

# Economic development in Nigeria: Does value added tax matter?

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**ABSTRACT:** Value-Added Tax (VAT) as part of indirect taxes serves as a source of revenue for the government at the federal level in the country. Despite this, the government still complains of insufficient funds to embark on infrastructural projects and social amenities that are the foundations of development in Nigeria. Therefore, this study examined the effect of VAT on economic development in Nigeria from 1994-2019. The study employed Auto-Regressive Distributed Lag (ARDL) technique. The unit root test confirmed that at level, consumer price index and inflation rate were stationary; while the human development index and value added tax were stationary at first level difference. The bound test result established a long-run relationship between the variables. ARDL result showed that value added tax was positive and significantly related to the human development index at short-run and long-run; the consumer price index was non-significant at 5% in the short-run but was in the long-run with a positive sign; while the inflation rate was significant at both short-run and long-run. The study concluded that value-added tax and a moderate increase in general price level stimulate economic development in Nigeria, while instability in the consumer price index worsens it. Therefore, this study recommended that the government should ensure that revenues realized through direct tax are channeled to the provision of adequate infrastructural facilities that can promote economic development.

**Keywords:** Consumer price index, economic development, human development index, Value-Added Tax (VAT).

**JEL:** H20

## INTRODUCTION

Taxation is the life wire of every nation and the level of development of any country depends mostly on the amount of revenue generated through taxation. Value-Added Tax (VAT) had been identified as a tax system that would yield substantial revenue to meet the needs of the government. It is an indirect tax on the consumption of goods and services introduced into the Nigerian tax system through Decree No 102 of 1993. At the initial introduction, it charges 5% on certain goods and services imported or produced locally in Nigeria until the 1st of February, 2020 when the rate was changed to 7.5%. VAT has become the main source of revenue for public expenditures in both developing and developed countries. For instance, France was the first country to introduce VAT

in the whole World. Also, many African countries like Benin republic, Cote d'ivoire, Guinea, Kenya, Niger Republic, Senegal, and Togo are collecting taxes on consumption of goods and services. Nigeria was the 62nd country to introduce value-added tax in the world (Onwuchekwa and Aruwa, 2014). According to Madugba and Joseph (2016), economic development is advancement in quality of life, the standard of living and sustainability. Also, economic development is hanged on Human Development Index (HDI). In line with these ideas, Dervis and Klugman (2011) state that HDI seeks to capture three basic dimensions of well-being which are: long and healthy life, access to knowledge and a decent standard of living.

Achieving these desired results of economic development within the economy requires stable funds from the government. The depressed economy of the 1980s coupled with high and volatile oil prices in the face of ever increasing need for infrastructure development brought the need for the government to seek for new ways of generating additional revenue to meet the fast growing public expenditure. This is perhaps one of the reasons why value-added tax is considered the best fiscal option. In view of this, Inyiama *et al.* (2017) reveal that VAT administration within the country is relatively easy, unselective and difficult to evade. However, since 1st January 1994, when VAT was implemented in Nigeria, it has been observed that Nigerians have wrong attitude towards taxation. Nigerians always find it difficult to pay tax as and when due and this attitude has made the evasion and avoidance of tax inevitable. VAT is a fiscal remedy adopted in Nigeria based on economic problems such as fiscal disequilibrium, consumer price index, per capita income and quality of living standard. Also, shortage of capital has been recognized as the main factor that limits economic development and VAT has been framed to fight against it through consumer spending so as to discourage consumption and encourage savings for investment to accelerate economic growth and development in Nigeria (Oyedokun, 2016). Given this, the present study examines the effect of VAT on economic development from 1994-2019.

### Statement of the problem

Value-added tax is a tax system that generates substantial revenue for government public expenditures in Nigeria. It contributes the highest percentage of the total tax revenue for government capital and recurrent expenditures such as expenditures on infrastructural projects, social amenities, salaries and wages that accelerate economic development. However, it is sad to note that despite the huge revenue generated through taxation, the government still complains of insufficient funds to embark on infrastructural projects and social amenities that are the foundations of development in Nigeria. This issue of insufficient funds at the government's disposal to harness infrastructures and social amenities has to be investigated. The opinion of VAT proponents is that VAT is a fiscal remedy whose adoption in Nigeria is based on economic problems such as fiscal disequilibrium, consumer price index, per capita real income, inflation and human development index in Nigeria.

The high rate of unemployment presently in Nigeria is alarming. The high level of illiteracy, and poor standard of living that are evidenced in the number of people living in shanties with little or no access to quality education in Nigeria, the poor medical facilities in Nigerian hospitals, the epileptic power supply, lack of potable water, good roads, poor infrastructures including the low per capita

income and the high interest rates including consumer price index are clear evidence of underdevelopment and backwardness of the Nation. Furthermore, the stand of literatures on the effect of indirect taxation on economic development is very voluminous; while that of development is scanty. For instance, Madugba and Joseph (2016) and Basila (2010) confirmed that VAT contributed significantly to the total tax revenue of the government and by extension the economic growth. Thus, this signal a dire need for this present study to examine the effect of VAT on economic development in Nigeria from 1994-2019.

### Objectives of the study

The broad objective of this study is to determine the effects of value-added tax on economic development in Nigeria. The specific objectives include the following;

1. To ascertain the effect of value-added tax on the human development index.
2. To determine the effect of the consumer price index on the human development index.
3. To determine the effect of the inflation rate on the human development index.

### Research hypotheses

The hypotheses for the study were stated in the null form (H<sub>0</sub>), and were presented as follows:

**H<sub>01</sub>:** Value-added tax has no significant effect on the human development index.

**H<sub>02</sub>:** Consumer price index has no significant effect on the human development index.

**H<sub>03</sub>:** Inflation rate has no significant effect on national income.

## LITERATURE REVIEW

### Concept of value added tax

Value-added tax (VAT) is an indirect tax imposed on goods and services at each stage of the production chain. Value-added tax is levied on the value additions at different stages of production. It was introduced into the Nigeria tax system through Decree No 102 of 1993. VAT was implemented in 1994 by the federal government based on the recommendations of Dr. Sylvester Ugo, the head of the study group committee that the federal government set up in 1991 to review the entire tax system of Nigeria. VAT is a major source of revenue for public expenditure. It has been adopted by many countries of the world. Nigeria was the 62nd country to introduce VAT while France was the

first country to introduce VAT in the whole world. It is also known as the goods and services tax proves to be beneficial to the government being a source of revenue for public expenditure (Oyedokun, 2016; Akwue, 2007). One of the main rationales for taxing consumption rather than income is that it is believed that consumption tax discourages consumption, and encourages savings and capital accumulation for investment; thus, generating higher economic growth and development. The primary objective of value-added tax is to remove the cascading effect of sales tax and other types and manners of levy (Oyedokun, 2016).

VAT is a tax on consumer expenditure and is collected on business transactions and imports. The basic principle is to charge VAT at each stage where utility is created (Abubakar, 2004). Persons who are carrying on businesses that have an annual turnover of more than ₦50,000 are required to register with the Federal Board of Inland Revenue (FBIR) for the purpose of value-added taxation. The requirement includes persons who are carrying on separate small businesses whose annual turnover combined is more than ₦5,000 (Akwue, 2007). As stipulated by Akwue (2007), persons commencing new businesses are also required to register on commencement if they have reasons to support that their annual turnover will exceed ₦5,000. Similarly, anyone whose present annual turnover is less than ₦5,000 and who believes that his or her future annual turnover will exceed ₦5,000 may register. Penalties will be meted out to persons who fail to register when they are required to do so and such persons are in any case liable to the FBIR for the tax not collected from the date they should register.

## Empirical review

Madugba and Joseph (2016) examined the relationship between value added tax and economic development in Nigeria for the period 1994-2012. The study employed a multiple regression technique. The result of the multiple regressions showed a negative and significant relationship between value added tax revenue and gross domestic product. Also, the result showed a positive and significant relationship between gross domestic product and total consolidated revenue. Therefore, recommended that the federal government should educate the general public more on the essentiality of VAT payments, and machineries should be put in place to ensure that VAT revenue does not reduce as this will help foster economic development.

Okoye (2013) investigated value-added tax from a developing country. The challenge of the study was to evaluate the performance of VAT as a revenue earner in Nigeria and to access revenue generated from VAT since its inception to know if it has been on the increase or decrease. The study covered a period of seven years from 2005 – 2011. The researcher utilized a survey research

design. The study finds out that VAT revenue has been on the increase for the period of study and recommends that the Nigerian government should make adequate provision for retrieving the proceeds of VAT from companies and other agents of collection.

Inyama *et al.* (2017) investigated the effect of Nigeria's Tax on infrastructural development in Nigeria. The study used income from Value Added Tax (VAT), the Petroleum Profit Taxes (PPT) as proxies for Tax revenues while Infrastructural Development was applied as a proxy for the Infrastructural Development of Nigeria. The research adopted ex-pos-facto research design as secondary data were used for the analysis and covered the period of 2006-2015 using multiple linear regression techniques. The result revealed that tax revenue resources (PPT, CIT AND VAT) had a positive and insignificant effect on infrastructural development in Nigeria. The study recommended that government should provide the necessary human and material infrastructures that are needed to support seamless tax collection so they can earn more income that will boost taxation to enhance infrastructural development in Nigeria.

Onwuchekwa and Aruwa (2014) conducted a study on VAT and economic growth in Nigeria. The paper adopted the least square technique and findings revealed that VAT contributes significantly to the total tax revenue of the government and by extension the economic growth of Nigeria. The growth pattern of GDP from 1994 to 2009 was oscillating. VAT revenue growth was not as explosive as that of GDP. The study recommends that to boost VAT revenue we need to boost revenue collected from VAT and it is not necessary by increasing the VAT rate to 7.5% but by closing every VAT revenue leakage, sensitizing the managers of companies operating in Nigeria.

Okoye and Gbegi (2013) evaluated the influence of revenue generated through VAT on wealth creation in Nigeria using Product Moment Correlation Coefficient and student T-test. The findings revealed that revenue generated through VAT has a significant effect on total tax revenue in Nigeria. The study recommends Federal Inland Revenue Service pay attention to the informal sector of the economy by creating VAT offices in the local communities so as to generate more revenue and to fully achieve the objectives of wealth creation through VAT.

Basila (2010) empirically investigated the relationship between value-added tax (VAT) and gross domestic product (GDP) in Nigeria. The study applied time series data set spanning from the period 1994 to 2008. The study used Pearson's Product Moment Correlation (PPMC). The test revealed a strong correlation at about 96% strength. Further, a test of significance confirmed that value-added tax revenue is significantly different at a 99% confidence level in relation to the gross domestic product (GDP). It also showed that there is a strong positive correlation between value-added tax revenue and gross domestic product (GDP).

Owolabi and Okwu (2001) made an empirical study of

the contribution of value-added tax (VAT) on the development of Lagos state economy. They employed the tools of a simple regression model to evaluate the effect of the contribution of value-added tax revenue to the economic growth of Lagos state economy. Development indicators are infrastructural development, environmental development, education sector development, youth and social development, agricultural sector development, health sector development and transportation sector development. The state economy was disaggregated into seven strategic economic sectors and a simple regression model was specified to enhance the isolated analysis of each sector. The analysis showed that value-added tax revenue contributed positively to the development of the respective sectors. However, the positive contributions were statistically significant only in agricultural sector development. The study concludes that various sectors are yet to benefit significantly from the state government's expenditures of value-added tax revenue.

## METHODOLOGY

The theoretical framework for this study is anchored on the benefit received theory as propounded by Cooper (1994). This theory states that taxes are to be imposed on individuals according to the benefits conferred on them.

This theory suggests that payment of taxes should initiate an exchange relationship between tax payers and the government in the sense that while the government provides certain goods and services to the members of the society, they bear the cost of these supplies to the extent of the benefit received. Thus, a quid-pro-quo is expected to subsist. This theory explains that every citizen should be called upon to pay taxes in proportion to the benefits derived by him from services provided by the government. It implies that the state provides certain facilities to its citizens who should, therefore, contribute to the cost or value of these facilities in proportion to the benefits received by them. However, it is impossible to implement precisely due to the difficulty in determining the amount of government benefits, including diffuse benefits such as military protection by each resident and non-resident tax payer. The main assumption of this theory is that the more benefit a citizen derives, the more taxes he should bear (Babatunde et al., 2017).

The model for this study was built on Okeke *et al.* (2018). They specified a functional relationship between economic development and taxation as follows:

$$Y = \beta_0 + \beta X_1 + \mu \dots \dots \dots (i)$$

Where; Y = Economic development (Dependent Variable); X =Taxation (Explanatory/Independent Variable);  $\beta_0$  = Constant term (Intercept);  $\beta$  = Coefficient of taxation;  $\mu$  =Error term.

The modified model of Okeke *et al.* (2018) for this study

was given below:

$$HDI = f(VAT, CPI, INF) \dots \dots \dots (ii)$$

Where: HDI = Human Development Index, CPI = Consumer Price Index, VAT = Value-Added Tax, INF = Inflation rate (Table 1).

Putting equation i-ii into econometric form, our equations become.

$$HDI = \beta_0 + \beta_1VAT + \beta_2CPI + \beta_3INF + \mu \dots \dots \dots (iii)$$

## RESULTS

### Descriptive statistics

The descriptive statistics showed that the consumer price index had the highest average value contribution, followed by the inflation rate and value-added tax as indicated in Table 2. Implying that all the variables identified averagely contributed positively to the human development index. This finding implies that the consumer price index has the highest skewed distribution, followed by the inflation rate, value-added tax and human development index. Finally, the *Jarque-Bera'sp*-value showed that the consumer price index, human development index and value-added tax were normally distributed.

### Unit root result

The unit root test for ADF and PP showed that at level consumer price index and inflation rate were stationary (S) at level I (0); while the human development index and value added tax were stationary (S) at the first level difference, i.e. I(1) (Table 3).

### Lag order selection

Table 4 shows that the optimal lag length of the selected variables is 2 in determining the effect of independent variables on the dependent variable. Hence, the study selected two as the optimal lag length criteria.

### Bound test result

The bound test results in Table 5 show that the F-statistic value was greater than the critical upper bound value at 1%, 2.5%, 5% and 10% significance levels; therefore, indicates a long-run relationship between the variables.

### Human development index

Table 6 shows the short-run ARDL results. The result

**Table 1.** Measurement and source of data.

Variable	Measurement	Source
HDI	Percentage value of Human Development Index	CBN Statistical Bulletin 2019
VAT	The sum of Value added tax divided by GDP at constant price	CBN Statistical Bulletin 2019
CPI	Consumer Price Index	CBN Statistical Bulletin 2019
INF	Inflation Rate	CBN Statistical Bulletin 2019

Researcher's compilation (2021).

**Table 2.** Descriptive statistics result.

Descriptive statistics	HDI	VAT	CPI	INF
Mean	0.436348	1.852179	71.98391	16.71739
Medium	0.462000	1.880356	61.95000	11.60000
Std. Dev.	0.076870	0.600196	50.40847	16.22242
Skewness	-0.400349	-0.353957	0.700974	2.574823
Jarque-Bera	2.650900	1.380533	2.278856	56.07612
Probability	0.265683	0.501442	0.320002	0.000000
Observations	23	23	23	23

Sources: Researcher's Compilation from E-view 9 (2021).

**Table 3.** Results of Augmented Dickey Fuller and Phillip Peron Unit Root Tests.

Variable	ADF level of stationary				PP level of stationary			
	Test statistic	5% critical value	Level	S/NS	Test statistic	5% critical value	Level	S/NS
HDI	/3.020118/	/3.004861/	I(1)	S	/3.990223/	/3.004861/	I(1)	S
VAT	/5.043590/	/3.004861/	I(1)	S	/5.050569/	/3.004861/	I(1)	S
CPI	/4.240623/	/2.991878/	I(0)	S	/7.507544/	/2.991878/	I(0)	S
INF	/3.106927/	/2.998064/	I(0)	S	/3.326700/	/2.998064/	I(0)	S

Key: S = Stationary; NS = non stationary (Sources: Researcher's Compilation from E-view 9 (2021)).

**Table 4.** Lag length selection (1994-2019).

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-976.6313	NA	1.16e+15	51.71744	51.97600	51.80943
1	-835.5611	230.1671	4.73e+12	46.18743	47.99739	46.83140*
2	-800.5794	46.02856*	5.78e+12*	46.24102*	49.60238*	47.43697
3	-770.4323	30.14719	1.20e+13	46.54907	51.46182	48.29699

\*Indicates lag order selected by the criterion.

**Table 5.** ARDL Bound test results.

Test Statistic	Value	k
F-statistic	6.952789	3
<b>Critical Value Bounds</b>		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Researcher's compilation (2023).

**Table 6.** Short-run and Long-run Result of ARDL (Dependent Variable: HDI).

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Short-run Result of ARDL				
HDI (-1)	0.341912	0.152838	2.237091	0.0341**
HDI (-2)	0.316048	0.143825	2.197446	0.0371**
VAT	0.078493	0.032770	2.395278	0.0241**
VAT (-1)	0.095727	0.043102	2.220928	0.0353**
CPI	-0.015751	0.013192	-1.193917	0.2433
CPI (-1)	0.018981	0.013704	1.385132	0.1778
INF	-0.134018	0.050408	-2.658698	0.0132**
INF(-1)	0.159688	0.057801	2.762726	0.0104**
INF(-2)	-0.138899	0.052984	-2.621538	0.0144**
Constant	5.721850	1.673046	3.420019	0.0021**
Long-run result of ARDL				
VAT	0.050386	0.063443	0.794195	0.4343
CPI	0.009445	0.002300	4.106522	0.0003**
INF	-0.043124	0.012923	-3.336996	0.0013**
Constant	16.728629	8.534549	1.960107	0.0608*

\*\* Indicate statistically significant at the 0.05.  $R^2=0.660605$ ; Adjusted  $R^2 =0.503961$ ; Prob.(F-statistic)= 0.001035 ; Durbin-Watson stat=2.258864

showed that the short-run coefficients of the Human Development Index for lagged one period and lagged two as the dependent variable of itself was significant at a 5% level with a direct effect. Statistically, this finding implies that a 1% increase in Human Development Index for lagged one period and lagged two brought about 34.1% and 31.6% increase in the current year. The implication of this finding is that the current improvement in developmental indicators was due to effective management of value added tax, as well as, general price in the last two years.

## DISCUSSION

### Value-added tax and human development index

The ARDL result showed that the coefficient of value-added tax was 7.8% and 9.5% for current years and lagged one period with a direct effect on the human development index. However, the long-run estimate shows that it was positive and non-significant. The economic implication is that effective use of tax collection on consumable goods increases the revenue accrues into the government's coffers; hence, increasing the provision of social amenities that support economic development. However, the long-run result indicates that such revenue may not promote economic development in the long-run when not effectively used. The findings corroborated with the studies of Basila (2010), and Okoye and Gbegi (2013) that established positive links between value-added tax and economic development, and concluded that value-

added tax revenue enhanced economic development through continuous provision of funds for Nigerian government which serves as an essential tool to increase capital accumulation and steady state level of output per capita. Therefore, has a multiplier effect on the economy.

### Consumer price index and human development index

The coefficient of the consumer price index was 1.5% for the current year and 1.89% for lagged one period with both periods exhibiting a positive and a negative sign. This shows that the consumer price index has zero effect on the human development index. The implication of these findings is that instability in the general price level of baskets of goods within the economy worsens economic development by reducing the purchasing power of the respondents. Also, studies written by Gatawa *et al.* (2016) arrived at a similar conclusion.

### Inflation rate and human development index

The coefficient of inflation rate was 15.9% and 13.8% for both lagged one and lagged two periods under short-run, and were significant. Also, the finding was significant in long-run with a negative sign. For inflation rate, it has two economic implications. First, the improvement in economic development witnessed last year was due to a moderate increase in the general price level within the country. Second, there is high certainty that there will be spiral inflation in the future; hence, worsening the level of poverty

within the economy. These findings corroborate the work of Gatawa *et al.* (2016) in that discovered a significant and inverse relationship between them.

### Conclusion and Recommendations

The study concludes that value-added tax and a moderate increase in general price level stimulate economic development in Nigeria, while instability in the consumer

price index worsens it. Based on empirical findings, the study recommended as follows;

1. The government should ensure that revenues realized through direct tax are channeled to the provision of adequate infrastructural facilities that can promote economic development.
2. The apex bank should ensure that it maintains a 1-digit value inflation rate in order to achieve the desired level of economic development.
3. Government should also focus more on indirect tax as it generates substantial revenue that could accelerate economic development in Nigeria.
4. Nigerian government should endeavour to put policies in place that would facilitate development.

### CONFLICT OF INTEREST

The author declares no conflicts of interest.

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