EFFECT OF VALUE ADDED TAX ON ECONOMIC GROWTH IN NIGERIA: EVIDENCE FROM THRESHOLD ANALYSIS

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ABSTRACT

This study analyse the threshold effect of value added tax (VAT) on economic growth in Nigeria. The time series data covering 1995 to 2020 sourced from World Development Indicators (WDI) was utilised. The data was analyse using the Least Squares (LS) and threshold regression techniques. The results show a positives significant effect of export and investment on economic growth, while the effect of government expenditure was negative. Meanwhile, value added tax, consumption, and import do not show any effect. The estimate of threshold level is 27% below which VAT will not significantly affect growth but above this threshold, VAT might positively improve economic growth. Thus, there is a need to review the value added tax in line with the new threshold and ensure that its administration follows progressive system to reduce the wide disparity between the poor and the rich.

Keywords: Value added tax, Economic growth, Investment, Government expenditure, Threshold regression.

1. INTRODUCTION

This study explores the threshold effect of value added tax (VAT) on economic growth in Nigeria. Recently, government has been borrowing recklessly to cater for the persistent shortage in revenue (Onoja and Ibrahim, 2021) amidst increasingcosts of running the government (Akaaand Eya, 2017). This is on the backdrop of the core role tax plays as a sustainable and reliable source of revenue and its important role in stimulating other sources of government revenue and in the distribution of wealth (Ogbonna, Ebimobowei and Isaac, 2016; Amgain, 2017). This questioned the potential role of tax as the main revenue source of the state and its role in engendering economic growth in the country (Adigwe and Oyadonghan, 2020). Among the several debates on the effectiveness of the Nigeria tax system are whether the tax rate is sufficient to meet increasing government expediture, whether tax revenue is effectively utilize or wether evation and avoidance of tax affect its administration.

In Nigeria, the government inability to maximise the potentials of tax which hassubjected the country to the overreliance on oil revenue and borrowing has been attributed to several factors (Onoh, Okafor, Efanga, Ikwuagwu and Henry, 2021; Adigwe and Oyadonghan, 2020). These factors include the rise in tax avoidance and evation (Ogbonna, Ebimobowei and Isaac 2016; Awa and Ibeanu, 2020); high costs of tax administration compared to the revenue generated (Onoh, Okafor, Efanga, Ikwuagwu and Henry, 2021). Other factors include poor tax administration expertise; poor awareness on the benefit of tax and high tax rate (Olugbemi, Bassey, Okon and Osang, 2020); and poor compilation and management of tax statistics (Alhaji & Moshood, 2021). Among these factors, tax rate, which determines the tax level, plays important role in maximizing the potential of tax for economic growth (see Scully 1991; Chao and Grubel, 1998; Saibu, 2015; Amgain, 2017; Davidsson, 2012). This stem from the argument that a higher level of tax hampers labour supply and capital formation and this subsequently affect economic progress while a lower level of tax is believed to translate to resources gap, which is a disincentive to public finance and infrastructural development (Amgain, 2017).

In the literature, there are two proponents growth effect of tax. The first school of thought argued in favour of lower tax rate based on the believe that when tax is low, it serves as an inducement for more productivity, savings and invesmtnet (Nweze, Asogwa, Umoffon and Etim, 2020). However, according to Akani, Ikebujo, Ibanichuka, (2016) a high tax rate not corresponding with increased government sepending will lead to a fall in the purchasing power of the consumer and subsequently inflation. Conversely, several studies have argued that high tax rate hinders economic progress (Nweze, Asogwa, Umoffon and Etim, 2020). Against this background, the contribution of

this study is on the current argument in the literature on the growth effect of tax.

The focus of government in Nigeria has been mainly on revenue from oil while neglecting other sources of revenue and this have redered the tax system innefient in meeting the expendiure needs of the government (Adigwe and Oyadonghan, 2020). The over-reliance on oil revenue and several tax administrative challenge including tax avoidance and evation due tothe lopsided tax laws (Ogbonna., Ebimobowei. and Isaac 2016; Awa and Ibeanu, 2020), and the high costs of tax administration (Onoh, Okafor, Efanga, Ikwuagwu and Henry, 2021) makes it difficult for government to maximize the potential of tax in finacing her increasing expenditure (Onoh, Okafor, Efanga, Ikwuagwu and Henry, 2021; Adigwe and Oyadonghan, 2020). Consequently, government have resulted to frequent borrowing to cater for the persistent shortage in the revenue (Onoja and Ibrahim, 2021). The shocks that charactersed oil price flunctuation, the commodity which government relied have continued to widen government expenditure and revenue gap increasing the government borrowing intensity (Adigwe and Oyadonghan, 2020; Akaa& Eya, 2017; Onoh, Okafor, Efanga, Ikwuagwu and Henry, 2021).

To make the tax system effective, despite the introduction of several tax reforms to ensure strict compliance with payment of taxes, the tax system has performed below expectations (Okeke, Mbonu and Ndubuisi, 2018).In the literature, despite the vast studies addressing Nigeria tax administration bottlenecks and their implication on growth, limited studies abound to determine the level of value added tax that is optimum for growth in Nigeria. Meanwhile, a higher level of tax hampers labour supply and capital formation and this subsequently affect economic progress while a lower level of tax is believe to translate to resources gap, which is a disincentive to public finance and infrastructural development (Amgain, 2017).

In this study, the effect of value added tacx (VT) on economic growth in Nigeria is explore. The study specifically:

▪ examine the effect of value added tax on economic growth in Nigeria; and
▪ estimate the level of valued added tax that maximize economic growth in Nigeria.

The study offers immense benefit to the government, tax administrators, tax payers and the general public. Government will benefit immensely from the outome of this study as the study will provide necessary insights that will assit the government to maximize the potential of value added tax in government finacing and to ascertain whether the cuurent tax rate is appropriate to produce an optimal level of value added tax. This will inform their decision either for an upward or downward review of the tax rate to stimulate economic growth. It will also enhance openness and accountability of the tax administrative system. For the tax payers who are concerned with government reckless borrowing and low tax dividend, the study will provide insights on how the level of tax paid to the government impacted on their tax dividends in the area of welfare and infrastructural spending. The study will also benefit the public by providing reommendations that will improve tax administration productivity and efficiency, which will in turn raise government revenue and thereby increased government spending on welfare and infrastrural spending for the public.

2. LITERATURE REVIEW

Numerous theories exists the extant literature linking growth to taxation and on how taxes influence growth. This study draws on the expediency theory and Wargner's modern school theory of tax, with both theories providing the basis upon which this study relies on. The expediency theory emphasizes the practical feasibility of tax proposals. According to this theory, tax authorities should primarily consider the workability of a proposed tax working template, disregarding socioeconomic goals of the state. The economic and social factors should not affect the design of the tax system. This approach prioritizes the creation of a tax that can be efficiently imposed and collected. Various groups representing economic, social, and political interests exert pressure, leading authorities to adjust tax structures to accommodate these demands. Additionally, the administrative setup might not be optimally efficient in collecting taxes at a reasonable cost. Taxes, as powerful policy tools, should be wielded effectively by authorities to address societal issues like income inequality, regional disparities, unemployment, and economic fluctuations (Bhartia, 2009).

Wagner's modern school theory proposes a rise in marginal tax rates can foster economic progress. This is based on the premise that increased tax revenue, when directed towards education and infrastructure development, can stimulate the

economy. The accumulation of higher government income, when properly invested, can invigorate economic growth. While tax structure might seem less significant in developing countries, a sound tax framework yields advantages for the state as well as the payee. Wagner's viewpoint promotes a contemporary welfare approach to shaping tax policies. He advocates for using taxation to reduce income inequality, suggesting that property ownership and inheritance are outcomes of state policies rather than inherent rights. Thus, the state is justified in regulating property ownership and inheritance for the collective benefit. Despite initial criticism, Wagner's ideas have evolved to become fundamental principles in modern state fiscal policies (Bhartia, 2009).

Numerous research studies abound on the connection between economic growth and taxation. To illustrate, Ogbonna, Ebimobowei, and Isaac (2016) examined how evasion and avoidance of tax affects growth in Nigeria from 1999-2012.The research utilized Least Squares regression to assess the impact of tax evasion and avoidance on economic growth, revealing a negative correlation. Ogbonna and Ebimobowei (2016) investigated the influence of tax revenue and administration on Nigeria's economic growth using primary data from questionnaires and secondary data spanning from 1990 to 2012, employing regression techniques. Their results affirmed that tax administration and revenue significantly affected Nigeria's economic growth during the analyzed period.

Adigwe and Oyadonghan (2020) explored the role of taxation as a determinant of growth in Nigeria from 2009 to 2018, employing Least Squares regression. They identified a substantial relationship among value-added tax, corporate income tax, and growth in Nigeria, confirming that taxation indeed stimulates economic growth and development in the country. Worlu and Emeka (2012) investigated the connection between taxes and economic development in Nigeria, finding that an increase in marginal tax rates for higher incomes tends to slow down economic growth. Conversely, an increase in average tax rates, considering all income levels, positively impacts economic growth. Yahaya and Yusuf (2019) examined how non-oil tax revenue influences Nigeria's economic growth using Auto Regressive Distributive Lag (ARDL) analysis. Their findings indicated a strong and positive relationship between corporate income tax (CIT) and economic growth, while value-added tax

(VAT) and customs and excise duties (CED) also showed a positive but insignificant relationship with growth.

In 2017, Akaa and Eya studied the impact of taxation on Nigeria's economy over two decades using Johansen Cointegration and error correction models. They found that company income tax and petroleum profit tax positively influenced long-term economic growth, whereas value-added tax and personal income tax had negative impacts on growth. Further more, Onoja and Ibrahim (2021) analyzed the connection between tax revenue and Nigeria's economic growth. They observed a positive but not very strong correlation between petroleum profit tax (related to oil revenue) and economic growth, while value-added tax and companies' income tax (non-oil tax revenues) exhibited significant relationships with growth.

Nweze, Asogwa, Umoffon, and Etim (2020) explored the relationship between different components of tax revenue and economic growth in Nigeria from 1989 to 2018, using Error Correction Mechanism (ECM), Granger Causality tests, and correlational statistics. Their findings emphasized the crucial role played by various tax revenue components in driving economic growth in Nigeria.Lastly, in 2018, Obialor investigated how government investment in human capital influenced economic growth in Nigeria, South Africa, and Ghana, utilizing Co-integration techniques and Vector Error Correction Mechanism (ECM). The results highlighted that investing in health and education positively influenced economic growth in Nigeria, while the literacy ratio had insignificant positive effects in all three countries.

3.   METHODOLOGY

Ex post facto approach was adopted in this study. The reason why this research design is preffered over other alternative research design is its ability to use past occourence to explain the current condition. This study draws its theoretical framework from the Kyeynesian Model of national income from his analysis of income and consumtion nexus. The bane of the model is that to rescue an economy from recession, reduction in taxes and increase in transfer payment are imperative(Thanh and Canh, 2020). Keynesian presented the consumption-income nexus via the national income framework specified as:

$$Y = C + I + G + X - M$$

$$(1)$$

Y in the equation stands for national income or output and it is determined by C consumption both priave and public, I investment, government expenditure, X is export and M is import. The consumption C in equation (1) is made of both induced and autonomous components specified as follows:

$$C = a + bY^d \qquad (2)$$

Equation (2) suggest that consumption is a function of autonomous consumption "a" and disposable income (Y^d) which depends on the marginal propensity to consume "b". Meanwhile, the disposable income is partly determined by income and taxation as specified in equation (3).

$$Y^d = Y - T \qquad (3)$$

Equation (3) can be substituted into equation one as follows:

$$C = a + b(Y - T) \qquad (5)$$

Equation can further be substituted into the output model in equation (1) as follows:

$$Y = a + b(Y - T) + I + G + X - M \qquad (6)$$

At equilibrium output or economic growth level:

$$Y = a - bT + I + G + X - M \left(\frac{1}{1-b}\right) \qquad (7)$$

Equation (7) suggests output, income or growth level is determined by tax, investment, government speeding and net export. In this study, tax is decomposedCompany Income Tax (CIT), Value added tax (VAT), Petroleum profit tax (PPT) and custom excise duty (CED).

By incorporating these variables into the model:

$$Y = a - b(CIT + VAT + PPT + CED) + I + G + X - M$$

In the analysis, the model employed byFasanya and Aregbeyen (2013) was adapted in this study. In the current study, the value added taxis the independent variable while the gross domestic product (GDP) per capita growth rate (GR) a proxy for economic growth serves as the explanatory variable in the model. As additions to the explanatory variables in the model, consuption (CONS), investment (IVS), government expenditure (GEX), export (EXP) and import (IMP) all of which can be potentially influence by tax and can as well influence economic growth were used in place of savings. The model for the tax effect on economic growth model is presented as follows:

$$GR_t = \beta_0 + \beta_1 TR_t + \beta_2 CONS_t + \beta_3 IVS_t + \beta_4 GEX_t + \beta_5 EXP_t + \beta_6 IMP_t + u_t \qquad (9)$$

The transformation of equation (9) into a threshold regression model for the threshold effect of value added tax on economic growth model in line with Mubarik (2005); Doguwa (2012) and Omotosho, Bawa and Doguwa (2016) to determine the optimal size of value added tax that maximize economic growth is presented as follows:

$$GR_t = \beta_0 + \beta_1 TR_t + \beta_2 D_t(TR_t - \pi) + \beta_2(1 - D_t)(TR_t - \pi$$

where:

D_t is dummy variable define as 1 for periods with higher tax to GDP ratio and 0 for period with lower tax to GDP ratio; π is the threshold parameter whose value is used in the interation process in the search for optimal threshold point by using different values of tax thresholds; β_1= The slope of the effect of tax on grwth for periods with higher tax to GDP ratio; β_2 is the slope of the effect of tax on growth for periods with lower tax to GDP ratio; and μ_t is the disturbance term capturing the effects of other control variables

In economic theory, tax is treated as leakages or withdrawal from the circular flow of income which is why reduction in tax was advocated for an economy to escape from recession (Thanh and Canh, 2020). Investment, government expenditure and export in line with Keynesinan theory have positive association with economic growth while the direction of import and consumption is expected to be negative depending on the balance of payment position of the country. The expected relationship between and among thedependent and various explanatory variables are express as follows:

$$\frac{\partial GR}{\partial TR} < 0 \quad ; \quad \frac{\partial GR}{\partial CONS} < 0; \quad \frac{\partial GR}{\partial IVS} > 0; \quad ; \quad \frac{\partial GR}{\partial EXP} > 0; \quad \text{and}$$

$$\frac{\partial GR}{\partial IMP} < 0 \qquad (8)$$

This study covers the period of 26 years from 1995 to 2020. The selection of the period was informed partly by data availability on the various components of tax in Nigeria and the need cover the period when the country experienced a surge in her debt profile as a result of declining government revenue despite the availability of tax as a major source of government revenue. The data was collected from the tax record of the Nigeria Federal Inland Revenue Service (FIRS) and World Bank Development Indicator (WDI). In the measurement of variables, economic growth was measured via gross domestic product (GDP) per capita growth rate (GR), tax was measured using total value added tax. Furthermore, investment (IVS) was proxy by gross capital formation, government expenditure GEX was measure using total government expenditure, export EXP was measure using total volume of export and import was

measured using total import data. The measurement   of variables is display as follows:

Table 1: Data Sources and Measurement

SN	Variables	Symbol	Measurement	Source
1	Economic Growth	GR	GDP per capital in million USD growth rate	World Bank Development Indicator, 2021
2	Value added tax	TR	Value added taxrevenue in million USD	World Bank Development Indicator, 2021
2	Consumption	CONS	Final consumption in million USD as a ratio of GDP	World Bank Development Indicator, 2021
3	Investment	IVS	Gross capital formation in million USD	World Bank Development Indicator, 2021
4	Government expenditure	GEX	Total government expenditure in million USD	World Bank Development Indicator, 2021
5	Export	EXP	Total export volume in million USD	World Bank Development Indicator, 2021
6	Import	IMP	Total import volume in million USD	World Bank Development Indicator, 2021

Source: Authors' 2022

In our research, we examined the statistical and econometric aspects of the variables using various methods. Descriptive statistics such as mean, minimum and maximum values, median, mode, skewness, and kurtosis, along with the Jarque-Bera statistics, were employed. Additionally, we conducted correlation analysis and stationarity tests, including the Augmented Dickey Fuller (ADF) and Phillips Perron (PPP) tests.

Aligned with the study's objectives, we employed the Ordinary Least Squares (OLS) estimation technique to analyze the impact of value-added tax on economic growth. Furthermore, to identify the optimal level of tax for fostering economic growth in Nigeria, we utilized the threshold regression approach. This approach is crucial for determining the threshold level of tax, representing the point beyond which the influence of tax on growth becomes detrimental (Doguwa, 2012).

4. RESULTS

The estimated result and the interpretation are presented in this section. It covers pre-estimation analysis, empirical analysis and post-estimation analysis

4.1 Pre-Estimation

Table 4.1: Correlation Matrix

	GDP_GROWTH	VAT	CONSUMPTION	INVESTMENT	GOV_EXPENDITURE	EXPORT	IMPORT
GDP_GROWTH	1.000000						
VAT	-0.137424	1.000000					
FINAL_CONSUMPTION2	0.055582	0.600103	1.000000				
INVESTMENT	0.074651	0.741273	0.888355	1.000000			
GOV_EXPENDITURE	-0.116268	0.823525	0.846716	0.873045	1.000000		
EXPORT	0.454208	0.185037	0.463371	0.376447	0.320855	1.000000	
IMPORT	-0.097255	0.655912	0.307824	0.592423	0.529124	0.092763	1.000000

Source: Authors' 2022

As illustrated in Table 4.1, for economic growth and value added tax, the correlation coefficient was -0.137424. This value falls below 0.85 and is negative, indicating a negative connection between the two variables. In other words, when value added tax increases, economic growth tends to decrease.

Furthermore, there is no indication of a multicollinearity issue between these two variables. Moving on to economic growth and consumption, the correlation coefficient was 0.055582. Again, this value is below 0.85 and positive, suggesting a positive connection between the two variables. An

increase in consumption is associated with an increase in economic growth. Importantly, there is no evidence of multicollinearity between these variables.

Likewise, for economic growth and investment, the correlation coefficient was 0.074651, which is below both 0.85 and positive. This indicates a positive relationship- when investment goes up, economic growth tends to increase. There is no indication of multicollinearity between these variables. Considering economic growth and government expenditure, the correlation coefficient was -0.116268. This value is below 0.85 and negative, implying a negative relationship. When government expenditure rises, economic growth tends to decrease. As before, there is no indication of multicollinearity.

For economic growth and exports, the correlation coefficient was 0.454208, which is below 0.85 and positive. This means that there is a positive association between the two variables- when exports increase, economic growth tends to rise. Importantly, there is no sign of multicollinearity. Lastly, economic growth and imports had a correlation coefficient of -0.097255, which is below 0.85 and negative. This suggests a negative relationship- when imports increase, economic growth tends to decrease. Again, no multicollinearity issue was observed.

To further understand the nature of the variables in the dataset, the study utilized the Augmented Dickey Fuller (ADF) test, the results of which are detailed in Table 4.2.

Table 4.2: Unit root

Variables	Level		First Difference		Status
	T-stat	Prob.	T-stat	Prob.	
GDP_GROWTH	-2.878478	0.0058	-7.307346	0.0000	I(0)
VAT	-0.423244	0.5202	-7.660808	0.0000	I(1)
CONSUMPTION	0.447685	0.8036	-3.713341	0.0106	I(1)
INVESTMENT	1.979670	0.9856	-7.660808	0.0000	I(1)
GOV_EXPENDITURE	1.864481	0.9819	-8.031958	0.0000	I(1)
EXPORT	-0.203638	0.6028	-4.276408	0.0029	I(1)
IMPORT	-0.423244	0.5202	-4.565945	0.0017	I(1)
Critical value @ 1%	-2.660720		-3.769597		
5%	-1.955020		-3.004861		
10%	-1.609070		-2.642242		

Source: Authors' 2022

As shown in Table 4.2, for economic growth, the unit root test indicates a probability value at the level of 0.00085. This value is smaller than the significance level of 0.05, which means that the variable is considered to be stationary at level, or in technical terms, it's stationary at I(0). For indirect tax, the probability value from the unit root test at the level is 0.5202, higher than 0.05. This implies that the variable is not stationary at its initial level, I(0). However, when the test was applied to the first difference of the variable, the probability value is 0.0000, which is less than 0.05. This indicates that the variable becomes stationary at the first difference, or I(1).

Similarly, for consumption, the unit root test at level shows a probability value of 0.8036, indicating non-stationarity at I(0). However, when examined at the first difference, the probability value is 0.0106, which is less than 0.05, implying that the variable becomes stationary at I(1). For investment, government expenditure, export, and

import, the probability values from the unit root test at the level are all higher than 0.05, indicating non-stationarity at I(0). However, when examined at the first difference, the probability values are all less than 0.05, suggesting that these variables become stationary at I(1). To summarize, some variables are stationary at level I(0), while others need to be transformed to their first differences (I(1)) to achieve stationarity.

4.2. Regression Results

The study employed two statistical methods to analyze the model. First, the Ordinary Least Squares (OLS) regression technique was used to determine how value-added tax impacts economic growth. Second, the study applied the threshold regression technique to find the level of value-added tax rate that maximizes economic growth. The outcome of the OLS analysis is

illustrated in Table 4.3.

Table 4.3: OLS Estimates

Variable				
D(VAT)	1.275846	0.629927	2.025387	0.0579
DLOG(CONSUMPTION)	1.886887	1.713646	1.101095	0.2854
LOG(INVESTMENT)	7.909781	3.176253	2.490286	0.0228
LOG(GOV_EXPENDITURE)	-8.737842	2.716830	-3.216190	0.0048
LOG(EXPORT)	3.765392	1.872643	2.010737	0.0496
IMPORT	-2.790253	3.161930	-0.882453	0.3892
C	-9.935343	5.030504	-1.975019	0.0638
R-squared	0.575820			
Adjusted R-squared	0.434427			
F-statistics	4.072467			
Prob (F-statistics)	0.009382			
Durbin-Watson Stat	2.936638			

Source: Authors' 2022

The results obtained from the Ordinary Least Squares (OLS) regression analysis, outlined in Table 3, align with our initial expectations. The coefficients for investment (β = 7.909781, t = 2.490286, p < 0.05) and export (β = 3.765392, t = 2.010737, p < 0.05) are positive and significant. This indicates that both investment and export have a substantial positive impact on economic growth in Nigeria. In simpler terms, a 1% increase in investment and export leads to approximately 791% and 377% growth in the economy, respectively, and vice versa. Conversely, the estimate for government expenditure (β = -8.737842, t = -3.216190, p < 0.05) contradicts expectations. It is negative and significant, suggesting that higher government expenditure is associated with a significant negative effect on economic growth. A 1% increase in government expenditure results in approximately an 874% decrease in economic growth, and vice versa.

However, the coefficients for value-added tax (β = 1.275846, t = 2.025387, p > 0.05), consumption (β = 1.886887, t = 1.101095, p > 0.05), and import (β = -2.790253, t = -0.882453, p < 0.05) are statistically insignificant. This implies that value-added tax, consumption, and import do not significantly impact economic growth in Nigeria.

To summarize, the findings suggest that value-added tax does not play a significant role in influencing economic growth. This implies that the current value-added tax system may not be effective in driving economic growth in Nigeria. Efficient and effective tax systems are expected to contribute positively to economic growth and other key macroeconomic indicators. Therefore, these results may indicate potential inefficiencies in Nigeria's value-added tax system.

The results of the threshold regression analysis will be presented in the following sections.

Table 4.4: Threshold Regression Estimates

Dependent Variable: GDP_GROWTH : 0.2766943				
Variable	Coefficient	Std. Error	t-Statistics	Prob.
TAX_REVENUE < 0.2766943 -- 16 obs				
TAX_REVENUE	-15.65776	7.711042	-2.030564	0.0519
C	3.208654	1.643723	1.952065	0.0610
0.2766943 <= TAX_REVENUE -- 16 obs				
TAX_REVENUE	-15.09339	3.894366	-3.875697	0.0006
C	11.77118	2.247877	5.236575	0.0000
R-squared	0.518941			
Adjusted R-squared	0.467399			
F-statistics	10.06831			
Prob (F-statistics)	0.000114			
Durbin-Watson Stat	2.098626			

Source: Authors' 2022

The results from the entire period studied, spanning from 1995 to 2020, and presented in Table 4.4, reveal a crucial tipping point for value-added tax and its impact on economic growth. The identified threshold level for value-added tax that optimizes economic growth is 0.2766943. Beyond this specific level, the influence of value-added tax on economic growth becomes detrimental. Conversely, when the tax rate is below this threshold, the value-added tax (β = -15.65776, t = -2.030564 & P > 0.05) does not show a significant impact on Nigeria's economic growth.

The interpretation of this coefficient suggests that when the tax rate is below the threshold, the tax effect on economic growth is negative. In contrast, when the value-added tax exceeds the threshold value of 0.2766943, it significantly and negatively affects Nigeria's economic growth ($\beta2$ = -15.09339, t = -3.875697 & P > 0.05). This implies that a one-unit increase in value-added tax above the threshold level results in a contraction of about 15.09 units in economic growth. The findings make it clear that the critical threshold level for taxation in Nigeria is 0.2766943. Below this level, taxation does not significantly influence economic growth. However, when the tax rate surpasses this threshold, it adversely impacts economic growth in Nigeria.

5.   CONCLUSION AND POLICY RECOMMENDATIONS

This research investigates the impact of value-added tax on economic growth in Nigeria. The primary objectives include analyzing how value-added tax affects economic growth and determining the optimal level of value-added tax that maximizes growth. The study utilizes yearly data spanning from 1995 to 2020, sourced from the World Development Indicators (WDI). For the data analysis, both Ordinary Least Squares (FMOLS) and threshold regression methods are applied.

The study's findings highlight that investment and export exert a positive and significant influence on economic growth, while government expenditure has a negative effect on growth. However, value-added tax, consumption, and import do not exhibit any discernible impact on economic growth in Nigeria. The threshold analysis pinpoints a specific threshold value of 0.2766943 percent, indicating when value-added tax is most beneficial for economic growth. Once the value-added tax exceeds this threshold, its impact becomes negative. Below this threshold level, value-added tax does not significantly affect economic growth, and the relationship between tax and growth is negative. Conversely, when the tax level surpasses the threshold of 0.2766943 percent, it negatively impacts economic growth by about 15.09 units.

In conclusion, the study asserts that value-added tax does not significantly affect economic growth in Nigeria, and the optimal threshold value is identified as 0.2766943 percent. Based on these findings, the study recommends that the government aligns value-added tax with this established threshold, ensuring the tax rate does not fall below it. Additionally, revenue generated from value-added tax and other taxes should be strategically invested in projects with a positive impact on economic growth. To enhance the effectiveness of taxation, the government should reform the tax system to be more progressive, thereby lightening the tax burden on the poor and reducing income inequality across different socio-economic groups.

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