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**Research Paper**

# Value Added Tax Revenue and Economic Growth in Nigeria

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***ABSTRACT***
*The study examined value added tax (VAT) revenue and economic growth in Nigeria from 1994-2018. The specific objective of this study is to investigate how VAT revenue affects economic growth in Nigeria. Secondary data used for the study covered the period of 1994 to 2018 and sourced from CBN statistical Bulletin. The methods of Augmented Dickey Fuller (ADF) unit root test and Ordinary Least Square (OLS) regression was employed to analyze the data. The ADF test showed that both the dependent and independent variables were stationary at first difference. The OLS results showed that the $R^2$ is 95%, thus the model is a good fit. Also, VAT revenue has positive relationship with economic growth. It was evident from the results that a unit increase in VAT revenue increased economic growth by 3.30067%. Based on these finding, the study recommended amongst others that all identified administrative loopholes should be plugged for VAT revenue to contribute significantly to economic growth in Nigeria.*
***KEY WORDS:*** ADF, VAT, OLS, Economic, Unit Root, Revenue

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## I. INTRODUCTION

One of the attempts to increase the tax revenue and as well reduce tax evasion so that most of the tax income revenue would get to the government is through value added tax (VAT). Thus, value-added tax is a consumption tax placed on a product whenever value is added at each stage of the supply chain, from production to the point of sale. In Nigeria, the value added tax came into place in January 1994 to replace the old sales tax which was narrow in scope in terms of tax revenue from goods and services. In other words, VAT is a broader tax system structured to raise revenue for government (Ofishe, 2015). This is because, VAT became a major contributor to total government tax revenues to many developing countries in Africa such as Benin Republic, Cote d'ivore, Guinea, Kenya who adopted the value added tax system (Ajakaiye, 2000).

The impressive performance of VAT in other countries as well as the intention of the Nigerian government to increase her non-oil revenue base principally accounted for the introduction of the VAT tax system. The value added tax system is consumption tax levied on the supply of goods and services which will be difficult to evade both by the rich and the poor, small or large companies.

### 1.1 Statement of Problem

The need to re-organize the priorities of the Nigerian economy became urgent as the nation approached the new millennium. The international price of crude oil, Nigeria's biggest foreign exchange earner, was falling and Nigeria was faced with the inevitable vulnerability of a monoculture economy. For a nation that had gone through an unprecedented economic boom in the seventies, it was a terrible experience. The Nigerian tax system, which went through a terrible periods in the eighties and seventies as revenue from petroleum took central and dominant role within the economy, was expected through the introduction of this effective tax system to come back to life (Afolayan and Okoli, 2015). Also, the increasing cost of running the government, fluctuation in oil price and economic recession have returned the attention of managers of the nation's economy to the importance and sustainability of taxes, especially value added tax.

While the performance of VAT as a source of revenue in Nigeria is encouraging, it remains difficult to find attempts to systematically assess the impact of VAT on the economy. Also, recent research works on the impact of taxation on the Nigerian economy lumped up all the various taxes together without isolating VAT. However this study examined the impact of VAT on economic the growth of the Nigerian economy by raising

the following questions; is there any causality between the two economic variables? Thus, the aim of the study was to examine the effect of value added tax on the growth of the Nigerian economy from 1994-2018. The choice of the scope was premised on the fact that VAT in Nigeria started in the year 1994.

## II. VALUE ADDED TAX REVENUE AND GROWTH: EMPIRICAL EVIDENCE

Empirically, Obayori and Omekwe (2019) used an ARDL model to examine indirect tax and economic growth in Nigeria: The case of VAT, They found that VAT has direct impact on economic growth in both short and long-runs. Also, Gatawa, Aliero and Aishatu (2016) examined the impact of VAT on economic growth in Nigeria. The study used the method of Johansen co-integration test. The study found evidence of a significant positive impact of VAT on economic growth. In the same vein, other government revenues other than VAT was also found to be positively related to economic growth. Afolayan and Okoli (2015) examined the impact of value added tax on the Nigerian economic growth by employing the error correction model and granger causality test. A positive and insignificant correlation exists between VAT revenue and real GDP. Granger causality test also revealed that the relationship between VAT and real GDP is unidirectional.

Denis (2010) investigated the relationship between value added tax and gross domestic product (GDP) in Nigeria, the study discovered that VAT is not effective as a revenue earner. This implies that significant parts of GDP which represent aggregate national income as well as aggregate national expenditure are not taxed. Samimi and Abdolahi (2011) scanned the impact of implementing value added tax on export goods and service in selected countries. Their findings based on Mean Statistical Difference test indicated positive impact of value added tax on exported goods and services.

A cursory backward view at the work done by Ajakaiye (2000) in his study of the microeconomic effect on value added tax on Nigeria since inception revealed that VAT revenue is a significant source of fund to the country. Owolabi and Okwu (2011) empirically asserted in their study on the contribution of value added tax (VAT) to the development of Lagos state economy as positively related. The analysis showed that VAT revenue contributed positively to the seven strategic economic sectors of Lagos. The sectors are: Agriculture, infrastructure, education, environment, transportation, health, Youth and social development sectors. Among all these the study indicated that Agricultural sector was the only one that is statistically significant with positive contributions to the economic growth and development.

Similarly, the impact of VAT on economic development of emerging nations was the research carried out by Unegbu and Irefin (2011). The study was focused on Adamawa state of Nigeria. The study revealed that VAT allocations alone accounted for 91.2% of variations in expenditure pattern in the state. And they showed very significant impact on the economic growth and development. However, data obtained from primary sources indicated minimum VAT impact. They however, recommended that similar research should be replicated in other states of Nigeria to ascertain the impact of VAT on economic growth and development.

Ekeocha (2010) work focused on how the value added tax rate could be increased from its initial 5% to 15%. This may be due to the fact that the 5% is not significant enough to address positive economic changes. Various IMF report as indicated by Sanni (2012) affirmed the intension to review the VAT rate upward. In his work, current law and practice of value Added Tax in Nigeria he posited that they have been amendment to the original value added tax decree of 1993 for more than half a dozen times-the latest being the value Added tax (Amendment) Act of 2007. He noted however, that some of the amendments have made significant changes which are yet to reflect in the body of existing literature and the economy itself.

Adereti, Sanni and Adesina (2011) empirically evaluated the contribution of value added tax (VAT) to economic growth in Nigeria between1994-2008. From their time series data of GDP and VAT revenue, it was observed that VAT revenue to total tax Revenue averaged 12.4% which was considered very low when compared to other countries in Africa. The study also observed that there is no causality between VAT revenue and Nigeria Gross Domestic product. Umeora (2013) investigation on the effects of value Added tax (VAT) on economic growth and total tax revenue in Nigeria. The result of his findings shows that VAT has significant effect or impact on economic growth (GDP) and total tax revenue.

Similarly, Onwuchekwa and Aruwa (2014) observed that VAT contributes significantly to the total tax revenue of government as well as economic growth in Nigeria. Their study was on the value added tax and economic growth in Nigeria.

## III. METHODOLOGY

The quasi -experimental research design was used in analyzing the various data collected. This is because; the study is quantitative in nature and thus demanded the use of time series variables to determine the relationship between the economic variables under consideration. The data ranges from the period of 1994 to 2018. This data was mainly sourced from the publications of the Central Bank of Nigeria (CBN) statistical bulletin and National bureau of statistics publications. This study adopted the descriptive statistics via mean, median skewness and standard deviation, to test the reliability of data, while the econometrics of method

Ordinary Least Square regression was used to test the effect of the explanatory variable on the dependent variable.

**Model Specification**

The model was specified in the log-linear form in the equation below;

$LnGDP_t = \beta_0 + \beta_1 LnVAT_t + U$ (1)

Where; GDP is Gross domestic product; VAT is Value added tax revenue;; U is Error Term; t is Time Frame; $\beta_0$ is Intercept parameter; $\beta_1$ is slope parameter

## IV. RESULTS AND DISCUSSION

### 4.1 Analysis and Discussion of Descriptive Statistics of the Variables

The descriptive statistics shows the variables mean, median, standard deviation, skewness and kurtosis amongst others.

**Table 1: Descriptive Statistics of the Variables**

| VARIABLES | GDP | VAT |
|---|---|---|
| Mean | 604289.9 | 305564.9 |
| Median | 578876.5 | 168800.0 |
| Std. Dev. | 268912.4 | 281763.8 |
| Skewness | 0.214970 | 0.385227 |
| Kurtosis | 1.553906 | 1.381752 |
| Jarque-Bera | 2.276037 | 3.212324 |
| Probability | 0.320453 | 0.200656 |

**Source:** *Extracted from e-view 10*

The descriptive statistics reported in Table 1 indicated that the approximate mean of real gross domestic product (GDP) and value added tax revenue (VAT) are 604289.9 and 305564.9. Meanwhile, the corresponding standard deviation of real gross domestic product (GDP), value added tax revenue (VAT), are; 268912.4 and 281763.8. The outcome indicated that the standard deviations of the two variables are within their means. The skewness test which measures the slope of the variables showed positive values for the two variables. The kurstosi values lies outside the 3.0 bench mark for kurtosis. Thus, they are platykurtic relative to normal. The probability of Jarque-Bera statistics showed that the null hypotheses of the variables were accepted. Thus, the variables were not normally distributed.

### 4.2 Analysis and Discussion of Stationarity Test

The unit root test via Augmented Dickey Fuller (ADF) test was used to investigate the order of integration of the variables.

**Table 2: Unit Root Test at Level and First Difference**

| **Variables** | **ADF Test @ Level** | **Critical Value @ 5% (level)** | **Order of Integration** | **ADF Test Statistic @ 1st Difference** | **Critical Value @ 5% (1st Diff.)** | **Order of Integration** |
|---|---|---|---|---|---|---|
| GDP | -0.894866 | -3.012363 | Not Stationary | -5.577993 | -3.020686 | 1(1) |
| VAT | -0.435512 | -3.004861 | Not Stationary | -6.046837 | -3.012363 | 1(1) |

**Source:** *Researcher's Computation from (E- view 9)*

The order of each of the series as presented in Table 2 using the ADF tests showed that both the dependent and independent variables were not stationary at level. Thus, the variables were subjected to first difference and they became stationary at first difference. Given the stationarity of the variables, the best regression results was obtained when estimating the OLS.

### 4.3. Analysis and Discussion of Ordinary Least Square (OLS) Regression Result

This section analyzed and discusses the regression result in line with the objective of the study in a bid to ascertain the validity of economic/accounting theory. Also, the test of hypothesis was discussed.

**Table 4.3 Ordinary Least Square Regression Result**

Dependent Variable: Real Gross Domestic Product (GDP)

| Dependent Variable: Real Gross Domestic Product (GDP) | | | | |
|---|---|---|---|---|
| **Variables** | **Coefficients** | **t-statistics** | **t-table** | **Probability** |
| C | 329401.4 | 15.64620 | 2.0796 | 0.0000 |
| VAT | 0.330067 | 1.884493 | 2.0796 | 0.0741 |
| R-Squared | 0.949690 | f-statistics | 125.8445 | Prob(F-statistic) |
| Durbin Watson | 1.4877 | f-table | 3.9000 | (0.0000) |

**Source:** *Extracted from e-view 10*

The results of the estimated model as presented in Table3 showed that the R-squared ($R^2$) is 95%, this showed that the model is a good fit. The Durbin Watson (DW) which measures the level of autocorrelation has the value of 1.4877. This suggested that the model free from the problem of serial autocorrelation. Thus, the model is valid for policy recommendations.

Furthermore, the estimated results in Table 3 showed that in the short-run, the value added tax (VAT) has a positive relationship with economic growth (GDP). Thus, a unit increase in VAT revenue causes an increase in GDP by 33.0067. The finding conforms to the work of Obayori and Omekwe (2019) as well as Afolayan and Okoli (2015) who examined value added tax and the Nigerian economic growth. They discovered that value added tax (VAT) has direct relationship with economic growth in Nigeria. Also, the estimated results in Table 3 showed that VAT t-statistic; 1.884493 < t-table, 2.0796. Thus, the null hypothesis which states that there is no significant relationship between VAT and economic growth was accepted. The finding conforms to the work of Adereti, Sanni and Adesina (2011) as well as Denis (2010) when the examined the nexuses between VAT and GDP and observed that VAT has no significant impact on GDP. Thus, the study discovered that, significant part of GDP which represent aggregate national income as well as aggregate national expenditure are not taxed to impact on economic growth.

## V. CONCLUSION

This work is an attempt to empirically investigate the impact of value added tax revenue (VAT) on economic growth from 1994–2018. This was done against the background that VAT was introduced by the Federal Government of Nigeria in 1993 to replace Sales Tax. The aim was to increase the revenue base of government and make funds available for developmental purposes that will accelerate economic growth. Time series data on the GDP, VAT revenue, and company's income tax (CTX) were sourced from CBN statistical bulletin. Using the OLS technique, the empirical result showed that the value of VAT has a positive relationship with economic growth (GDP) in Nigeria. Hence it was concluded that Value Added Tax (VAT) as an indirect tax system in Nigeria has direct relationship with economic growth in Nigeria since its inception in 1994. It has greatly contributed to the total revenue of this nation by reducing tax evasion by many people. Following the empirical finding of this study, it was recommended that government should put in place adequate measure to ensure that revenue generated from VAT is effectively utilized to develop and grow the economy through proper infrastructural development.

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