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# The Effect of Value Added Tax on Economic Development in Nigeria (1994-2018)

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**ABSTRACT**
This study ascertained the effect of Value Added Tax on Economic Development in Nigeria from 1994-2018. Two hypotheses were formulated in line with the objective of the study. Time seriesresearch design was adopted and the data for the study were obtained from CBN statistical bulletin, Federal Inland Revenue bulletin and Joint tax board bulletin for the period under study. Pearson coefficient of correlation and simple regression analysis were applied for the test of the hypotheses formulated with aid of E-Views 9.0 statistical software. Findings showed that Value Added Tax has a positive and statistically significant relationship with economic development (proxy by Gross Domestic Product and Total Government Revenue) at 5% significant level. Based on these findings, the study recommends among others that Government should therefore put in place measures to enhance productivity so as to increase the contribution of VAT to economic growth and development in Nigeria.

**KEYWORDS:** *Taxation, Value Added Tax, Economic Development, Gross Domestic Product*

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## I. INTRODUCTION

### 1.1 Background of the Study

Taxation is one of the oldest means by which the cost of providing essential services for the generality of persons living in a given geographical area is funded (Abiola&Asiweh, 2012). Tax revenue, all over the world plays a vital role in the development of an economy, this facilitated many nations to introduce tax on goods and services. According to Nasiru, Haruna, and Abdullahi (2016), government has themandate to impose tax via its various regulations. Anefficient and effective tax system is capable of ensuringthe basic necessities and services in the country. Taxesare used to achieve economic development, equity inincome and wealth distribution and maintain equilibrium in the economy.

Onwuchekwa and Aruwa (2014) defined tax as a compulsory payment made by all concerned to the government of a country from which essential services are rendered, without necessarily offering an explanation on how the money generated was spent or equating the services with the money collected. Taxation is one of the sources of revenue generation to the government for the social welfareof its citizens. The social welfare can be the provision of the power supply, free education, social amenities, stipends for her citizen, infrastructure. Before now, Nigeria, government revenue has been sourced majorly from oil and other petroleum products. Hence, the Nigerian economy has been adjudged to be overly dependent on petroleum and petroleum products. Against the backdrop of the implications of this overdependence on oil revenue has been a seriousnegativeimplication and this call for need to diversify the economy of Nigeria, without which the economy will collapse (Okonjo-Iweala, 2015). It is against this backdrop that taxation has become handy in diversifying the economy of Nigeria away from petroleum and petroleum products.

Taxes can be either direct taxes (levied on income, profits, wealth) or indirect taxes (levied on commodities, transactions, rights, et cetera). Value added tax (VAT), as one of indirect taxation has been given great emphasis the National tax policy in Nigeria. It has been adopted by several countries of the world because of the growing concern about economic efficiency and tax simplicity in a competitive and integrated world economy. VAT is a consumption tax levied at each stage of the consumption chain and borne by the final

consumer of the product or service. It was first introduced in Nigeria in 1994 to replace the sales tax. The decision to replace the sales tax with VAT was influenced by the fact that VAT is applied on a broader range of goods and services (including those that were exempted from sales tax), so it was meant to broaden government's tax revenue base. Currently, VAT is charged at a rate of 5% on all goods and services. Goods that are subject to VAT include among others; food, household appliances, electricity, water, land and buildings, computers, stationery etc. Services subject to VAT include; commercial services, electricians, plumbers, builders and professional services such as lawyers, doctors, accountants. The difference is to be remitted to the government when the VAT collected on behalf of the government (output VAT) is more than the VAT paid to other persons (input VAT) in a particular month, by the taxable person (Oserogho and Associates, 2008).

According to Madugba and Azubike (2016), the Federal Inland Revenue Service (FIRS) stated that VAT is easy to administer and of course very difficult to evade. Also, the result of a study conducted by International Monetary Fund (IMF) to ascertain whether countries with VAT system had higher tax revenue to Gross Domestic Product (GDP) ratio proved more tantalizing as the study revealed that VAT system generates higher revenue to the government. Ihendinihu, Jones and Ibanichuka (2014) equally concurred that value added tax is an authentic fiscal policy, a key source of revenue to government and an instrument for regulating economic and social policies. Keen and Lockwood (2006) confirmed that VAT is a money machine, which effectively generates revenue.

Nevertheless, the inadequate social infrastructures in Nigeria has made the rate of corruption on the part of tax officials to be so alarming as most of them connive and collude with supposed-tax- payer to evade and avoid tax. Sometimes, the tax officials are not properly trained on the modern ways of tax administration. Furthermore, the de-escalating revenue generation has become a recurrent problems facing the three-tier structure of the government in Nigeria,which is characterized by yearly budget deficits and insufficient funds for economic growth and development. Apart from strengthening the existing sources of revenue through economic reasoning of revenue need of government, it is also necessary for government to diversify its revenue base in order to meet its constitutional responsibilities.

Several researches have been carried out on the relationship between Value added tax and Economic development both within and outside Nigeria, with mixed result emanating from the analysis. For instance, Madugba and Azubike (2016), examined the relationship between Value added tax and Economic development in Nigeria. The result of the multiple regression showed a negative significant relationship between value added tax revenue and Gross domestic product. While Ofishe (2015), using Ordinary Least Square techniques found a strongpositive significant relationship between value added tax revenue and Gross domestic product. These inconsistencies mean that the value-added tax-growth dynamics in Nigeria has not been derived. Therefore, this current contribution will help to expand the existing body of literature on the nexus between value-added tax and economic development in Nigeria.

More so, Value added tax is one of the instruments the Federal government introduced to generate additional revenue. Yet, most prominent Nigerians and interest groups had spoken against its introduction. It would appear that VAT is froth with some problems. After its adoption into the Nigeria tax system, it has become a controversial issue that generates debate among several authors as Naiyeju (2009) quoted that the purpose of introducing value added tax as one of the methods of taxation in Nigeria economy has not yet known. Hence, this study tends to explore the implication of value added tax on economic development in Nigeria and to provide reasonable solutions and recommendations that will be geared to reveal the benefit of VAT in Nigeria macro economy.

## II. LITERATURE REVIEW

### 2.1 Conceptual Framework and Overview of Value Added Tax in Nigeria

Taxation traced its existence from biblical foundation where Zacchaeus a chief tax collector (Luke 19:2-8)invited Jesus into his house and he later became one of Jesus disciple (Okoye&Gbegi, 2013). Ilaboya (2012),defined tax as a compulsory levy imposed by a legitimate authority (guided by specific regulations) on persons, group of persons, property, income, transactions and commodities for the purpose of financing government expenditure.

Oghuma (2017),defined VAT as consumption tax levied at each stage of the consumption chain and borne by the final consumer of the product or service. The modality of its application involves a multi-stage collection procedure. This means that at each stage of a manufacturing or operating process VAT is paid and collected by the buyer and supplier respectively.

According to Wikipedia, Value Added Tax (VAT) has its origin traceable to the French Economist, Maurice Laure in 1954, originally referred to as "taxesur la valueur" The idea of VAT was conceived in Nigeria by the Federal Government in 1991, when a study group was inaugurated to come out with a report on the implementation of VAT which replaced the existing consumption tax (sales tax) which had been in existence since 1986 in Nigeria. Based on the report of the study group, the Federal Government of Nigeria introduced

VAT when Decree (now Act) No. 102 of 1993 was promulgated with commencement date of January 1994. Value tax system in Nigeria is administered by the Federal Inland Revenue Service (FIRS) in close co-operation with Nigeria Customs Service (NCS) and the State Internal Revenue Service (SIRS). According to section 10(1and 2) of VAT Act 1993, a taxable person shall pay to the supplier the tax on taxable goods and services purchased by or supplied by him at the time of making payment to a contractor, remit the tax charged on the contract to the nearest local VAT office.Value Added Tax (VAT) as a form of taxation has taken centre stage and it is being operated in almost all the developing and developed countries around the world. It is viewed and defined in different perspectives.

According to Iyoha (2004), economic growth is the increase in output or per capita income over time. It is a means of analyzing the economic performance of advanced countries over time.

**Relationship Between Value Added Tax and Gross Domestic Product in Nigeria**

Njogu (2015), investigated the effect of the value-added tax on economicgrowth from 1990 to 2014. The study concluded that there exists a significant negativerelationship between VAT rates and GDP in Kenya. The findings equally indicated that there exists aninsignificant positive relationship between value-added tax rates and consumer price index. Though, there exists a significant positive relationship between VAT rates andunemployment rate during the period under study.In the same vein, Smith, Islam and Moniruzzaman (2011) investigated the relationship between VAT and economic growth in Bangledesh and found a satisfactory growth implication of value added tax in the initial years of implementation. Dennis, (2010), investigated the relationship between Value Added Tax (VAT) and Gross Domestic Product (GDP) in Nigeria. The study finds that VAT is not effective as revenue earner; this implies that significant parts of GDP which represent aggregate national income as well as aggregate national expenditure are not collected as tax.Samimi, and Abdolahi, (2011) Scan the impact of implementing Value Added Tax on Export of goods and services in selected countries. Four different indices for export; export of goods and services, export of goods and services (BOP), export of goods and services (annual % growth), export of goods and services (% of GDP) to investigate the sensitivity to different definitions. Findings of the study based on Mean Difference Statistical Test in a two three-year periods before and after introduction of VAT show that, in different indices, the impact of VAT on export is positive.

Conclusively, the empirical reviewed shows that indirect tax and revenue generation in Nigeriahas been few in the literature. However, this necessitated the investigation of indirect tax and revenue generation in Nigeria and to extend the period covered by the previous researchers on internally Generated Tax Revenue.

**$H_1$: There is no relationshipbetween VAT and Gross Domestic Product in Nigeria.**

**Effect of VAT on Total Government Revenue in Nigeria.**

Value added tax influences economic development through the provision of resources in financing the various governmental needs (Illyas and Siddiqi, 2010). The major sources of revenue to the Government of Nigeria are revenue accruing from oil and gas, and non-oil revenue (taxation) with the oil sector accounting for more than 80% of the total revenue. Okasha, and Iqbal, (2012) examined the impact of value added tax in Pakistan's economy. Using household survey data to grasp the effect of value added tax on social and economic life of the populace. Results show that VAT would disturb economic order of the society. Salti and Chabaan (2010) studied the effect of increasing rate of VAT by targeting poverty and inequality. An empirical model based on consumer theory of demand was established to study the impact. Simulation results showed that increased rate of VAT would have negative significant impact on poverty. Although the increased rate would have a negative impact on overall consumption, yet its effect on poor is greater when compared to the rich.

Ugochukwu and Azubike (2016) investigated the relationship between value added tax, government revenue and economic development. The result of the study shows a negative relationship between value- added tax and economic development. The poor result of the study maybe attributable to the proxy for economic. In Madugba and Azubike (2016), the result of the study of the nexus between VAT and Nigerian economic growth was also negative.The implication of the finding is that increase in value added tax has tendency to reduce government revenue in Nigeria. No doubt, the relationship between value added tax and economic growth has been largely explored, but the inconsistencies in the research report has made the issue still open for further research.Against the backdrop of the differenttheoretical and empirical expositions, wehypothesised in null form of

**$H_2$: Value-added tax has not significantly affect total Government Revenuein Nigeria.**

**2.2 Endogenous Growth Theory**

The concept of economic growth has been rooted on different theoretic ranging from the neoclassical growth theory of Solow (1956) which believed that taxes can hamper economic growth. Rather than long run tax implication, it proposed a transitory growth (Hall &Jengenson,1967).The endogenous growth theory advanced a steady growth which presupposes that policy changes can result in savings (King &Rebelo, 1990) as cited in (Okoror&Onatueh, 2018). According to the, government policy, including taxation, can permanently

result to increase in per capita output where there is high level of innovation. The implication of the theory is that taxes and other fiscal policies of government can persistently increase per capita output (Mendoza, Milesi-Ferretti, &Asea, 1997 as cited in Okoror and Onatuyeh (2018).

According to Myles (2000), economic growth is the basis of increased prosperity. And since incremental growth is not restricted to organic units, the Kuznets' position of economic growth cannot stand the test of time. Beyond the neoclassical and the endogenous theory of economic growth lies the unified and the new theory of economic growth. The unified theory of economic growth was propounded by Galor (2005) as an offshoot of the endogenous growth theory. The Galor contribution emphasized that the problems of the developing can only be gleaned from a complete understanding of the forces that propelled the developed economies to their present state. The new growth theory on the other hand was popularized by Romer (1994) as cited in Okoror andOnatuyeh (2018)). The unified growth theory internalized technological development into a model of how market functions. The theory believed that knowledge and technological development drives the growth of any economy.

**2.3 Empirical Review**

Okoror and Onatuyeh (2018) investigated the nexus between value-added tax and economic growth The data were tested for stationarity using the Augmented Dickey-Fuller approach, subjected to diagnosis tests, and analysed using the Ordinary Least Square regression technique. The result of the analysis shows that value-added tax is negatively related to economic growth. To test the robustness of the result, we substituted the dependent variable with total tax revenue and total federally collected revenue. Both results were negative and statistically significant. The negative relationship shows that there are leakages arising from the poor administration of value-added tax in Nigeria. To overcome the leakage, it is recommended that the FIRS should embark on sensitization, human resource development to meet the growing challenges of effective tax administration in Nigeria.

Oraka, Okegbe, and Ezejiofor (2017),determined the extent to which value added tax has affected the Nigerian economy. Ex post facto research design was adopted for this study. In measuring Nigerian economy, Gross Domestic Product (GDP), Per Capital Income (PCI) and Total Revenue (TR) were used in the study for the period 2003 to 2015. Secondary data method was adopted in obtaining data on value added tax, gross domestic product, per capital income and total revenue. These data were obtained from CBN statistical bulletin, Federal Inland Revenue Services federal ministry of finance, and journals. The data obtained were analyzed using Simple regression analysis. Findings shows that value added tax has not significantly affected Gross Domestic Product of Nigeria economy. It was also discovered that VAT has a negative relationship with per capital income. Finally, we found that VAT has a positive relationship with total revenue generation of Federal government of Nigeria. The implication of these findings is that Nigerian economy will experience slow development in spite that VAT has a positive effect on revenue generation. Based on these findings, the researcher recommends that Nigerian government should put in place fiscal policies that will enhance investment in agriculture, industries and technology which will stimulate overall productivity growth.

Madugba and Azubike (2016), examined the relationship between Value added tax and Economic development in Nigeria. The study covered 18years period between 1994 and 2012. Multiple regression was used to analyse the data gotten from Central Bank of Nigeria (CBN) Statistical Bulletin of various years. The result of the multiple regression showed a negative significant relationship between value added tax revenue and Gross domestic product. Also, the result showed a positive significant relationship between Gross domestic product and Total consolidated revenue. We recommend that federal government should educate the general public more on the essential of VAT payments and also that machineries should be put in place to ensure that VAT revenue does reduce as this will help foster economic development. Also, VAT rate should be increased as it will account for more revenue to the Government.

Gatawa, Aliero and Aishatu (2016), examined the impact of value-added tax (VAT) on the level of economic activities in Nigeria from 1994 to 2014. The study used Quarterly data ranged from 1994 Q4 to 2014 Q4which was analyzed using co-integration test. The study found evidence of a significant positive impact of VAT on economic growth. In the same vein, other government revenues, which include all oil receipts and other receipts into the federation account other than VAT were also found to be positively related to economic growth during the study period.

Apere and Durojaiye (2016), investigated relationship between value-added tax, government total revenue and gross domestic product between 1994 and 2014 using secondary data obtained from the Central Bank of Nigeria (CBN) statistical bulletin. It was observed that all the variables were stationary at their first differences, using the Phillip Perron unit root test; Correlation test was also conducted to ascertain the strength of their relationship. The study revealed that there is a long-run significant positive relationship between value-added tax and each of government total revenue and gross domestic product in Nigeria over the period under review.

Inyiama and Ubesie(2016), examined the effect of the value-added tax, customs and excise duties on Nigeriaeconomic growth. Secondary sources were explored in data gathering while simple regressiontechnique was employed in data analysis. Correlation analysis was applied in the assessmentof the relationship between the non-oil revenue sources and Nigeria Gross Domestic Product.The outcome reveals that all the non-oil tax revenue affects Nigeria Gross Domestic Product.On the side of the relationship among the variables studied, the strength of their relationship is very high for all the variables. The study concluded that Value Added Tax and Customs andExcise Duties are some of the major contributors to Nigeria Gross Domestic Product.

Njogu (2015), investigated the effect of the value-added tax on economicgrowth from 1990 to 2014. The study concluded that there exists a significant negativerelationship between VAT rates and GDP in Kenya. The findings equally indicated that there exists aninsignificant positive relationship between value-added tax rates and consumer price index. Italso revealed that there exists a significant positive relationship between VAT rates andunemployment rate during the study period.Conclusively, the empirical reviewed shows that indirect tax and revenue generation in Nigeriahas been few in the literature. However, this necessitated the investigation of indirect tax and revenue generation in Nigeria and to extend the period covered by the previous researchers internally Generated Tax Revenue with respect to consumption.

Ofishe (2015), empirically examined the Impact of Value Added Tax on economic growth in Nigeria from 1994 - 2012. Relevant data were collected from Central Bank of Nigeria (CBN) statisticalbulletin and Federal Inland Revenue Service (FIRS) reports. The Ordinary Least Square techniques were used toestimate three models in line with the formulated hypotheses. The results from the models revealed a strongpositive significant impact of VAT on economic growth as proxy by GDP in Nigeria. It also revealed that thereis positive relationship or impact of VAT on total tax revenue over the period studied. Consequently, it wasrecommended among other things that government should put in place measures to effectively utilize generatedVAT revenue for infrastructural and economic development. It also recommends the review of tax incentives toattract both local and foreign investors in order to boost economic growth in Nigeria.

Izedonmi and Okubor (2014), examined the contribution of VAT to the development of the Nigerian Economy. They employed time series data on the GDP, VAT Revenue, Total Tax Revenue and Total (Federal Government) Revenue from 1994 to 2010. They used both simple regression analysis and descriptive statistical method. The result of their findings revealed that VAT Revenue and total revenue account as much as 92% significant variations in GDP in Nigeria. Also, a positive and significant correlation exists between VAT revenue and GDP. According to the authors, both economy variables fluctuated greatly over the period with VAT revenue to be more stable. The study therefore, recommended that all identified loopholes be plugged for VAT revenue to continue to contribute more significantly to economic growth of Nigeria.

Okwori and Ochinyabo (2014), this study focused on the assessment of the effect of Value Added Tax on Revenue Generation for sustainable development in Nigeria. The study is aimed at establishing an innovative method of assessing taxation on the Revenue Productivity theory-that is, high revenue generation at minimal cost given a very broad inclusive base. Using a log-linear data for regression on e-views 7.0 technique, the study found a positive 0.186 tax elasticity and buoyancy which is desirable. This shows that VAT is not only a viable taxation tool in Nigeria but also has great potential to generate adequate revenue for the Nigeria Government. But, government as an element of the package included numerous exemptions, generous concessions, and arbitrary waivers especially for unproductive ventures. This has greatly affected revenue base, leaving high annual budget deficits, and an extremely poor fiscal performance. This also has implications for proper VAT threshold which raises concerns of abuse and high cost, sharply leading to revenue losses and poor response of VAT to GDP growth. The study therefore recommends that there is a need to consider the technology of the tax collection. That is; the feasibility of the tax instruments, cost of administration, and compliance. Also, special attention in the area of automation, consumer information and its mechanism modified to respond to GDP flexibilities is required. Holds negatively and escalate consumer price index to undesired level.

## III. DESIGN AND METHODOLOGY

This study employsarchival time series data on the rate of value added tax (VAT), economic growth (proxy by Gross Domestic Products and Total Government Revenue) for Nigeria over the period under study. The data span a period of twenty-four years from 1994, when VAT was implemented in Nigeria to 2018. The period is considered long enough for the independent variable of interest to effectively influence the dependent variable of economic development.

This research also adopt purposive sampling technique based of the availability and up-to-date data which were obtained from the CBN Statistical Bulletin, Federal Inland Revenue Service Bulletin and Joint Tax Board bulletin.The analysis was carried out in two forms and they are regression analysis and correlation.Inferential statistics of the hypotheses was carried out with the aid of E-Views 9.0 statistical software, using coefficient of correlation which is a good measure of relationship between two variables. Simple regression analysis was used to predict the value of a variable based on the value of the other variables,

Regression analysis includes many techniques for modelling and analysing several variables, when the focus is on the relationship between a dependent variable and independent variable.

### 3.2 Model Specification

The model for this study would take the following form:

$Y = \beta_o + \beta_1 X_1 + \mu$

Where:

Y = economic development (dependent variable, proxied by Gross Domestic Product, total revenue)
X = value added tax (explanatory/independent Variable)
$\beta_0$ = constant term (intercept)
$\beta_1$ = Coefficients of value added tax
$\mu$ = Error term (stochastic term)

Explicitly, the equation can be defined as:

Economic development = *f* (macroeconomic variables) + $\mu$
Gross Domestic Product (GDP) = *f* (GDP, TGREV) + $\mu$

Hence,

$Y = f(GDP + TGREV)$ - - - - - - (1)

Representing the equations with the variables of the construct, hence the equations below are formulated:

$VAT_{it} = \beta_0 + \beta_1 GDP_{it} + \mu_{it}$ - - - - (2)
$VAT_{it} = \beta_0 + \beta_1 TGREV_{it} + \mu_{it}$ - - - - (3)

Incorporating the control variables ofpopulation growth rate, we have

**Where:**

$\beta_0$ = Constant term (intercept)
$\beta_{it}$ = Coefficients to be estimated for macro variables í in period t
$\mu_{it}$ = Error term/Stochastic term for macro variables í in period t
$VAT_{it}$ = Value added tax (a proxy for the government policy),
$TGREV_t$ = Total revenue for macro variables í in period t
$GDP_{it}$ = Gross domestic product (a proxy for economic growth),for macro-economic variable í in period t
$PGR_{it}$= PGR is population growth rate macro variables í in period t

$GDPGRt = \beta 0 + + \beta 1 GDPt + \beta 2 VATt + + \beta 3 PGRt + \mu$---------- (5)

Where, GDPGR is growth rate in gross domestic product (a proxy for economic growth),
VAT is value added tax (a proxy for the government policy), PGR is population growth rate serving as the control variable.

**Table 1: Concepts and Measurements of Variables in the Study**

| Variables | Definition | Measurements |
|---|---|---|
| **Dependent Variables** | | |
| GDP | Gross Domestic Product | Endogenous variable |
| TGREV | Total Government Revenue | Endogenous variable |
| **Explanatory Variables** | | |
| VAT | Value Added Tax | Government Policy |

## IV.DATA PRESENTATION AND RESULT

### 4.1 Descriptive Statistics

**Table 3: Correlation Matrix of Variables in Endogenous Economic**

| | VAT | GDP | TGREV |
|---|---|---|---|
| VAT | 1.000 | 0.466 | 0.606 |
| GDP | 0.466 | 1.000 | 0.312 |
| TGREV | 0.606 | 0.312 | 1.000 |

Source: E-Views 9.0 Correlation Output, 2019

The correlation results in Table 3 indicate the existence of a positive association between GDP (0.466), TGREV (0.606), and VAT. The association of VAT and the variables in endogenous economic is strongest with TGREV; followed by GDP.

### 4.2. Tests of Hypotheses

#### 4.2.1 Test of Hypothesis I

**$Ho_1$:** VAT has no significant relationship with Gross Domestic Product in Nigeria.

The data on the two variables for the period 1994 to 2018 were subjected to regression analysis to ascertain the nature of relationship between them. The results of the analysis are presented in Table 2 below.

**Table 2. Simple Regression Analysis between VAT and Gross Domestic Product in Nigeria**

Dependent Variable: GDP
Method: Least Squares
Date: 11/28/19 Time: 18:41
Sample: 1994 2018
Included observations: 25

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.083971 | 0.040889 | 2.053637 | 0.0741 |
| GDP | 0.070258 | 0.047142 | 2.490350 | 0.0345 |

| | | | |
|---|---|---|---|
| R-squared | 0.217309 | Mean dependent var | 0.138000 |
| Adjusted R-squared | 0.119472 | S.D. dependent var | 0.063736 |
| S.E. of regression | 0.059807 | Akaike info criterion | -2.618525 |
| Sum squared resid | 0.028615 | Schwarz criterion | -2.558008 |
| Log likelihood | 15.09263 | Hannan-Quinn criter. | -2.684913 |
| F-statistic | 4.221143 | Durbin-Watson stat | 1.738439 |
| Prob(F-statistic) | 0.034466 | | |

Source: E-Views 9.0 Regression Output, 2019**.**

**Interpretation of Simple Regression Result**

In Table 2, adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the Table 4 above, the value of R squared was 0.217, an indication that the variation of 21.7% on growth rate in GDP, a proxy for economic development, was accounted for by the explanatory variable, value-added tax. This shows that only 21.7% changes in GDP ratio of macro-economic variable could be accounted for by value added tax. An adjusted value of 0.119472 which shows that about 12% of the systematic variation in the growth rate in the variable GDP, a proxy for economic growth, is accounted for by the explanatory variables, with emphasis on value-added tax The probability of the slope coefficients indicate that; $P(x_1= 0.0345<0.05)$. This implies that GDP is positively related to VAT, however, significant at 5%. The Durbin-Watson Statistic of 1.738439 is substantially close to the benchmark of 2.00 and shows the absence of autocorrelation. The F-statistic of the GDP regression is equal to 4.221143 and the associated probability value of 0.034466. The relationship between the variable of interest (value-added tax) and economic growth is positive, with a coefficient of 0.070258 and t-Statistic of 2.490350, which shows that a significant linear relationship exists between the dependent and the explanatory variables. The results indicate that value-added tax has a positive effect on the growth of Nigerian economy, so the null hypothesis was rejected and the alternative hypothesis was accepted. As a result, there is linear relationship of GDP to the independent variable (VAT).

#### 4.2.2 Test of Hypothesis II

**$Ho_2$:** VAT does not significantly affect Total Government Revenue in Nigeria.

Data on the two variables within the period 1994 to 2018 were subjected to regression analysis to ascertain the effect of VAT on TGREV. The results of the analysis are presented in Table 3 below:

**Table 3: Simple Regression Analysis between VAT and Total Government Revenue in Nigeria**

Dependent Variable: TGREV
Method: Least Squares
Date: 11/28/18 Time: 18:47
Sample: 1994 2018

Included observations: 25

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.050125 | 0.044233 | 1.133200 | 0.2899 |
| TGREV | 2.043614 | 0.949543 | 3.652208 | 0.0036 |

| | | | |
|---|---|---|---|
| R-squared | 0.366688 | Mean dependent var | 0.138000 |
| Adjusted R-squared | 0.287524 | S.D. dependent var | 0.063736 |
| S.E. of regression | 0.053798 | Akaike info criterion | -2.830300 |
| Sum squared resid | 0.023154 | Schwarz criterion | -2.769783 |
| Log likelihood | 16.15150 | Hannan-Quinn criter. | -2.896687 |
| F-statistic | 6.632000 | Durbin-Watson stat | 0.548390 |
| Prob(F-statistic) | 0.003556 | | |

Source: E-Views 9.0 Regression Output, 2019

**Interpretation of Simple Regression Result**

In Table 3, a simple regression analysis was conducted to test the influence of VAT onTGREV. Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the Table 3 above, the value of R squared was 0.367, an indication that there was variation of 36.7% on the TGREV due to changes in VAT. This shows that about 36.7% changes in TGREV ratio could be accounted for by VAT. The probability of the slope coefficients indicate that; $P(x_1= 0.0036<0.05)$. This implies that VAT is positively related to TGREV; a relationship which is significant at 5%. The Durbin-Watson Statistic of 0.548390 suggests that the model does not contain serial correlation problem.

The F-statistic of the TGREV regression is equal to 6.632000 and the associated F-statistic probability is equal to 0.003556, so the null hypothesis was rejected and the alternative hypothesis was accepted. As a result, there is linear relationship of TGREV with the independent variable (VAT).

### 4.4 Discussion of Findings

The results of regression analyses in Tables 2 and 3showed that VAT impacts positively and significantly on GDP and TGREV at 5%, respectively. The positive relationship between value-added tax and economic growth and development is in tandem with the position of Ofishe (2015) whorecommended among other things that government should put in place measures to effectively utilize generatedVAT revenue for infrastructural and economic development. The positive relationship also corroborates the position of Okubor and Izedonmi (2014) who revealed that VAT and total revenue account for as much as 92% of variations in GDP in Nigeria.However, this is contrast with the study byOkoror and Onatuyeh (2018), who found a negative relationship.

## V. CONCLUSION AND RECOMMENDATIONS

This study assessed the effect of Value Added Tax on economic growth and development in Nigeria. The interactions of specific macro-economic variables namely: value added tax, Gross domestic product and total government revenue were assessed to determine the relationships that exist amongst them. Pearson correlation coefficient and simple regression estimate were employed. The result revealed that gross domestic product and total government revenue have positive impacts on value added tax at 5% level of significance.

Government should supervise the collection of VAT to ensure orderly, fair and equitable dealings in collecting VAT revenue and to forestall illegal deals by privilege insiders in order to raise the revenue generated by this tax as effectively and efficiently as possibleso as to increase the contribution of VAT to economic growth and development in Nigeria

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