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Original Research Article

Value Added Tax and Economic Development in Nigeria

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Abstract

The study examines the impact of Value Added Tax on economic development in Nigeria for the period 1994 to 2018. The study employed a longitudinal research design. The data used in the study were generated from the office of the Federal Inland Revenue Service, and United Nation Data bank and the data generated were analysed using the Auto-Regressive Distribution (ARDL) regression estimation technique. The result from the finding unveils that VAT has a positive and significant impact on economic development in Nigeria. The study recommended that Government should ensure that the revenue that is generated from VAT is expended on projects that will impact on the citizens of the country and Regularly tax audit should be carried out on registered VAT collectors to ensure that the tax collected is remitted to the appropriate authority.

Keywords: value added tax, economic development, human development index

JEL Classification Codes: H2, H5

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1. INTRODUCTION

The main problem with the three arms of government in Nigeria is inadequate in

revenue generation as characterised by the yearly budget deficit (Onaolapo & Ogbomosa, 2018). Over the years the

government expenditure on social services has been on the rise as a result of the increase in population. However, the revenue-generating capacity of the government has not increased in proportion with the increase in population rate, which had resulted in a shortage of social services in the country. To solve this constant shortage in revenue generation and the recurring budget deficit problem, the government needs to boost its revenue generation. To increase the revenue generation, the government is faced with different options: the first option is to issue more currency into the economy. However, this option may not be feasible because it might lead to too much money in circulation thereby, resulting to inflation hence, it may not be the best option for now giving our current inflation rate which stood at 12.13% as at Jan. 2020 (Economic Confidential) 2020). Another option available to the government is to raise revenue through debt but again this may not be too feasible because of the country's current debt profile which stood at #25 trillion as at 2020 (Dukawa, 2020) the last option is to raise revenue through taxation. Increasing revenue through taxation, for now, is considered to be the best option for the government because revenue from taxes is more stable and precise than other sources. But the big question is what type of tax should the government focus on? Is it direct taxes? (Taxes levy on factors of production) or indirect tax? (Taxes levy on goods and services). Currently, Nigeria depends on direct taxes as the major source of government tax revenue as most of its tax revenue is gotten from direct taxes such as Companies Income Tax (CIT), Petroleum Profit Tax(PPT), and Personal Income Tax(PIT) which is not conducive to growth, in the realisation of this fact the Nigeria tax system was redirected towards indirect

tax with major emphasis on Value Added Tax (VAT) (National Tax Policy, 2017).

VAT is the most productive indirect tax in Nigeria judging by its contribution to the national treasury, which has increased from #7.26 million in 1994 to #802.98 million in 2014. Though in 2015 Nigeria experience a 0.04% reduction in VAT revenue collected compares to its previous year's collection, the actual amount collected in 2015 was #767.33 million while the amount collected in 2014 was #802.98 million, despite the reduction in VAT revenue generated in 2015, its contribution to total revenue in Nigeria increased from 17% which was recorded in 2014 to 21% in 2015. In 2016 total VAT collected increase to #828.20 million which was a 6% increase from the preceding year, in 2017 total VAT collected was #972.35 million this was a 17% increase from the amount collected in 2016. In 2018 VAT revenue increased by 14% from its previous year collection of #972.35 million to #1.108.14 million and 2019, the total VAT collected was #1188.58 million which is about 7.1% increase from the amount collected in 2018.

From the foregoing, it can be seen that VAT has contributed immensely to the revenue of the country hence this study seeks to investigate the influence of VAT revenue on economic development in Nigeria with emphasis on three key areas; access to income, access to quality education and access to quality health care.

However, closely following the introduction is section two on review on literature and hypothesis development, thereafter the methodology, estimation of result and discussion of findings and lastly the conclusion and recommendation.

2. LITERATURE REVIEW

This section review literature on the concept of economic development, its measures, human development index and empirical review of the relationship between VAT revenue and economic development in Nigeria.

Economic Development

Economic development is a concept that means different things to different people. Hence, it is difficult to have a single satisfactory definition (Feld, Hadjimicheal, & Lanahan, 2016). The term Economic development is often confused with the term economic growth due to their similar meaning. Thus, they are most times used interchangeably which is a misconception of the term economic development. Economic growth is just a measurement of the output of a country while economic development is a broader term that includes social and political improvement in the well-being of people living in a country. According to Romer (2016), economic development is the improvement in the economic well-being and quality of life of a country by accumulating wealth and diversifying the economy.

Measures of Economic Development

There abound different measurements of economic development in literature; this measure can be classified into two: single measures and a composite measure of economic development. The single measures of economic development are Gross Domestic Product, Gross National Income, Per capita income, and expenditure on infrastructure while the composite measure of economic development is the Human Development Index, Gender Development Index. In this study, emphasis will be placed on the Human Development Index reason being that it is one of the most

recognised composite indexes of economic development.

Human Development Index

The introduction of the human development index is a response to provide a holistic view of the concept of development as against the earlier notion of development that focuses on per capita income. The first Human Development Index report issued by United Nations Developmental Programme was in 1990. In the report, development was seen “as a process of enlarging people’s choice” (UNDP, 1990:10). Human development index is “a composite index that measures the average achievement of a country in three key areas namely: access to a long and healthy life, access to education, and a decent standard of living” (United Nations Development Programme [UNDP], 2018:33)

Concept of Value Added Tax

VAT is a tax paid on the consumption of goods and services by individuals, government and corporate entities. It is an indirect tax that is levied on the goods and services at each stage of production thus is avoid the cascading (double) effect of tax which is an experience in similar tax like the sales tax this made it gain more popularity than the sales tax. In Nigeria, before the introduction of Value Added Tax, there was an already existing tax of almost the same nature known as the sales tax. The sale tax which came into effect in Nigeria in 1986 was administered jointly by both the various state board of Inland Revenue of the various states and the Federal Inland Revenue Service in the year 1986 to 1993 before it was replaced by VAT (Ugwa&Embuka, 2012). The reason why the sales tax was replaced by VAT is because of the success of VAT in other countries like France, Germany and the criticism that has plagued

the sales tax, notable among this criticism is the narrow base of the sales tax that was limited to nine classes of goods plus sales and services in hotel, motel, and the similar establishment and the negative effect of taxing only locally manufactured good thereby placing locally manufactured goods at a disadvantage relative to imports.

VAT is a tax on consumption paid when goods are purchase and services render (FIRS, 2020) VAT is charged on all goods produced within or imported into the country except those specifically excepted by the VAT act. VAT is a multi-stage tax meaning it is charged on the value-added at each stage of production in the value chain. The current VAT rate is 7.5%, this rate came into effect from February 2020, and the decision to increase the VAT rate from 5% to 7.5% did not come as a surprise as there have been several efforts to increase the VAT rate by past administrations. Part of the justification by the current administration for increasing the VAT rate is that our VAT rate is one of the lowest in the world; another reason also articulated is that it will be used to fund the new minimum wage. However, the funding of minimum wage may not be a sound rational basis for the increase in the VAT rate this is due to the dynamic nature of your country.

VAT and Economic Development

Ihenyen and Mieseigha (2014) did a study on the impact of tax as a tool for economic growth in Nigeria for the year 1980 to 2013. In the study time series data were obtained from the Central Bank of Nigeria. The data generated were analysed using Ordinary Least Square (OLS) regression estimation technique, the result from the analysis revealed that the VAT has a significant and a positive impact on the GDP of the country.

Salami, Apelogun, Omidayo, and Ojoye (2015) examine the impact of taxation on the Nigerian economic growth process from 1976-2006. The data for the study were generated from the annual statistical bulletin of the Central Bank of Nigeria (CBN), this data was analysed using OLS regression estimation technique and the results from the analysis revealed that VAT has a positive and significant influence on economic development proxy by RGDP.

Nasiru and Abdullahi (2016) investigated the impact of value-added tax on the economic growth in Nigeria data from the study were gathered from the Central Bank of Nigeria statistical bulletin, Nigeria Bureau of Statistics and Federal Inland Revenue Service for the year 1994 to 2014 these data were analysed using Johansen cointegration test. The findings from this test revealed that VAT has a positive and significant long-run relationship with GDP.

Ogwuru and Agbaraevo (2017) investigated the impact of VAT on economic growth and development in Nigeria. In the study economic growth was proxy by GDP while economic development was proxy by HDI. The first model which had GDP as a proxy for economic growth showed that VAT had a positive and significant relationship with economic growth while the second model which had HDI as a proxy for economic development revealed that VAT has a negative and significant relationship with economic development proxy by HDI. This negative relationship could be due to non-utilisation of the tax revenue from VAT on social services like education and health facilities.

Izedonmi and Okunbor (2014) examine the role of VAT in the economic growth of Nigeria from the year 1994 to 2010 the

study made use of Cobb Douglass regression to analyse the time-series data that was drawn from CBN statistical bulletin and Federal Inland Revenue Service. The result from the test discloses a positive and significant relationship between VAT and economic growth proxy by GDP

Ocheni (2018) examined the impact of indirect tax on economic development of Nigeria, time-series data for the period 2000 to 2016 were used, the data were analysed using OLS regression technique. The study found a positive and significant relationship between VAT and economic development proxy by HDI.

Ibanichuka, Akani, and Ikebujo (2016) study the effect of tax revenue on the economic development of Nigeria for the period 1993 to 2014 to find out if there is an association among VAT, and Human Development Index. The study made use of the ordinary least regression (OLS) analysis technique and found a positive but insignificant relationship between Value Added Tax and HDI, which is in contrast with the findings of Ocheni (2018) who found a positive and significant relationship between VAT and HDI.

Ayanduba and Aronmwan (2015) investigated the impact of federally collected tax revenues on infrastructural development proxy by electricity generation in Nigeria for the period 1980 to 2014. The hypotheses raised were evaluated using the Error Correction Model. They found that VAT has a non-significant impact. Based on these, the study recommended that VAT should be properly administered in a way that it collections and remittance will not be evaded in others for its impact to be properly seen in the form of infrastructural development.

Gwa and Kase (2018) examined the contribution of petroleum profit tax revenue on the growth of the Nigerian economy using time series data for the period 1997 to 2016. The data were analysed with the use of OLS regression technique. The result revealed that VAT has a positive and significant impact on economic growth in Nigeria which was proxied by gross domestic product.

Premised on the literature review, the study addresses the hypothesis stated in the null form:

Ho₁: VAT has no significant impact on economic development in Nigeria

3. METHODOLOGY

This study employed a longitudinal research design. The justification for the choice of longitudinal research design is based on the fact that the data were observed for a period of twenty-six (26) years 1994 to 2019. The study made use of secondary data. The data for VAT revenue was gotten from the Federal Inland Revenue Service (FIRS), and the data for the Human Development Index were sourced from United Nation Data Bank.

Model Specification

The study adopted the model of Ugochukwu and Azubike (2016). Their model as specified in functional form is

$$GDP = f(VAT, TCR) \text{ ----- eqn 1}$$

In econometric form, it is stated as

$$GDP = \beta_0 + \beta_1 VAT + \beta_2 TCR + \mu \text{ ----- eqn 2}$$

Where:

GDP= Gross Domestic Product; VAT= Value Added Tax; TCR= Total Consolidated Revenue and μ = Stochastic error term X_0, X_1 = Coefficients

The model for this study is specified as follows:

HDI= (VAT) -----eqn 3

In econometric form, it is stated as

$HDI = \beta_0 + \beta_1 VAT + \mu$ -----eqn 4

Where:

HDI = Human Development Index; VAT= Value Added Tax and μ = Stochastic error term

β_0, β_1 =Coefficients. Based on extant literature, it is presumptively expected that $\beta_1 > 0$

Operationalisation of Variables

Table 1

S/N	Variables	Type	Measurement	Source
1	Human Development Index	Dependent	Captured using the geometric mean of the educational index, income index and health index in Nigeria	Ocheni (2018)
2	Value-added tax	Independent	Captured using the total amount of value-added tax received by FIRS in a year	Ibanichukaetal. (2016)

Source: Researchers Compilation, 2020

4. ESTIMATION OF RESULT AND DISCUSSION OF FINDING

Table: 1. Result of Descriptive Statistic

	HDI	VAT
Mean	0.477600	383.0639
Maximum	0.532000	1108.140
Minimum	0.393000	7.260800
Jarque-Bera	0.392733	2.576769
Probability	0.821711	0.275716
Observations	25	25

Source: Eviews 9 Output, 2020

The descriptive statistics in Table 1 show the characteristics of the variables under investigation. As observed, the mean value of HDI and VAT were 0.4 and #383.07 million respectively, this implies that the average value of HDI and VAT for the period under investigation are 0.4 and #383.07 million respectively. The minimum and maximum value for HDI stood at 0.367

and 0.532 respectively, this indicates that the minimum and maximum value that the country has ever attained during the period covered by the study are 0.367 and 0.532 respectively. Similarly, The minimum and maximum value for VAT were #7.26 million and #1108.14 million respectively, this indicates that the minimum and maximum value that the country has

generated from VAT was #7.26 million and #1108.14 million respectively for the period covered by the study.

On the Jarque-Bera statistic, the outcome suggested that both HDI and VAT are normally distributed as depicted by the probability value of 0.82 and 0.28 respectively which are greater than 5%

Regression Diagnostic Test

In other to avoid spurious regression result the following diagnostic test was done on the data

Test for Autocorrelation

Table: 2 presentations of Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.201985	Prob. F(1,13)	0.6605
Obs*R-squared	0.336591	Prob. Chi-Square(1)	0.5618

Source: Researcher’s Compilation from Eviews 9, 2020

Table 4: Presentation of Unit Root Test

@LEVELS					@1ST DIFFERENCE			
Variables	ADF	Critical Value @ 5%	Prob	Remark	ADF	Critical Value	Prob	remark
HDI	-1.976869	-2.991878	0.2942	NS	-8.341956	-2.998064	0.0047	S
LVAT	-4.067965	-2.991878	0.0047	S				

N/B NS = NOT STATIONARY, S = STATIONARY

Source: Researcher’s Compilation from Eviews 9, 2020

To determine the stationarity state of the time series data, the unit root test was done using Augmented Dickey-Fuller (ADF) as presented in Table 4 it can be observed that LVAT was stationary at levels given its ADF value of -4.068 as against the critical value of -2.992 while HDI was not stationary at the level given its ADF value of -1.977 which is lesser than the critical

Breuch-Godfrey serial correlation was used to test for the presence of serial correction as it can be seen from the result in Table 2 there is no presence of serial correlation since the probability value is higher than 5%

Test for Misspecification

Table: 3 Presentations of Ramsey RESET Test

	Value	Df	Probability
t-statistic	1.038339	13	0.3180
F-statistic	1.078147	(1, 13)	0.3180

Source: Researcher’s Compilation from Eviews 9, 2020

The Ramsey RESET Test was performed to ascertain if there were specification errors. The results revealed that there is no evidence of miss-specification since the probability value of 0.3180 is higher than 0.05

value of -2.992. however, upon first difference HDI was observed to be stationary given its value of -8.342 which is greater than the critical value of -2.998 This, therefore, indicates that the variables are ordered differently hence we proceed to test for cointegration using the bound test the result is as present below

Test for Cointegration: Bound Test

F- Statistics	Critical Value	Cointegration	Decision
4.577069	I(0)= 4.94 I(1)= 5.73	No	Estimate ADRL model

Source: Source: Researcher's Compilation from Eviews 9, 2020

The result of the bound test reveals the absence of cointegration between HDI and VAT as depicted by the F- statistic value of 4.577069 which is lower than the I(0) bound

value of 4.94 bound therefore indicating that on the average there is no long-run relationship among the variables hence we estimate only the short-run ARDL model.

Regression Estimation Result

Dependent Variable: HDI

Method: ARDL

Date: 03/18/20 Time: 08:46

Sample (adjusted): 1997 2018

Included observations: 22 after adjustments

Maximum dependent lags: 3 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (3 lags, automatic): LVAT

Fixed regressors: C

Number of models evaluated: 12

Selected Model: ARDL(3, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HDI(-1)	0.682630	0.225630	3.025436	0.0091
HDI(-2)	0.142961	0.263703	0.542129	0.5963
HDI(-3)	-0.282541	0.180187	-1.568045	0.1392
LVAT	-0.025666	0.016892	-1.519358	0.1509
LVAT(-1)	0.014223	0.025272	0.562784	0.5825
LVAT(-2)	-0.007260	0.021414	-0.339042	0.7396
LVAT(-3)	0.026651	0.011806	2.257350	0.0405
C	0.191295	0.058223	3.285560	0.0054
R-squared	0.973153	Mean dependent var	0.484364	
Adjusted R-squared	0.959730	S.D. dependent var	0.032419	
S.E. of regression	0.006506	Akaike info criterion	-6.956987	
Sum squared resid	0.000593	Schwarz criterion	-6.560244	
Log-likelihood	84.52686	Hannan-Quinn criter.	-6.863527	
F-statistic	72.49672	Durbin-Watson stat	2.031783	
Prob(F-statistic)	0.000000			

From The estimation result the P-value of VAT stood at 0.0405 which is less than the critical value at 5% confidence interval, hence we reject the null hypothesis that VAT has no significant impact on the economic development of Nigeria and accept the alternate hypothesis which states that VAT has a significant impact on the economic development of Nigeria, this finding is in contrast with the work of Ibanichuka et al (2016) who found a significant relationship between VAT and economic development in Nigeria through the relationship was negative. To determine the direction of the impact we look at the t-statistics and coefficient value of the variable VAT. As seen in the result, VAT has a positive T-statistic value of 2.257350 and a positive coefficient value of 0.026651 this implies that VAT has a positive relationship with economic development that is, an increase in VAT will also lead to an improvement in the economic development of the country this positive relationship between VAT and economic development is inconsonant with our a priori expectation but differ from the finding of Ogwuru and Agbaraevo (2017) who found a negative relationship between VAT and economic development in Nigeria

5. CONCLUSION AND RECOMMENDATION

The study evaluated the influence of value added tax on the economic development of Nigeria. The study employed time series data in achieving the set out objective and from empirical review using the ordinary least square regression technique it was revealed that VAT has a significant and a positive influence on the economic development of Nigeria. However, upon the conclusion, the paper recommended that the government should ensure at all time that revenue generated from VAT are expended

on projects that will further enhance the living standard of the people.

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