condition is static is able to generate aid sustained an annual increase in its GDP at rates more than 5 percent or at least higher than its population growth rate. Economic development is presumed to have taken place in such a situation since it implies an increase in per capita income. The neoclassical concept relates to economic growth rather than economic development. However, this idea is applied to development, given the experience of developed economies. It

is expected that the benefits of growth would spread to all facets of the economy through pecuniary and technological externalities (Krugman, 1992).

#### Empirical Review

Fatih and Esra (2016) analysed the nexus between defense expenditures and economic growth using panel data from sixteen countries spanning from 1991 to 2013. A panel fixed effect model has been estimated for the all countries and the results show a negative effect on economic growth due to military expenditures, but this negative effect is negligible due to the statistically insignificant value of the coefficients.

Jelilov and Musa (2016) investigated the reasons why defence spending in Nigeria has failed to generate commensurate growth rate for the economy. Time series data spanning 1981-2012 were analysed using the OLS technique. It was found that government expenditure has a positive and significant impact on economic growth. Government expenditure drives economic growth in Nigeria and the paper recommends that more of government's resources should be directed to especially capital expenditure.

Ogbonnaya (2018) examined the effect of corruption on Nigeria Economy. A cross survey research design was adopted and secondary data extracted from the World Bank, Transparency International data. The statistical tool used was multiregression analysis and t-test for the hypotheses testing and data analysis with the aid of SPSS version 20. The result of the study shows that corruption has significant impact on the economy of Nigeria.

Nwankwo (2014) empirically investigated the impact of corruption on growth of Nigerian economy using granger causality regression techniques. The study used gross domestic product as proxies for economic growth and corruption index as a proxy of corruption in the analysis. The study revealed that the level of corruption in Nigeria over years has significant negative impact on economic growth in Nigeria.

Sunkanni and Isola (2014) carried out a research on corruption and economic growth in Nigeria, the study adopted Johansen co-integration test, ADFs unit roof test, Granger causality test and Ordinary least square, with time series data covering a period of 20 years. The result revealed that there was no significant relationship between corruption and the Economic growth determinates.

Ardagna and Lusagi (2009), used doing business surveys to construct a crossnational harmonized micro data from a broad sample of developed and developing countries and investigated the heterogeneity of the effect of entry, contract enforcement regulation, and financial development on both the decision to become an entrepreneur and the level of employment of newly created businesses. The study focused on the interaction between the level of regulation and financial development and some individual characteristics that are important determinants of entrepreneurship, such as gender, business skills, and social networks. They found that entry regulation moderates the effect of business skills, while accentuating the effect of gender, even after accounting for the level of financial development.

Ani (2015) aimed to explain the effect of ease of doing business to economic growth among selected economies in Asia for the year 2014. Multiple regression determined the effect of doing business to economic growth. The study found out that the variations in ease of doing business was

explained by dealing with construction permits, getting credit, registering property and trading across borders. Dealing with construction permits and getting credit have negative effect to Gross Domestic Product while registering property and trading across borders have positive effect. Trading across borders greatly affect gross domestic product among selected countries in Asia.

# Supported Theory

This study will be anchored on the Keynesians Theory as it offers the most suitable theoretical explanation of the growth process adopted in this study.

Keynesian economics (Keynesianism) are the various theories about how in the short run, and especially during recessions, economic output is strongly influenced by aggregate demand (total spending in the economy). In the Keynesian view, aggregate demand does not necessarily equal the productive capacity of the economy; instead, it is influenced by a host of factors and sometimes behaves erratically, affecting production, employment, and inflation (Hunt, 2004).

The theories forming the basis of Keynesian economics were first presented by the British economist John Maynard Keynes during the Great Depression as specified in the General Theory of Employment, Interest and Money (Keynes, 1963 & 2008). He declared that government should increase expenditure (in this study expenditure on defence sector), with a view to stimulating the growth of the economy. Keynes argued that an economy could languish indefinitely with high unemployment if aggregate demand is inadequate. Nelson (2006) noted that increased government expenditure, on the other hand, would not only boost demand directly but would also set off a chain reaction of increased demand from workers and suppliers whose

income had been increased by the government's expenditure. Similarly, a tax cut would put more disposable income in the wallets of consumers, and that too would boost demand. Keynes contented, then, that the appropriate fiscal policy during periods of high unemployment was to run a budget deficit. These ideas flew in the face of the conventional wisdom that budget deficits were always bad.

Keynesian economists often argue that private sector decisions sometimes lead to inefficient macroeconomic outcomes which require active policy responses by the public sector, in particular, monetary policy actions by the central bank and fiscal policy actions by the government, in order to stabilize output over the business cvcle (Fletcher, 1989). Keynesian economics advocates a mixed economy predominantly private sector, but with a role for government intervention during recessions. This theory is aligned to this study particularly to investigate the extent to which government's expenditure on defence affects economic growth in Nigeria.

#### Methodology

The study adopts descriptive ex-post facto research design. Data for this study is basically in secondary form and was collected from the Nigerian budget from 1988-2018. Other sources of data include the Nigerian Code of Conduct Bureau and the Stockholm International Peace Research Institute (SIPRI).

Regression technique is used as a major technique of data analysis in this study. The econometric model was therefore,

specified thus; EDB\*GDP =  $\beta 0 - \beta_1 CUI + \beta_2 TDE +$ 

 $\begin{array}{l} \beta_3 EDB - \beta_4 CUI^*TDE + \beta_5 EDB^*TDE + U \\ \ldots & \ldots & 1 \\ CUI^*GDP = \beta 0 - \beta_1 CUI + \beta_2 TDE + \beta_3 \\ EDB - \beta_4 CUI^*TDE + \beta_5 EDB^*TDE + U \\ \ldots & 2 \end{array}$ 

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Where,	U = Error Terms
GDP = Gross domestic product	$\beta_0 = \text{Constant}$
CUI = Corruption index	$\beta_1, \ldots, \beta_5$ , = are the coefficients of the
TDE = Total defense expenditure	independent variables
EDB = Ease of doing business	

Table 1 Variables and their Measurements

Variable	Name	Туре	Measurement	A priori expectation
GDP	Gross domestic product	Dependent	measured using the values obtained from CBN statistical bulletin	
EDB	Ease of doing business	Independent	measured using the World Bank EDB index	+
TDE	Total defense expenditure	Independent	measured using the total defense expenditure for the period	+
CUI	Corruption index	Independent	measured using dummy variables 1 if corruption cases are reported and 0 otherwise.	-
Source: Aut	hor's compilation 201	19		

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# Results

This chapter presented and discussed the data collected in the course of the study. It also consists of the presentation and analysis of secondary data extracted from

the Nigerian budget, Nigerian Code of Conduct Bureau and the Stockholm International Peace Research Institute (SIPRI). The data is a time series data producing thirty-one (31) observations.

Table 2: Summary Descriptive Statistics

Variable	Mean	Max	Min	Sd	skewness	Kurtosis
GDP	13.60	16.67	10.34	1.24	0.12	5.98
CUI	0.51	1.00	0.00	0.50	-0.06	1.00
TDE	11.51	12.50	9.83	0.80	-0.46	1.90
EDB	0.22	1.00	0.00	0.42	1.31	2.72

Source: Stata Output, 2019

The results for the various descriptive statistic items for gross domestic product (GDP), Corruption index (CUI), Total defense expenditure (TDE) and Ease of doing business could be seen from Table 2 above. It can be seen that the mean or average values for the gross domestic product (GDP), Corruption index (CUI), Total defense expenditure (TDE) and Ease of doing business are approximately 13.60017 (14%), .516129 (52%), 11.51795 (12%) and .2258065 (23%) respectively. In addition, the standard deviation, which measures the dispersion around the mean, stood at 1.249939 for GDP, .5080005 for CUI, .802384 for and .4250237 for TDE. The table equally documented minimum GDP, CUI, TDE and EDB values of 10.34%, 0%, 9.83% and 0% in that order. On the other hand,

the maximum value documented for GDP, CUI, TDE and EDB was 16.678 (17%), 1%, 12.50533 (13) and 1% respectively.

to a large extent suggested that the data did not follow the normal curve. Therefore, the test of normality is conducted and the results of data normality test of the variables are presented in table 3.

Therefore, the descriptive statistics of the variables of the study shows the nature and extent of dispersion of the data, which

Table 3: Shapiro-Wilk (W) Test for Normal Data

Variable	Obs	W	V	Z	Prob>z
GDP	31	0.70045	9.757	4.720	0.00000
CUI	31	0.99860	0.045	-6.403	1.00000
DTE	31	0.9972	0.225	-3.310	0.99950
EDB	31	0.88329	3.801	2.767	0.00283

Source: Stata Output, 2019

The study applies Shapiro-WIlk (W) test for normal data. Under this technique, null hypothesis principle is used to check a variable that came from a normally distributed population. The null hypothesis of the test is that the data is normally distributed. In this study, Table 4.2 indicates that data from the variables of the models of the study are not normally distributed because the P-values are significant at 5% level of significance, except for CUI and DTE variables, which is not significant at all levels of significance (p-value of 1.00000 & 0.9995). Thus, the null hypothesis (that, the data is normally distributed) is rejected for GDP and EDB, while accepted for the CUI and DTE.

## Unit Root Test Results

Time series data are generally nonstationary and therefore, running a regression without controlling for that problem will yield spurious regression results, meaning that the results may appear good but do not make economic sense.

Table 4. Results of Unit Root Test in First Order Difference

VARIABLE	ADF	P-value	Order of Integration
GDP	-5.881	0.0013	Ι
CUI	-4.405	0.0041	Ι
DTE	-7.348	0.0030	Ι
EDB	-6.040	0.0001	Ι

Source: Stata Output, 2019

The results in table 4 above indicate that the series variables are integrated of order one I (1) as well as stationary at first differences given their respective p-values that are all significant at 5%. Consequently, the result of the unit test reveals that the data used for this study are stationary in nature.

Table 5 Coeffi	cient of Correlation	1			
Variables	GDP	CUI	DTE	EDB	
GDP	1.0000				
CUI	-0.4577	1.0000			
DTE	0.5109	0.4126	1.0000		
EDB	0.1003	0.2141	-0.1698	1.0000	

Source: Stata Output, 2019

# Pearson Correlation Coefficients of the Variables

Table 5. above indicated that Corruption index is negatively correlated with Gross Domestic Product in Nigeria up to 45%. Total defence expenditure positively related by 51%. Also, ease of doing business is positively correlated with Gross Domestic Product in Nigeria up to 10%.

#### **Regression Diagnostic**

The three diagnostics tests conducted in this study are Multicollinearity, heteroscedasticity tests and serial correlation. These tests are important to regression estimation in order to satisfy the assumptions of the Ordinary Least Square (OLS) of homoscedasticity and absence of exact correlations among the independent variables in the model.

#### Multicollinearity Test

In this study, Multicollinearity test was conducted using Variance Inflation Factor (VIF) and Tolerance Value (TV). According to Gujarati (2004), when VIF value is more than 10 and/or when the tolerance value is less than 0.1 then there is a strong indication of the presence of Multicollinearity.

 Table 5: VIF Test for Multicollinearity

Variable	VIF	1/VIF
CUI	1.34	0.746548
TDE	1.32	0.759861
EDB	1.14	0.873797
Mean VIF	1.27	

Source: Stata Output, 2019

The test for Multicollinearity using the variance inflation factor (VIF) reveals the absence of it as all factors are below 10 and tolerance values are less than 1.0. The mean VIF is 1.27. The result means that there is no evidence of Multicollinearity among the explanatory variables.

Test for Heteroscedasticity

Heteroscedasticity test is conducted to check the homoscedasticity assumption of the regression model. The presence of heteroscedasticity violates the homoscedasticity assumption and may lead to a wrong inference.

Table 6: Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity

chi2(1) =	1.75
Prob > chi2 =	0.1861
Source: Stata Output, 2019	

In this study, heteroscedasticity test was conducted using Breusch- Pagan/Cook-Weisberg test. The result of Breuschpagan / Cook-Weisbaerg test for the study shows that the chi2 value is 1.75 and the p-value of chi2 is 0.1861 indicating the absence of heteroscedasticity

Table 7. Breusch-Godfrey LM Test for Autocorrelation

lags(p)	chi2	Df	Prob > chi2
1	0.669	1	0.1602
G G ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	10		

Source: Stata Output, 2019

The test of autocorrelation using Breusch-Godfrey test shows that the chi-square

value of 0.669 and probability of 0.1602 which falls within the inconclusive region

of Breusch-Godfrey partition curve. Hence, we can clearly say that there exists no degree of autocorrelation in the model.

#### **Regression Result**

Table 7 reports the regression results of moderating effect of corruption index and ease of doing business on the relationship between defense expenditure and economic growth in Nigeria. In the second empirical model which introduce the interaction variable of corruption index and ease of doing business, the result shows that the association between defense expenditure and economic growth in Nigeria becomes positive and statistically significant at level of 5% CUI\*TDE. when we use While EDB\*TDE becomes negative and insignificant. This result can give us an idea of the moderator effect of the of corruption index and ease of doing business on the association between defense expenditure and economic growth.

	Table 8: Regression Resu	ılt
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GDP	Beta Coefficients	t-values	Sig.
CUI	1.458203	1.05	0.302
DTE	7.84564	9.33	0.000
EDB	.7896656	0.19	0.847
CUI*TDE	.0138118	5.26	0.000
EDB*TDE	1330787	-0.73	0.470
R2	0.9001		
F. Statistic	45.04		
F-Sig.	0.0000		

Source: Stata Output, 2019

The cumulative  $R^2$  of the model have a cumulative value of R2 of 0.9001. This signifies that 90% of the total variation in the explanatory variable is caused by the same set of independent variables and the interacting variables. Furthermore, the value of F-statistic coefficient (45.04) which is significant at 5% level of significance (0.000).

Hypotheses One: Moderating effect of corruption on the relationship between defense expenditure and economic growth in Nigeria.:

Moderating effect of corruption on the relationship between defense expenditure and gross domestic product shows coefficient value of .0138118 with t-value of 5.26 and a corresponding p-value of 0.000. Therefore, the study rejects the null hypothesis which states that moderating effect of corruption has no significant effect on the relationship

between defense expenditure and economic growth in Nigeria.

Hypotheses Two: Moderating effect ease of doing business on the relationship between defense expenditure and economic growth in Nigeria.

Moderating effect of the ease of doing business on the relationship between defense expenditure and gross domestic product in Nigeria. shows coefficient value of -.1330787 with t-value of -0.73 and a corresponding p-value of 0.470. On the basis of this, the study accepts the null hypothesis two of the study which states that moderating effect of the ease of doing business has no significant effect on the relationship between defense expenditure and economic growth in Nigeria.

# **Conclusion and Recommendations**

This study examined moderating effect of corruption and ease of doing business on the relationship between defence expenditure and economic growth in Nigeria. This study has interacted corruption index with defense expenditure to see how the interaction affects economic growth in Nigeria. Also, the ease of doing business has been moderated against defense expenditure to ascertain the outcome on economic growth.

Based on the findings, it was concluded that the interaction of corruption effects has significant influence relationship on the between defence expenditure and economic growth in Nigeria. This implies that the existence of corruption in defence expenditure will not lead to economic growth. This is based on the fact that expenditures on defence are expected to provide a secured and protected environment for smooth operations of economic transaction. Where corruption sets in and the outcome on defence expenditure does not commensurate with the desired outcome, it becomes an expenditure in waste. This conclusion is substantiated by the recent high profile cases of corruption in the sector.

It is also, concluded that the moderating effects of ease of doing business exerts no significant influence on the relationship between defence expenditure and economic growth in Nigeria. In this study, the interaction of ease of doing business indices do not have any significant effect on the relationship between defence expenditure and economic growth in Nigeria. Ease of doing business is an index provides aggregates figures that includes different parameters which define the ease of doing business in a country. Nigeria is still ranked very in the ease of doing business index. This could be based on the fact that there are no adequate measurable factors put in place by Nigeria to make business opportunities effective and efficient. Most especially in the public sector organisations.

Recommendations

Based on the findings and conclusions, the following recommends were made;

- 1. Policy makers (i.e government) should strengthen the anti-corruption fight in the defence sector since it has been found to have negative effect on the nation's economic growth. The defence sector should be closely monitored on the way it expends money on both capital and recurrent expenditures. This can be achieved by creating an oversight board to mornitor defence expenditure and ensure that such expenditures are tailored towards the best interest of the public.
- 2. Nigeria should look at improving its ease of doing business parameters since there has been no significant changes in the ease of doing business index over the years. Awareness should be created concerning the ease of doing parameters especially in the Nigerian public sector organisations and strict adherence should also, be encouraged.

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