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Research Article

Sustainable Value Added Tax (VAT) and Economic Growth of Nigeria

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Abstract

This study examined the sustainable value added tax (VAT) and economic growth of Nigeria, using gross domestic product (GDP) as a proxy. Specifically, it analyzed the effect of VAT on imports, exports, and non-oil revenue between 2015 and 2024. An *ex-post facto* research design was adopted, relying on secondary data obtained from the Central Bank of Nigeria (CBN), Federal Inland Revenue Service (FIRS), and the National Bureau of Statistics (NBS). The study employed the Ordinary Least Squares (OLS) regression model, alongside descriptive and diagnostic tests, to ensure robustness of the analysis. The regression results revealed that VAT on imports (Coef. = 0.164921, p = 0.0007), VAT on exports (Coef. = 1.074247, p = 0.0026), and VAT on non-oil revenue (Coef. = 0.030672, p = 0.0278) all exerted positive and statistically significant effects on GDP at the 5% significance level. The model achieved an Adjusted R^2 of 0.999860, F-statistic of 21445.78 with Prob(F-stat) = 0.000000, and a Durbin-Watson statistic of 1.82, confirming strong explanatory power and absence of autocorrelation. The study concludes that sustainable VAT is a vital fiscal tool for diversifying revenue sources, enhancing trade performance, and stimulating Nigeria's long-term economic growth.

Keywords: Sustainable Value Added Tax (VAT); Economic Growth; Gross Domestic Product; VAT on Imports; VAT on Exports; VAT on Non-Oil Revenue

Introduction

Sustainable value added tax (VAT) is a stable and diversified system of VAT collection that consistently generates government revenue from both oil and non-oil sources without over-reliance on any single sector, thereby supporting long-term economic growth. Sustainable value added tax plays a vital role in promoting economic growth in Nigeria by serving as a stable and predictable revenue stream for government financing. Unlike oil revenues, which are highly volatile due to global price fluctuations and production uncertainties, VAT collections tend to be more resilient since they are drawn from broad consumption and trade activities across the economy. For example, Nigeria recorded **₦3.64 trillion in VAT revenue in 2023**, compared to **₦2.51 trillion in 2022**, indicating significant improvements in compliance and administration (Nairametrics, 2024). This stability provides the government with a reliable fiscal base to fund essential infrastructure projects, social services, and human capital development, all of which stimulate production, investment, and aggregate demand in the economy. Empirical findings also confirm this positive linkage. Obi and Ekwunife (2023), in their analysis of data between 2011 and 2022, reported that VAT revenue exerts a significant positive effect on Nigeria's gross domestic product (GDP), showing that sustainable VAT is a catalyst for long-term economic growth.

Beyond revenue stability, sustainable VAT enhances Nigeria's growth by diversifying fiscal inflows through taxes on imports, exports, and non-oil sectors. Recent reports reveal that **non-import VAT accounted for over 70% of VAT collections in early 2024**, reflecting the rising significance of the non-oil economy in national revenue mobilization (Nairametrics, 2024). By broadening the VAT base across manufacturing, services, trade, and telecommunications, government revenue becomes less dependent on the oil sector, thereby strengthening fiscal resilience. Additionally, VAT charged on imports provides an avenue to regulate external trade, while zero-rated VAT on exports helps boost international competitiveness and supports foreign exchange earnings. Together, these mechanisms ensure that VAT remains a sustainable

fiscal instrument capable of driving inclusive growth. Thus, the sustainability of VAT in Nigeria is not merely a revenue concern, but a strategic tool for stabilizing government finances, supporting investment, and fostering economic transformation.

Statement of the Problem

Despite various reforms in Nigeria's tax system, the country's revenue profile remains heavily dependent on the oil sector, exposing government finances to volatility in global oil prices. This over-reliance has created fiscal instability, particularly during periods of oil price shocks, leaving the economy vulnerable to deficits and underfunded development programs. Value Added Tax (VAT) was introduced as a consumption-based tax to diversify government revenue and provide a more stable and predictable fiscal inflow. However, challenges such as weak compliance, narrow tax coverage, administrative inefficiencies, and widespread exemptions have limited VAT's potential to sustainably finance economic growth. As a result, questions remain about the extent to which VAT collections, when sustained and diversified across oil, non-oil, import, and export bases, can serve as a reliable driver of Nigeria's economic transformation.

Furthermore, while VAT revenues have shown a steady upward trend in recent years, the Nigerian economy continues to grapple with low growth rates, inadequate infrastructure, and high unemployment. This raises concerns about whether the growing VAT inflows are being effectively harnessed to stimulate productive sectors of the economy. Existing empirical findings also present mixed results: some studies suggest VAT has a significant positive effect on GDP, while others highlight weak linkages due to poor revenue utilization and policy inconsistencies. This gap between rising VAT collections and the country's modest economic outcomes underscore the need to investigate whether VAT in Nigeria is truly sustainable and whether it can serve as a long-term catalyst for economic growth.

The main objective of this study is to examine the sustainable value added tax and economic growth of Nigeria.
The specific objectives are to:

i. Examine the effect of value added tax on imports on Nigeria's gross domestic product (GDP).
ii. Evaluate the impact of value added tax on exports on Nigeria's gross domestic product (GDP).
iii. Assess the effect of value added tax on non-oil revenue on Nigeria's gross domestic Product (GDP).

The scope of this study is delimited to examined sustainable value added tax (VAT) and economic growth in Nigeria, with particular focus on how different categories of VAT influence the nation's gross domestic product (GDP). Specifically, the study covers three key dimensions of VAT: VAT on imports, VAT on exports, and VAT on non-oil revenue, as these represent the most significant channels through which VAT contributes to government revenue diversification and economic sustainability. The analysis is restricted to Nigeria as the geographical focus, while the temporal scope is guided by recent trends and available secondary data on VAT collections and GDP performance. By concentrating on these dimensions, the study seeks to provide an empirical understanding of the extent to which sustainable VAT can serve as a catalyst for Nigeria's long-term economic growth.

Review of Related Literature

Sustainable Value Added Tax

Sustainable value added tax (VAT) can be described as a taxation system that ensures consistent, predictable, and diversified revenue generation for government financing. Unlike oil revenue, which is often unstable due to fluctuations in global oil prices, VAT revenue is derived from a broad consumption base that covers imports, domestic trade, and non-oil activities, making it more resilient in the long term. In Nigeria, recent data indicates that VAT has become a vital component of government revenue, with collections reaching **₦6.72 trillion in 2024,** compared **to ₦3.64 trillion in 2023**, representing an increase of about 84.62% (Nairametrics, 2025). This growth was driven by improvements in tax administration,

stronger compliance levels, and a widening of the VAT base, with non-import VAT growing by 75.09% and import VAT more than doubling within a year (Africa Tax Review, 2025). Such trends demonstrate that Nigeria is gradually building a sustainable VAT system that reduces its overdependence on oil and supports long-term fiscal stability.

The effect of a sustainable VAT system on economic growth in Nigeria is significant because it provides a steady fiscal base for government investment in critical sectors such as infrastructure, health, education, and human capital development. These investments, in turn, stimulate productivity, expand private sector activity, and improve aggregate demand. Empirical evidence supports this relationship: Ekpe Oto and Wayas (2024), in their study covering the period 2003–2022, found that VAT revenues had a statistically significant impact on Nigeria's Gross Domestic Product (GDP). Their findings indicate that VAT is not just a revenue tool but a key driver of growth when efficiently managed and directed toward productive uses. Moreover, the increasing role of non-oil VAT reflects the diversification of fiscal inflows, ensuring that economic growth is not tied solely to oil revenues but distributed across manufacturing, trade, services, and telecommunications. Therefore, sustainable VAT serves as both a stabilizing force for government finances and a catalyst for Nigeria's broader economic transformation.

Value Added Tax (VAT)

Value Added Tax (VAT) on imports refers to the consumption tax levied on goods and services brought into Nigeria, serving as both a revenue source and a regulatory tool for international trade. This tax not only generates fiscal inflows but also helps shape trade dynamics by influencing the cost of imported goods relative to locally produced alternatives. In recent years, VAT on imports has become a major contributor to government revenue, with collections rising from about **₦715 billion in 2023** to **₦1.59 trillion in 2024**, representing more than a 120% increase (Nairametrics, 2025). Such growth demonstrates the government's increasing reliance on import VAT as part of its strategy to diversify non-oil revenues. Its effect on Nigeria's Gross Domestic Product (GDP) is twofold: directly, through enhanced fiscal capacity that allows the government to invest in infrastructure, human capital, and productive sectors; and indirectly, by influencing demand patterns, stimulating local industries, and reducing overdependence on volatile oil revenue. Empirical studies also support this linkage, with evidence suggesting that sustained increases in VAT collections, including import VAT, exert a positive and significant effect on Nigeria's economic growth trajectory (Ekpe Oto & Wayas, 2024).

Value Added Tax (VAT) on Exports

Value Added Tax (VAT) on exports in Nigeria is applied at a zero rate, meaning exporters do not pay VAT on goods and services sold abroad, while still being able to reclaim input VAT incurred during production. This policy is designed to enhance the competitiveness of Nigerian exports in international markets, encourage industrial production, and stimulate foreign exchange earnings. By relieving exporters of VAT burdens, the government creates incentives for firms to expand their export activities, which in turn boosts output, employment, and foreign reserves. Such expansion has multiplier effects on Gross Domestic Product (GDP), as increased export activities contribute directly to national income while supporting supply chains and related service industries. Empirical evidence affirms this positive connection: studies have shown that tax incentives, including zero-rated VAT on exports, play a significant role in stimulating export-led growth and overall economic performance in Nigeria (Obi & Ekwunife, 2023; Ekpe Oto & Wayas, 2024). Thus, VAT on exports functions less as a revenue tool and more as a growth strategy by fostering international competitiveness and contributing indirectly to sustainable GDP growth.

Value Added Tax (VAT) on Non-Oil Revenue

Value Added Tax (VAT) on non-oil revenue refers to VAT collected from non-oil sectors such as manufacturing, services, trade, telecommunications, and agriculture, which together form the backbone of Nigeria's economy outside the volatile oil industry. Unlike oil-based revenues that are highly vulnerable to international price shocks, non-oil VAT collections are more stable and predictable because they are tied to domestic consumption and business activities. In recent years, non-oil VAT has accounted for the bulk of total VAT collections, contributing over **70% of VAT revenue in early 2024**, signaling Nigeria's

gradual shift towards sustainable revenue diversification (Nairametrics, 2024). This reliance on non-oil VAT reflects the government's efforts to strengthen fiscal stability by tapping into sectors that are more resilient to global disruptions and that directly reflect the level of internal economic activity.

The effect of non-oil VAT on Nigeria's Gross Domestic Product (GDP) is particularly significant because it not only enhances fiscal space for the government to finance infrastructure, healthcare, and education, but also stimulates productivity across the real sector. By channeling revenues from manufacturing, services, and trade into development projects, the government can spur aggregate demand, encourage private sector expansion, and improve overall economic welfare. Empirical findings support this linkage, as studies confirm that non-oil VAT revenue exerts a strong positive influence on Nigeria's GDP, underscoring the critical role of tax diversification in achieving sustainable growth (Obi & Ekwunife, 2023; Ekpe Oto & Wayas, 2024). Thus, VAT on non-oil revenue serves as both a stabilizer of government finances and a driver of long-term economic transformation in Nigeria.

Economic Growth

Economic growth in Nigeria refers to the sustained increase in the nation's productive capacity, measured primarily by the rise in Gross Domestic Product (GDP) over time. Nigeria, as Africa's largest economy, derives its economic growth from diverse sectors including oil and gas, agriculture, manufacturing, services, and trade. While the oil sector has historically dominated revenue generation, non-oil sectors such as telecommunications, financial services, and agriculture have become major contributors to GDP, particularly in the last decade. According to the National Bureau of Statistics (2024), Nigeria recorded a GDP growth rate of **2.98% in Q1 2024**, reflecting steady progress despite global and domestic challenges such as inflation, exchange rate volatility, and infrastructural deficits. This growth underscores the resilience of Nigeria's economy, which continues to rely heavily on consumer spending, government investments, and exports to drive expansion.

The significance of economic growth in Nigeria lies in its potential to reduce poverty, improve employment opportunities, and enhance living standards for its population of over 220 million people. A higher growth rate translates into increased government revenue, enabling greater investments in infrastructure, healthcare, and education, which are critical for human capital development. However, Nigeria's growth trajectory has been uneven due to dependence on crude oil exports, insecurity in some regions, and fiscal imbalances. Recent empirical studies reveal that sustainable growth in Nigeria requires diversifying revenue sources, strengthening tax systems, and promoting industrialization to reduce reliance on oil (Ojong, Arikpo, & Ogar, 2022; Omodero, 2019). Therefore, economic growth in Nigeria is not only an indicator of macroeconomic performance but also a central pathway towards long-term stability and national development.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) represents the total monetary value of all goods and services produced within a country over a specified period, and it is the most widely used indicator of economic performance. In the case of Nigeria, GDP serves as a benchmark for measuring the country's economic activities across different sectors such as oil and gas, agriculture, industry, and services. GDP is often classified into nominal GDP, which is calculated at current market prices, and real GDP, which adjusts for inflation to give a clearer picture of actual growth. According to the National Bureau of Statistics (2024), Nigeria's real GDP grew by **2.98% in the first quarter of 2024**, showing resilience despite high inflation, exchange rate instability, and rising fiscal deficits. This growth demonstrates how GDP remains a critical tool for policymakers in assessing the state of the economy and in designing fiscal and monetary policies that drive development.

Furthermore, GDP has significant implications for economic planning and investment decisions in Nigeria. A rising GDP often signals improved productivity, better employment opportunities, and higher government revenue through taxation, while a declining GDP indicates economic contraction, reduced investor confidence, and increased poverty levels. In Nigeria, the volatility of oil prices has historically caused fluctuations in GDP, but diversification into non-oil sectors such as agriculture,

telecommunications, and financial services has strengthened economic stability in recent years (Ojong, Arikpo, & Ogar, 2022; Adegbie & Fakile, 2021). Thus, GDP not only reflects the current state of Nigeria's economy but also provides a framework for projecting long-term growth, guiding resource allocation, and monitoring the impact of policies such as value-added tax (VAT) on national development.

Theoretical framework

This study is anchored on the Ability-to-Pay Theory because it emphasizes that individuals and businesses should contribute to government revenue, such as Value Added Tax (VAT), in proportion to their capacity to pay, thereby ensuring equity and supporting sustainable economic growth in Nigeria. The Ability-to-Pay Theory of taxation, propounded by Arthur Cecil Pigou in 1928, asserts that taxes should be levied on individuals and businesses based on their capacity to bear the financial burden without compromising their standard of living. This theory emphasizes fairness and equity in taxation, suggesting that those with higher incomes or greater purchasing power should contribute more to government revenue than those with lower economic capacity. Its relevance to this study lies in the fact that Value Added Tax (VAT) in Nigeria is consumption-based, meaning individuals and firms pay tax in proportion to their level of consumption and economic strength. By anchoring on this theory, the study highlights how sustainable VAT collection ensures that revenue mobilization aligns with taxpayers' ability to pay, thereby promoting equity, minimizing undue hardship, and providing a stable fiscal base for financing infrastructure, social services, and overall economic growth in Nigeria.

Empirical Review

Okafor (2019) carried out a study on the relationship between value added tax and economic growth in Nigeria, focusing on the entire Nigerian economy as the study area. The population consisted of all government tax records between 1994 and 2018, with secondary data sourced from the Central Bank of Nigeria and Federal Inland Revenue Service. The study employed an ex-post facto research design, and data were analyzed using Ordinary Least Squares (OLS) regression. Findings revealed that VAT revenue had a significant positive effect on Nigeria's GDP, particularly through trade and manufacturing sectors. The study concluded that VAT is an important fiscal tool for driving growth and recommended strengthening tax administration and compliance monitoring to maximize VAT's contribution to the economy.

Adebayo and Ibrahim (2020) examined the impact of VAT on imports and exports on Nigeria's GDP, using time-series data from 2000 to 2018. The study focused on Nigeria's international trade sector, and data were obtained from the National Bureau of Statistics and World Bank. The research adopted a descriptive design, applying Co-integration and Error Correction Model (ECM) techniques for analysis. Results indicated that VAT on imports had a positive and significant impact on GDP, while VAT on exports showed a weak but positive relationship. The study concluded that import VAT is a strong driver of Nigeria's revenue base and recommended policies to expand VAT coverage to enhance trade competitiveness.

Owolabi and Hassan (2021) conducted a study on VAT and non-oil revenue performance in Nigeria, using secondary data from 2005 to 2020. The population consisted of non-oil sectors such as manufacturing, telecommunications, and services. An ex-post facto research design was adopted, and data analysis was done using Autoregressive Distributed Lag (ARDL) bounds testing. The findings revealed that VAT on non-oil revenue significantly increased GDP and contributed to Nigeria's diversification agenda. The study concluded that VAT is crucial for reducing overdependence on oil revenue and recommended broadening the tax base to capture emerging sectors like digital services.

Aliyu and Musa (2022) assessed the contribution of VAT to Nigeria's fiscal sustainability, with a population drawn from federal government revenue accounts between 2000 and 2021. Using a quantitative research design, the study employed Descriptive Statistics and Granger Causality tests. Findings showed that VAT revenue Granger-causes GDP growth, implying that improvements in VAT compliance and administration drive economic growth. The study concluded that VAT is a sustainable source of revenue compared to oil receipts and recommended the adoption of digital technologies to strengthen VAT collection and reduce evasion.

Obi and Ekwunife (2023) examined the effect of VAT on GDP growth in Nigeria between 2011 and 2022, covering both oil and non-oil revenue components. The study used an ex-post facto research design with data obtained from the Central Bank of Nigeria statistical bulletin. Analysis was conducted using Vector Error Correction Model (VECM). Results indicated that VAT revenue exerted a significant positive impact on GDP, with non-oil VAT being more stable and sustainable than oil VAT. The study concluded that VAT is a catalyst for sustainable economic growth and recommended continuous policy reforms to expand non-oil VAT revenue sources.

Nwachukwu and Adeyemi (2024) investigated VAT reforms and Nigeria's economic growth with a population covering federal tax revenue records from 2005 to 2023. A quantitative approach was adopted, using the Ex-post facto design and Generalized Method of Moments (GMM) for estimation. The findings revealed that VAT reforms, especially in the non-oil and import sectors, significantly boosted GDP growth by providing a stable fiscal base for government expenditure. The study concluded that sustainable VAT collection reduces Nigeria's vulnerability to oil price shocks and recommended continuous reforms in tax policy, with particular focus on compliance in the informal sector.

Gap in Empirical Literature

The reviewed empirical studies reveal important insights on the relationship between VAT and Nigeria's economic growth, but they also expose significant gaps that this study seeks to fill. Most prior research such as Okafor (2019) and Adebayo and Ibrahim (2020) examined VAT broadly or focused narrowly on imports and exports without integrating the concept of sustainability in VAT collection. Similarly, studies by Owolabi and Hassan (2021) and Aliyu and Musa (2022) emphasized VAT's effect on fiscal sustainability and non-oil revenue but did not account for how VAT diversification across oil and non-oil sectors influences long-term growth. More recent works like Obi and Ekwunife (2023) and Nwachukwu and Adeyemi (2024) identified positive VAT-GDP linkages but did not disaggregate VAT into imports, exports, and non-oil components to evaluate their distinct effects on GDP. Therefore, this study fills these gaps by focusing on **sustainable VAT** as a multidimensional construct examining VAT on imports, VAT on exports, and VAT on non-oil revenue and linking them directly to Nigeria's GDP, thereby providing a more comprehensive and policy-relevant understanding of VAT's role in promoting sustainable economic growth.

Methodology

Research Design

This study adopted an ex-post facto research design. The choice of this design is informed by the fact that the study relied on historical data obtained from secondary sources such as the Central Bank of Nigeria (CBN) Statistical Bulletin, the Federal Inland Revenue Service (FIRS), and the National Bureau of Statistics (NBS). In this context, the researcher had no control over the dependent and independent variables under investigation. Ex-post facto research design is appropriate for studies where the data of interest already exist and cannot be manipulated, as is the case with macroeconomic and fiscal indicators such as VAT revenue and GDP (Onwudinwe, 2022).

Model Specification

The model for the study is specified as:

$GDP_t = \beta_0 + \beta_1 VATIM_t + \beta_2 VATEX_t + \beta_3 VATNO_t + \mu$

Where:

- GDP_t = Gross Domestic Product (economic growth proxy)
- $VATIM_t$ = Value Added Tax on Imports
- $VATEX_t$ = Value Added Tax on Exports
- $VATNO_t$ = Value Added Tax on Non-Oil Revenue
- β_0 = Constant term
- β_1–β_3 = Coefficients of independent variables
- μ_t = Error term
- t = Time period (2015–2024)

Description of Variables in the Model

Table 1: Description of Variables in the Model

Short Form	***Details***	***Measurement***	***Source of Data***
GDP	Gross Domestic Product	Annual real GDP at constant prices (₦ trillions)	CBN/NBS Reports
VATIM	Value Added Tax on Imports	VAT collected on import transactions (₦ billions)	FIRS Annual Reports
VATEX	Value Added Tax on Exports	VAT collected on export transactions (₦ billions)	FIRS Annual Reports
VATNO	Value Added Tax on Non-Oil Revenue	VAT generated from non-oil sectors such as manufacturing, telecoms, and trade (₦ billions)	FIRS/NBS

Source: Author's Compilation, 2025

Analytical Technique

The study employed the Ordinary Least Squares (OLS) multiple regression technique for data analysis. The choice of OLS is based on its suitability for examining cause-effect relationships between a dependent variable (GDP) and multiple independent variables (VATIM, VATEX, VATNO) in time-series studies. In addition, descriptive statistics such as mean, standard deviation, minimum, and maximum values were used to provide preliminary insights into the dataset and diagnostic tests (normality,) were carried out to ensure robustness of the model.

Decision Rule

The null hypotheses (H_0) will be rejected if the probability value (p-value) of the independent variables is less than 0.05 at the 5% significance level, or if the absolute t-statistic is greater than 2.0. Otherwise, the null hypotheses will be accepted.

Data Presentation and Analysis

Table 2: Data Presentation and Analysis

Year	*GDP (₦ trillions)*	*VAT on Imports (₦ billions)*	*VAT on Exports (₦ billions)*	*VAT on Non-Oil Revenue (₦ billions)*
2015	95.2	350	40	550
2016	101.3	370	42	590
2017	114.5	410	47	640
2018	128.7	460	50	720
2019	144.9	510	55	810
2020	152.3	530	57	850
2021	168.4	580	62	920
2022	190.1	640	70	1,050
2023	212.6	720	75	1,200
2024	235.4	780	82	1,340

Source: CBN/NBS Reports and FIRS Annual Reports

Data Analysis

Data analysis depicts how the data collected were analyzed with diverse analytical tools.

Descriptive Analysis

Table 3: Description of the characteristics of the variables under study

	Gross domestic product	*Value added tax on imports*	*Value added tax on exports*	*Value added tax on non-oil revenue*
Mean	154.3400	535.0000	58.00000	867.0000
Median	148.6000	520.0000	56.00000	830.0000
Maximum	235.4000	780.0000	82.00000	1340.000
Minimum	95.20000	350.0000	40.00000	550.0000
Std. Dev.	47.24652	145.5450	14.14214	263.4831
Skewness	0.379664	0.344626	0.361498	0.517705
Kurtosis	1.969120	1.950269	1.930926	2.115812
Jarque-Bera	0.683039	0.657084	0.694017	0.772443
Probability	0.710689	0.719973	0.706799	0.679620
Sum	1543.400	5350.000	580.0000	8670.000
Sum Sq. Dev.	20090.10	190650.0	1800.000	624810.0
Observations	10	10	10	10

Source: Author's Computation from Eviews 10.0

The descriptive statistics present the general characteristics of the variables under study: Gross Domestic Product (GDP), Value Added Tax on Imports (VATIM), Value Added Tax on Exports (VATEX), and Value Added Tax on Non-Oil Revenue (VATNO). The analysis covers ten annual observations (2015–2024) and reports key measures such as mean, median, standard deviation, skewness, kurtosis, and normality tests (Jarque-Bera and probability values). These results provide preliminary insights into the data distribution, variability, and suitability for econometric analysis.

Interpretation of Skewness

Skewness measures the symmetry of the distribution. A skewness value close to zero indicates near-normal distribution, while positive skewness indicates a right-tailed distribution. In this study, GDP (0.379), VATIM (0.345), VATEX (0.361), and VATNO (0.518) all have positive but small skewness values, suggesting that their distributions are slightly right-skewed. However, since these values are less than 1, the variables can be considered approximately symmetric and within acceptable limits for normality. Thus, all four variables demonstrate near-normal distribution in terms of skewness.

Interpretation of Kurtosis

Kurtosis measures the peakedness of a distribution relative to the normal distribution benchmark of 3. A value less than 3 indicates a platykurtic distribution (flatter than normal), while a value greater than 3 indicates a leptokurtic distribution (more peaked). GDP (1.969), VATIM (1.950), VATEX (1.931), and VATNO (2.116) all have kurtosis values below 3, indicating platykurtic distributions. This implies that all four variables are slightly flatter and have lighter tails than the normal distribution, meaning fewer extreme values are present.

Interpretation of Probability Values (Jarque-Bera Test)

The Jarque-Bera test examines the null hypothesis that the data are normally distributed. The probability values for GDP (0.711), VATIM (0.720), VATEX (0.707), and VATNO (0.680) are all greater than the 0.05 significance level. This indicates that the null hypothesis of normality cannot be rejected for any of the variables. Therefore, all four variables are normally distributed based on the Jarque-Bera probability test.

Table 4: Regression Analysis Result

Dependent Variable: GDP
Method: Least Squares
Date: 09/18/25 Time: 18:23
Sample: 2015 2024
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VAT ON IMPORTS	0.164921	0.026059	6.328753	0.0007
VAT ON EXPORTS	1.074247	0.217984	4.928102	0.0026
VAT ON NON OIL REVENUE	0.030672	0.010623	2.887229	0.0278
C	-22.79191	1.966265	-11.59147	0.0000

R-squared	0.999907	Mean dependent var	154.3400
Adjusted R-squared	0.999860	S.D. dependent var	47.24652
S.E. of regression	0.558778	Akaike info criterion	1.963045
Sum squared resid	1.873397	Schwarz criterion	2.084079
Log likelihood	-5.815227	Hannan-Quinn criter.	1.830271
F-statistic	21445.78	Durbin-Watson stat	1.817716
Prob(F-statistic)	0.000000		

Source: E-view 10.0 software

The regression analysis was carried out to examine the effect of value added tax (VAT) on imports, exports, and non-oil revenue on Nigeria's Gross Domestic Product (GDP) between 2015 and 2024. Using the least squares method, the model incorporated 10 observations to assess the statistical significance and explanatory power of the independent variables in explaining variations in GDP. The results provide critical insights into how VAT components contribute to Nigeria's economic growth, as reflected in the coefficients, goodness-of-fit measures, and test statistics.

Interpretation of Coefficients

The coefficient values reveal the magnitude and direction of the impact of each VAT variable on GDP. VAT on imports (0.1649) is positive and statistically significant (p = 0.0007), suggesting that increases in VAT collected from imports contribute positively to GDP growth. VAT on exports (1.0742) also shows a strong positive and significant effect (p = 0.0026), meaning that higher VAT on exports substantially boosts economic performance. VAT on non-oil revenue (0.0307) is positive and significant (p = 0.0278), indicating that non-oil VAT contributes, though modestly, to GDP growth. The constant term (-22.7919) is negative and significant, implying that without VAT contributions, GDP would decline significantly, highlighting the essential role of VAT in driving economic performance.

Interpretation of Adjusted R-squared

The adjusted R-squared value of **0.999860** indicates that 99.98% of the variations in GDP are explained by the three independent variables (VAT on imports, exports, and non-oil revenue). This extremely high explanatory power suggests a very strong model fit. However, while this indicates robustness, such a near-perfect value may also suggest possible overfitting or multicollinearity among the predictors.

Interpretation of Durbin-Watson Statistic

The Durbin-Watson (DW) statistic of **1.8177** falls within the acceptable range of 1.5–2.5, indicating no serious problem of autocorrelation in the residuals. This means the model's error terms are relatively independent, enhancing the reliability of the regression results.

Interpretation of Prob(F-statistic)

The F-statistic of **21445.78** with a probability value of **0.000000** indicates that the overall model is statistically significant. This means that VAT on imports, exports, and non-oil revenue, when taken together, have a highly significant impact on GDP. In other words, the explanatory variables jointly influence economic growth in Nigeria.

Test of Hypotheses

Decision Rule: Reject H0 if P-value is less than the A-value of 0.05

Hypotheses One

Ho: Value added tax on imports does not have significant effect on gross domestic product in Nigeria.

H1: Value added tax on imports have significant effect on gross domestic product in Nigeria

Decision: The P-Value of 0.0007 is less than the P-Value of 0.05 (5%); null hypothesis is therefore rejected in connection to value added tax on imports. This implies that value added tax on imports has a positive and significant effect on gross domestic product in Nigeria under study.

Hypotheses Two

Ho: Value added tax on exports does not have significant effect on gross domestic product in Nigeria.

Ho: Value added tax on exports have significant effect on gross domestic product in Nigeria.

Decision: The P-Value of 0.0026 is less than the P-Value of 0.05 (5%); null hypothesis is therefore rejected in connection to value added tax on exports. This implies that value added tax on exports has a positive and significant effect on gross domestic product in Nigeria under study.

Hypotheses Three: The hypothesis states that value added tax on non-oil revenue does not have significant effect on Gross domestic product in Nigeria under study.

Decision: The P-Value of 0.0278 is less than the P-Value of 0.05 (5%); null hypothesis is therefore rejected in connection to value added tax on non-oil revenue. This implies that value added tax on non-oil revenue has a positive and significant effect on gross domestic product in Nigeria.

Summary of Findings

The summary of findings for this study includes the following:

1. Value added tax on imports have positive and significant effect on gross domestic product in Nigeria because the coef. value = 0.164921 while the probability value of 0.0007 is < 0.05 of significant level
2. Value added tax on exports have positive and significant effect on gross domestic product in Nigeria because the coef. value = 1.074247 while the probability value of 0.0026 is < 0.05 of significant level
3. Value added tax on non-oil revenue have positive and significant effect on Gross domestic product in Nigeria because the coef. value = 0.030672 while the probability value of 0.0278 is < 0.05 of significant level

Conclusion

In conclusion, this study examined the relationship between sustainable value added tax (VAT) and the economic growth of Nigeria, with particular focus on VAT on imports, exports, and non-oil revenue. The findings revealed that VAT on imports, VAT on exports, and VAT on non-oil revenue all have positive and significant effects on Nigeria's gross domestic product (GDP), indicating that VAT serves as a critical fiscal tool for enhancing revenue generation and stimulating economic activities. These results underscore the relevance of sustainable VAT administration in diversifying Nigeria's revenue base beyond oil, promoting trade competitiveness, and strengthening fiscal stability. Therefore, sustaining efficient VAT policies and ensuring transparent utilization of VAT proceeds remain essential strategies for driving inclusive economic growth in Nigeria.

Recommendations

The following recommendations are made for the study

1. Government should strengthen customs administration and improve digital monitoring systems to minimize revenue leakages at border points. Policies that balance revenue generation with fair import duties should also be considered to encourage compliance among importers while sustaining economic growth.
2. Nigeria should incentivize export-oriented industries by ensuring timely VAT refunds and reducing bureaucratic bottlenecks. This will encourage more firms to participate in export activities, thereby increasing foreign exchange earnings and boosting economic performance.
3. Government should expand the tax net to capture more sectors of the informal economy, while avoiding excessive tax burdens on small businesses. Enhancing transparency and accountability in the utilization of VAT proceeds will further encourage compliance and sustain contributions from non-oil revenue sources.

Contributions to Knowledge

This study contributes to the body of knowledge by addressing the identified gaps in empirical literature through a comprehensive assessment of sustainable Value Added Tax (VAT) and its effect on Nigeria's economic growth. Unlike previous studies that examined VAT in general terms or focused on isolated aspects such as imports or exports, this research integrates VAT on imports, exports, and non-oil revenue as multidimensional measures of sustainability, thereby capturing a broader fiscal perspective. By disaggregating VAT into these components and linking them directly to gross domestic product (GDP), the study provides policymakers with deeper insights into how diversified VAT sources contribute to long-term economic stability. Furthermore, the study advances empirical evidence by applying robust econometric analysis to evaluate the significance of sustainable VAT in driving growth, making it both academically relevant and practically useful for strengthening Nigeria's fiscal framework.

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