An Analysis of the Impact of Indirect Taxes on Economic Growth in Nigeria (2003-2023)

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Abstract: The study is on the impact of indirect taxes on economic growth in Nigeria from 2003 to 2023. Specifically, the objectives were to: determine the impact of excise duties, examine the impact of stamp duties, and ascertain the impact of customs duties on gross domestic product in Nigeria. The study adopted a quantitative research design to investigate the impacts of various taxes on gross domestic product (GDP) in Nigeria. The study utilizes secondary data obtained from reputable sources to ensure the accuracy and reliability of the analysis. The sources of data include the Central Bank of Nigeria (CBN) Statistical Bulletins, the National Bureau of Statistics (NBS), and the Federal Inland Revenue Service (FIRS) website. The dataset spans a period of 21 years, from 2003 to 2023, capturing significant trends and patterns in Nigeria's fiscal policies and economic performance over time. The study employed the Autoregressive Distributed Lag (ARDL) bounds testing approach to analyze the relationship between tax revenue components and gross domestic product (GDP) in Nigeria. All analyses were performed using statistical software such as Eviews 13.0. The results of the study showed that exercise duties does not have significant impact on gross domestic product in Nigeria, with a negligible negative coefficient of -0.001939 and an insignificant p-value of 0.85441, suggesting minimal impact, stamp duties had significant positive impact on gross domestic product in Nigeria, with a positive coefficient of 0.054045 and a significant p-value of 0.0483, suggesting a meaningful impact on economic growth, and that custom duties do not have significant impact on gross domestic product in Nigeria, as the coefficient is -0.000634 with a high p-value of 0.9487, indicating no significant effect. In conclusion, a balanced and evidence-driven tax policy framework is essential to optimise revenue mobilisation and promote inclusive economic growth. Indirect taxes especially stamp duties should be positioned as central instruments of fiscal policy in Nigeria while addressing inefficiencies in excise and customs duties to minimise distortions in trade and production. It was recommended among other things that government should reassess excise duty rates and coverage, particularly on locally manufactured goods, to prevent excessive burden on producers.

Keywords: Tax,Indirect taxes, Economic growth, Excise duties, Stamp duties, Customs duties, Gross domestic product.

Introduction

Taxation is a fundamental instrument through which governments mobilize revenue to finance public expenditure, promote economic stability, and stimulate economic growth. In developing economies such as Nigeria, taxation plays an even more critical role because government revenue is required to support infrastructure development, social services, and economic diversification. Among the different forms of taxation, indirect taxes have become particularly important due to their broad base and relative ease of collection compared with direct taxes.Indirect taxes are levied on goods and services rather than directly on income or profits. These taxes are usually passed on to consumers through market prices and include instruments such as value-added tax (VAT), customs duties, excise duties, and stamp duties. Over the years, the Nigerian government has increasingly relied on these taxes as a means of strengthening revenue generation and reducing dependence on oil revenue. Recent reforms, including the introduction of digital tax administration platforms and electronic payment systems, have further improved the efficiency of tax collection in the country (FIRS, 2023).

Despite the growing importance of indirect taxes in Nigeria's fiscal framework, the relationship between indirect taxation and economic growth remains widely debated. Some scholars argue that indirect taxes contribute positively to economic growth by generating government revenue needed for infrastructure development and the provision of public goods. For example, Ogbonna and Appah (2012) maintain that revenue derived from indirect taxes can support government spending that stimulates productive activities and enhances economic performance. In this regard, indirect taxation serves as an important fiscal tool for financing development programmes and improving macroeconomic stability.Conversely, other studies suggest that excessive reliance on indirect taxes may have adverse implications for economic growth. Since these taxes are imposed on consumption, they may increase the cost of goods and services and reduce the purchasing power of households. Okoli and Afolabi (2019) argue that the regressive nature of indirect taxes can discourage consumption and reduce aggregate demand, thereby potentially slowing economic growth. This dual perspective highlights the need for careful evaluation of the impact of individual indirect tax components on economic performance.

Among the various forms of indirect taxes, excise duties have been widely used as a revenue-generating tool and as a mechanism for regulating the consumption of certain goods. Research by Oladipo and Adediran (2019) suggests that excise taxes can generate substantial government revenue without significantly distorting production when properly implemented. However, excessive excise taxation may reduce output in affected sectors and potentially lead to job losses, particularly in industries such as manufacturing where production costs are sensitive to tax changes.Similarly, customs duties play an important role in Nigeria's fiscal and trade policies. These duties are imposed on imported goods and are often used to protect domestic industries while generating revenue for the government. According to Ekeocha et al. (2012), the strategic

application of customs duties can stimulate local production and contribute to economic growth by encouraging domestic industries to compete with imported products. Nevertheless, the effectiveness of customs duties is sometimes constrained by challenges such as smuggling and weak border enforcement, which may reduce the expected revenue and economic benefits.

Another component of indirect taxation that has gained increasing attention in Nigeria is stamp duty, particularly with the expansion of electronic financial transactions. Policies introduced by monetary authorities regarding stamp duty charges on digital transfers have significantly increased government revenue from this source. However, debates continue regarding the broader economic implications of such policies, especially in relation to financial inclusion and consumer welfare (CBN, 2020). Understanding the implications of these indirect tax instruments is therefore essential for developing effective fiscal policies that support sustainable economic growth.

Statement of Problem

Nigeria has increasingly relied on taxation as a means of generating revenue to support economic development, particularly in response to the volatility of oil revenues. In recent years, the government has expanded the use of indirect taxes, including excise duties, customs duties, and stamp duties, as part of broader fiscal reforms aimed at improving revenue mobilization and strengthening public finances. Despite these efforts, Nigeria continues to face persistent challenges in achieving sustainable economic growth, raising concerns about the effectiveness of existing tax policies.

While indirect taxes constitute an important source of government revenue, their impact on economic growth remains uncertain. Some studies suggest that indirect taxes can promote growth by providing the government with the resources required for infrastructure development and public service delivery. However, other scholars argue that excessive reliance on consumption-based taxation may increase production costs, reduce purchasing power, and discourage economic activities. These conflicting perspectives create uncertainty regarding the overall contribution of indirect taxes to Nigeria's economic performance.

Furthermore, many empirical studies on taxation in Nigeria tend to focus primarily on value-added tax (VAT), with limited attention given to other important components of indirect taxation such as excise duties, customs duties, and stamp duties. This narrow focus creates a gap in the literature regarding the individual effects of these tax instruments on economic growth. In addition, changes in Nigeria's fiscal and tax administration framework over the past two decades make it necessary to reassess the relationship between indirect taxes and economic growth using more recent data.

Objectives of the Study

The broad objective of this study is to determine the impact of indirect taxes on economic growth in Nigeria from 2003 to 2023, while the specific objectives are to;

i. Determine the impact of excise duties on gross domestic product in Nigeria.
ii. Examine the impact of stamp duties on gross domestic product in Nigeria.
iii. Ascertain the impact of customs duties on gross domestic product in Nigeria.

1.4 Research Questions

i. To what extent is the impact of excise duties on gross domestic product in Nigeria?
ii. Does stamp duties have significant impact on gross domestic product in Nigeria?
iii. What is the impact of custom duties on gross domestic product in Nigeria?

1.5 Research Hypotheses

Ho: Exercise duties does not have significant impact on gross domestic product in Nigeria.
Ho: Stamp duties does not have significant impact on gross domestic product in Nigeria.
Ho: Custom duties does not have significant impact on gross domestic product in Nigeria.

Literature Review

Conceptual Review

Taxation

Taxation is a fundamental instrument of fiscal policy used by governments to mobilise revenue for financing public expenditure and promoting economic development. It represents a compulsory financial levy imposed on individuals, businesses, or institutions without a direct quid-pro-quo benefit to the taxpayer (Musgrave and Musgrave, 1989). Through taxation, governments obtain the resources required to provide infrastructure, healthcare, education, and other public services necessary for economic development.Historically, taxation has also been recognised as a mechanism for influencing economic behaviour and redistributing income within society. Adam Smith's classical principles of taxationequity, certainty, convenience, and economyremain central to modern tax systems and continue to guide the design of effective fiscal policies (Smith, 1776). These principles emphasise fairness in tax burden distribution, transparency in tax obligations, ease of payment, and efficiency in administration.

In developing economies, taxation plays an even more significant role because it helps governments reduce dependence on volatile revenue sources such as natural resources and foreign aid. Ariyo and Raheem (1991) note that an efficient tax system strengthens fiscal sustainability and enhances government capacity to finance development projects. Consequently, taxation is widely regarded as an essential driver of macroeconomic stability and economic growth.

Indirect Taxes

Indirect taxes refer to taxes imposed on goods and services rather than directly on income or wealth. These taxes are collected by intermediaries such as producers or retailers but are ultimately borne by consumers through higher prices of goods and services (Musgrave and Musgrave, 1989). Examples include excise duties, customs duties, stamp duties, and value-added tax.Indirect taxation has become increasingly important in developing countries where large informal sectors make the administration of direct taxes difficult. According to Bhatia (2021), indirect taxes provide governments with a relatively efficient and reliable means of generating revenue because they are easier to administer and can reach a wider tax base through consumption activities.

However, indirect taxes are often criticised for their regressive nature, as they tend to impose a higher relative burden on low-income households whose consumption accounts for a larger share of their income. Despite this limitation, many governments rely heavily on indirect taxation due to its administrative simplicity and capacity to generate steady revenue (Okafor, 2012).In Nigeria, the importance of indirect taxation has increased significantly as the government seeks to diversify revenue sources away from oil dependence. Taxes such as excise duties, customs duties, and stamp duties have therefore become critical components of fiscal policy aimed at improving domestic revenue mobilisation and supporting economic development.

Excise Duties

Excise duties are selective taxes imposed on the production or consumption of specific goods, particularly those considered luxury or socially harmful products such as alcohol, tobacco, and petroleum products. These taxes are typically charged at the point of manufacture or distribution and are included in the final price paid by consumers (Musgrave & Musgrave, 1989).Excise duties serve both fiscal and regulatory purposes. On the one hand, they provide governments with an important source of revenue. On the other hand, they are often used to discourage excessive consumption of goods that may generate negative social or health consequences. Oladipo and Adediran (2019) argue that excise duties can raise government revenue without significantly distorting production when properly implemented.

In Nigeria, excise duties have been periodically adjusted as part of broader fiscal reforms aimed at improving revenue generation and achieving public health objectives. However, excessive taxation on certain consumer goods may increase production costs and reduce output in affected sectors, particularly manufacturing industries (Oladipo andAdediran, 2019). Consequently, the relationship between excise duties and economic growth remains a subject of empirical investigation.

Stamp Duties

Stamp duties are taxes imposed on legal, commercial, and financial documents such as contracts, property transfers, and financial transactions. Traditionally, these taxes were validated through the affixation of physical stamps on official documents, although modern systems increasingly rely on electronic verification.Stamp duties play an important role in revenue generation and the formalisation of economic transactions. By requiring official documentation for legal agreements, they promote transparency and accountability in financial and commercial activities. The Central Bank of Nigeria (CBN, 2020) has also extended stamp duty charges to certain electronic transactions, which has significantly increased government revenue from this source.Despite their growing relevance, the economic impact of stamp duties remains relatively underexplored compared to other forms of taxation. While they contribute to government revenue, concerns have been raised regarding their potential effects on financial inclusion and the cost of conducting transactions in the formal economy. Understanding how stamp duties influence economic growth is therefore important for effective fiscal policy design.

Customs Duties

Customs duties are taxes imposed on goods imported into a country. These duties serve both revenue and trade policy objectives, including the protection of domestic industries, regulation of international trade, and generation of government income.In Nigeria, customs duties have historically been an important component of the tax system, particularly before the dominance of oil revenues. According to Ekeocha, Malizu, and Onyeka (2012), customs duties can stimulate domestic production by protecting local industries from foreign competition. By increasing the cost of imported goods, these tariffs encourage consumers to patronise locally produced alternatives, thereby supporting domestic economic activities.However, the effectiveness of customs duties in achieving these objectives is often limited by issues such as smuggling, weak border enforcement, and trade liberalisation policies. These challenges may reduce the revenue potential of customs duties and weaken their ability to promote domestic industrial growth. As a result, assessing their overall impact on economic growth remains an important area of empirical research.

Economic Growth

Economic growth refers to the sustained increase in the productive capacity of an economy over time, leading to a rise in the output of goods and services. It is commonly used as a key indicator of a nation's economic performance and development. Economic growth reflects improvements in productivity, technological advancement, capital accumulation, and the effective utilisation of labour resources.From a macroeconomic perspective, economic growth enables countries to improve living standards, reduce poverty, and finance essential public services. Keynes (1936)

emphasised that fiscal policies, including taxation, play an important role in influencing economic activity and aggregate demand, thereby affecting economic growth. Through taxation, governments can mobilise resources required for infrastructure development, education, healthcare, and other sectors that support economic expansion.

In developing countries such as Nigeria, economic growth is particularly important because it helps address structural challenges such as unemployment, poverty, and inadequate infrastructure. However, the relationship between taxation and economic growth remains a subject of debate. While taxation provides the revenue necessary for development expenditure, excessive or poorly structured taxes may reduce investment and consumption, thereby slowing economic activity (Okoli and Afolabi, 2019). Consequently, understanding how different forms of taxation influence economic growth is crucial for designing effective fiscal policies.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is the most widely used indicator for measuring economic growth. It represents the total monetary value of all final goods and services produced within a country's borders during a specific period, usually annually or quarterly. GDP reflects the overall level of economic activity in a country and provides a comprehensive measure of national output.GDP can be measured using three main approaches: the production approach, the income approach, and the expenditure approach. Regardless of the method used, GDP serves as an important macroeconomic indicator for assessing the performance and growth trajectory of an economy. An increase in real GDP indicates expansion in economic activities, while a decline suggests economic contraction.

In empirical economic studies, GDP is frequently used as a proxy for economic growth because it captures the aggregate value of production and income generated within the economy. According to the National Bureau of Statistics (NBS, 2022), Nigeria's GDP reflects the contributions of various sectors such as agriculture, manufacturing, trade, and services. Changes in fiscal policies, including taxation, can influence these sectors by affecting investment decisions, production costs, and consumer spending.In the context of this study, GDP is used as the primary indicator of economic growth in Nigeria. By analysing how excise duties, stamp duties, and customs duties influence GDP, the study provides insights into the extent to which these indirect taxes contribute to or hinder economic expansion between 2003 and 2023.

Theoretical Framework

This study on the impact of indirect taxes on economic growth in Nigeria is anchored on the Theory of Optimal Taxation, as it provides the most appropriate lens for evaluating the relationship between indirect taxation and Gross Domestic Product (GDP). The Theory of Optimal Taxation, advanced in modern public finance literature

(Mirrlees, 1971), posits that governments should design tax systems that balance revenue generation with minimal distortion to economic efficiency and equity. It emphasizes structuring taxes in a way that supports economic growth, encourages compliance, and distributes the tax burden fairly across society. The theory also provides a framework for analyzing how different categories of taxes such as excise duties, stamp duties, customs duties, and value-added tax (VAT) influence production, consumption, and overall economic activity.

The choice of this theory over the Social Contract Theory and the Expediency Theory is deliberate. While the Social Contract Theory underscores fairness and accountability in governance, it does not sufficiently explain the technical efficiency of tax instruments in relation to growth. Similarly, the Expediency Theory justifies taxation purely on practical needs of revenue generation, overlooking its growth and welfare implications. In contrast, the Theory of Optimal Taxation integrates both efficiency and equity considerations, making it directly relevant to the study objectives, which seek to assess the impact of various forms of indirect taxes (excise, stamp, customs, and VAT) on Nigeria's GDP.Therefore, by anchoring this study on the Theory of Optimal Taxation, the research not only examines the fiscal significance of indirect taxes but also evaluates their developmental implications within the Nigerian context, offering insights into how taxation can be structured to support sustainable economic growth.

Empirical Review

Empirical studies on the relationship between taxation and economic growth have produced mixed results, particularly in developing economies such as Nigeria. Ogbonna and Appah(2012) examined the impact of tax reforms on economic growth in Nigeria using time-series data. Their findings indicated that taxation plays a significant role in promoting economic growth by providing government with the financial resources necessary for infrastructure development and public service deliverySimilarly, Okafor (2012) investigated the relationship between tax revenue and economic development in Nigeria and found that tax revenue contributes positively to economic growth when efficiently administered. The study emphasised the need for improved tax administration and compliance to enhance the effectiveness of the tax system.

However, other studies present contrasting findings. Okoli and Afolabi (2019) analysed the effect of indirect taxes on economic growth in Nigeria and reported that excessive reliance on consumption-based taxes may negatively affect economic activities by reducing consumer purchasing power and aggregate demand.With respect to excise duties specifically, Oladipo and Adediran (2019) found that excise taxes can provide significant government revenue without substantially distorting production if implemented appropriately. However, they cautioned that excessive excise taxation could reduce output and employment in affected industries.Research on customs duties also highlights mixed outcomes. Ekeocha et al. (2012) suggest that customs duties can promote local industrial development by protecting domestic producers from foreign

competition. Nevertheless, the effectiveness of such policies often depends on the efficiency of customs administration and the ability to curb smuggling.

Methodology

Research Design

This study adopts a quantitative research design to examine the impact of indirect taxes on economic growth in Nigeria. The analysis employs the Autoregressive Distributed Lag (ARDL) modelling approach, which is suitable for examining both short-run and long-run relationships among variables within a single-equation framework. The ARDL bounds testing technique is particularly appropriate when variables are integrated at different orders, specifically I(0) and I(1), making it well suited for macroeconomic time-series analysis.

Nature and Sources of Data

The study utilises secondary time-series data covering the period 2003–2023. The data were obtained from credible and authoritative sources including:

Central Bank of Nigeria (CBN) Statistical Bulletin

National Bureau of Statistics (NBS)

Federal Inland Revenue Service (FIRS) publications and official website

These institutions provide reliable information on macroeconomic indicators and tax revenue components required for the analysis. The data set includes information on gross domestic product (GDP) and selected indirect tax variables such as excise duties, stamp duties, and customs duties. The twenty-one-year period captures important fiscal and economic developments in Nigeria, enabling a comprehensive analysis of the relationship between tax revenue and economic growth.

Model Specification

The study utilizes the ARDL model to estimate the impact of the various tax components on RGDP. The general ARDL model is specified as;

$$\begin{aligned}\Delta RGDP_t = \alpha &+ \sum_{i=1}^{p} \beta_i \Delta RGDP_{t-1} \\ &+ \sum_{j=0}^{q1} \gamma_j \Delta ED_{t-j} \\ &+ \sum_{k=0}^{q2} \delta_k \Delta SD_{t-k} + \sum_{l=0}^{q3} \phi_l \Delta CD_{t-1} + \sum_{m=0}^{q4} \Psi_m \Delta VAT_{t-m} + \sum_{n=0}^{q5} w_n \Delta CGT_{t-n} \\ &+ \lambda_1 RGDP_{t-1} + \lambda_2 ED_{t-1} + \lambda_3 SD_{t-1} + \lambda_4 CD_{t-1} + \lambda_5 VAT_{t-1} + \lambda_6 CGT_{t-1} \\ &+ \varepsilon_t\end{aligned}$$

Where;

Δ is the first difference operator

α intercept
β, γ, δ, $\boldsymbol{\phi}$, $\boldsymbol{\Psi}$ is the short run coefficients
p, q_1, q_2, q_3, q_4, $q_5$is the optimal lag length for each variable
Dependent Variable: Gross Domestic Product (GDP).
In the ARDL framework, the model allows the estimation of both short-run dynamics and long-run relationships between GDP and the selected tax variables.

Estimation Techniques

The estimation procedure follows several steps consistent with the ARDL methodology.

Stationarity Test

The Augmented Dickey-Fuller (ADF) test and Phillips-Perron (PP) test are used to determine the stationarity properties of the variables. This ensures that none of the variables is integrated of order two, I(2), which would violate the assumptions of the ARDL model.

Optimal Lag Selection

The optimal lag length for the ARDL model is determined using model selection criteria such as the Akaike Information Criterion (AIC) and Schwarz Bayesian Criterion (SBC). This ensures that the model adequately captures the dynamic relationships between the variables without overfitting.

ARDL Bounds Test for Cointegration

The ARDL bounds testing approach is employed to determine whether a long-run relationship exists between GDP and the indirect tax variables. The test compares the calculated F-statistic with the critical lower and upper bound values to determine the presence of cointegration.

Long-Run and Short-Run Estimation

If cointegration is established, the study estimates the long-run coefficients to determine the persistent impact of excise duties, stamp duties, and customs duties on economic growth. The short-run dynamics are captured using an Error Correction Model (ECM), which measures the speed at which deviations from the long-run equilibrium are corrected following short-run shocks.

Diagnostic Tests

To ensure the reliability and robustness of the ARDL model, several diagnostic tests are conducted, including:
Serial Correlation Test (Breusch-Godfrey LM Test)
Heteroskedasticity Test (Breusch-Pagan-Godfrey Test)
Normality Test (Jarque-Bera Test)
Model Stability Tests (CUSUM and CUSUMSQ)
These tests confirm that the estimated model satisfies the underlying econometric assumptions and that the results are statistically reliable.

Results and Discussion

Table 4.3: Descriptive Summary of the study variable

	RDGP	Excise Duties	Stamp Duties	Custom Duties
Mean	2.535062	2.814062	0.670257	2.711441
Median	2.607100	2.920900	0.707600	2.902933
Maximum	2.759100	3.204100	0.897600	3.296724
Minimum	2.020100	2.365900	0.380200	1.975202
Std.Dev	0.194710	0.300366	0.1572577	0.430445
Skewness	-1.374377	-0.3515517	-0.597321	-0.237239
Kurtosis	4.017280	1.650073	2.395581	1.578489
Jarque-Bera	7.516691	2.026988	1.568431	1.965097
Probability	0.023322	0.362949	0.456478	0.374356

Source: Eviews 12.0

Table 2 presents the descriptive statistics of the study variables, providing insights into the distribution and variability of real GDP and the different sources of indirect taxes in Nigeria. The mean values indicate that excise duties contribute the highest revenue, followed by customs duties, while stamp duties generate relatively lower amounts over the period 2003–2023. The standard deviations suggest moderate variability in RGDP and excise duties, whereas customs duties exhibit significant fluctuations, reflecting changes in trade activities and policy interventions. Skewness results show that most variables are slightly left-skewed, indicating occasional low-value occurrences. Kurtosis values reveal that RGDP have heavy-tailed distributions (leptokurtic), while excise duties, stamp duties, and customs duties exhibit flatter distributions (platykurtic), implying differences in the stability of tax revenue collections.

The Jarque-Bera test results suggest that excise duties, stamp duties, and customs duties follow a normal distribution, whereas RGDP deviate significantly from normality due to extreme values. These findings imply that while some indirect tax sources remain relatively stable over time, and overall economic activity show unpredictability, which could affect government revenue planning and the broader economic growth trajectory in Nigeria.

Table 4.4: ADF Unit Root Test

Model	Constant	Constant and Trend	No Constant and No Trend
RGDP	I (0) [-4.078946] *	I (1) [-3.696632] *	I (1) [-2.601539] *
Excise Duties	I (1) [-3.308206] *	I (1) [-3.520297] *	I (1) [-3.165275] *
Stamp Duties	I (1) [-3.970195] *	I (1) [-4.251198] *	I (1) [-3.768291] *
Custom Duties	I (1) [-6.634617] *	I (1) [-6.858538] *	I (1) [-6.274269] *

The Augmented Dickey-Fuller (ADF) unit root test results as shown in Table 2 indicate the stationarity levels of the study variables under different model specifications (constant, constant & trend, and no constant & no trend). Real GDP (RGDP) is found to be stationary at level I(0) when a constant is included, but becomes stationary at first difference I(1) under the constant & trend and no constant/no trend specifications, suggesting that RGDP is generally stable but may exhibit trends over time depending on the model used. Excise duties are stationary at first difference I(1) across all specifications, indicating that they require differencing to achieve stability. Stamp duties are stationary at first difference I(1) in all specifications, implying the need for differencing to stabilize the series. Custom duties are also stationary at first difference I(1) across all model specifications, showing that differencing is necessary for consistency.

Generally, the findings suggest that most variables are integrated of order one, I(1), except RGDP (stationary at level under some specifications). These results justify the use of the Autoregressive Distributed Lag (ARDL) approach, which can accommodate variables with mixed orders of integration while analyzing their long-run and short-run effects on economic growth in Nigeria.

Table 4.5: Correlations of the study variables

	RGDP	Stamp Duties	Value Added Tax	Excise Duties	Custom Duties
RGDP	1				
Stamp Duties	0.9249	1			
Value Added Tax	0.9991	0.9163	1		
Excise Duties	0.8312	0.8217	0.8198	1	
Custom Duties	0.8483	0.8114	0.8358	0.8951	1

Table 4 is the correlation analysis which reveals varying relationships between Real Gross Domestic Product (RGDP) and different tax revenue sources. Stamp duties (0.9249) show a strong positive correlation with RGDP, indicating that economic

growth tends to move closely with stamp duty revenue. Excise duties (0.8312) and customs duties (0.8483) have strong positive correlations with RGDP, indicating that these tax revenues are also responsive to changes in economic activity.

These results imply that all the indirect tax sources included in the study are positively associated with real GDP. The strong association between RGDP and customs and excise duties suggesting that increased production, trade activity, and imports significantly drive these tax revenues, reflecting their sensitivity to economic expansion in Nigeria.

4.2 Bound Test

The Bound Test is a statistical technique used in the context of the Autoregressive Distributed Lag (ARDL) model to assess the existence of a long-run relationship between variables in a time series dataset**.** The Bound Test, developed by Pesaran et al. (2001), is specifically designed to test for cointegration in the context of ARDL models. Cointegration implies that a linear combination of non-stationary variables can be stationary, indicating a long-run equilibrium relationship among the variables.

Table 4.6: ARDL Bound Test Result

Test Statistic	**Value**	
F-Statistic	46.05609	
t- Statistic	-4.270623	
Level of significance	**I (0) =Lower bound**	**I (1) = Upper bound**
10%	2.45	3.52
5%	2.86	4.01

The ARDL Bound Test results in Table 5 indicate a significant F-statistic of 46.05609, which is well above the upper bound critical value of 4.01 at the 5% significance level. This comparison leads us to reject the null hypothesis of no cointegration, suggesting that the variables in the model have a long-run relationship. The F-statistic being significantly higher than the lower bound of 2.86 reinforces the conclusion that a stable equilibrium exists among the variables.

The presence of cointegration implies that real GDP and the indirect tax variables (excise duties, stamp duties, and customs duties move together over the long term, allowing for further analysis to estimate their long-run coefficients. Understanding this relationship is crucial for interpreting the dynamics between these tax sources and economic growth in Nigeria, providing valuable insights into the underlying economic interactions represented in the data.

4.3 ARDL Regression

The Autoregressive Distributed Lag (ARDL) model is a statistical approach used to analyze the relationship between variables in both the short run and long run. It is particularly useful when variables have different levels of stationarity, meaning some may be stationary at level I (0) while others may be stationary at first difference I (1). Unlike traditional cointegration methods that require all variables to be at the same order of integration, ARDL regression can handle a mix of I (0) and I (1) variables, making it a flexible and widely applicable tool in time series analysis. Hence the prior test already conducted suggest we use the ARDL Regression for this study.

Table 4.7: ARDL Regression Results

	Coefficient	St. Error	t-Statistic	Prob
Log (Custom Duties)	-0.000634	0.009656	-0.065625	0.9487
Log (Stamp Duties)	0.054045	0.024804	2.178911	0.0483
Log (Excise Duties)	-0.001939	0.010332	-0.187621	0.85441
COINTEQ	-0.324089	0.018676	-17.35327	0.0000
R-Square	0.9995			
F-Statistic	18653.54			
Prob (F-Statistic)	0.0000			

Table 6 is the ARDL regression results, which indicate the long-run effects of various tax components on real Gross Domestic Product (GDP). Custom duties have a coefficient of -0.000634, suggesting a negligible negative relationship with GDP, where a one-unit increase in custom duties is associated with an approximate decrease of 0.0006 in GDP. This effect is not statistically significant, with a p-value of 0.9487, indicating that custom duties do not have a meaningful impact on RGDP in this model.

Furthermore, stamp duties exhibit a positive coefficient of 0.054045, which is statistically significant (p-value of 0.0483), suggesting that increases in stamp duties contribute modestly to economic growth. Conversely, excise duties have a negative coefficient of -0.001939, with a high p-value of 0.85441, indicating that they do not significantly affect RGDP.

The model's goodness-of-fit is reflected in an R-squared value of 0.9995, meaning that approximately 99.95% of the variability in real GDP is explained by the independent variables. The COINTEQ value of -0.324089 and its p-value of 0.0000 indicate a strong long-run relationship among the variables, confirming stability in the model. Additionally, the F-statistic of 18653.54 with a p-value of 0.0000 shows that the overall model is statistically significant, highlighting the collective impact of the tax variables on real GDP.

4.4 Diagnostic Test for ARDL Regression

Diagnostic tests for ARDL regression are essential for validating the model's assumptions and ensuring the reliability of the results. For this study we are going to check for autocorrelation, heteroscedasticity and the stability using the appropriate and recommended test as shown below.

Table 4.8: Diagnostic Test for ARDL

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.599317	Prob. F (2,11)	0.5662
Obs*R-squared	1.965194	Prob. Chi-Square (2)	0.3743

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	1.704621	Prob. F (6, 13)	0.1975
Obs*R-squared	8.806481	Prob. Chi-Square (6)	0.1848
Scaled explained SS	3.935758	Prob. Chi-Square (6)	0.6854

Table 7 shows the Breusch-Godfrey Serial Correlation LM test, and the results indicate no significant presence of autocorrelation in the model's residuals. The F-statistic of 0.599317 with a p-value of 0.5662, along with the Obs*R-squared value of 1.965194 and its corresponding p-value of 0.3743, suggest that the null hypothesis of no serial correlation cannot be rejected. Since the p-values are well above the conventional significance levels (0.05 or 0.01), the residuals appear to be independently distributed, which supports the validity of the regression model's assumptions.

Similarly, in Table 7, the Breusch-Pagan-Godfrey test results show no evidence of heteroskedasticity in the residuals. The F-statistic of 1.704621 with a p-value of 0.1975, along with the Obs*R-squared value of 8.806481 and its corresponding p-value of 0.1848, indicate that the null hypothesis of homoskedasticity cannot be rejected. Since the p-values are not statistically significant, the model's residuals exhibit constant variance, reinforcing the model's reliability for inference.

These results suggest that the ARDL regression model is well-specified, with no major issues related to autocorrelation or heteroskedasticity, confirming the robustness of the estimated effects of tax components on real GDP.

1 Summary of Findings

Based on the analysis and results, the following findings were made;

i. Exercise duties does not have significant impact on gross domestic product in Nigeria, with a negligible negative coefficient of -0.001939 and an insignificant p-value of 0.85441, suggesting minimal impact.
ii. Stamp duties had significant positive impact on gross domestic product in Nigeria, with a positive coefficient of 0.054045 and a significant p-value of 0.0483, suggesting a meaningful impact on economic growth.
iii. Custom duties do not have significant impact on gross domestic product in Nigeria, as the coefficient is -0.000634 with a high p-value of 0.9487, indicating no significant effect.

5.2 Conclusion

This study examined the impact of indirect taxesexcise duties, stamp duties, and customs duties, on Nigeria's economic growth from 2003 to 2023 using the ARDL model. The findings reveal a differentiated effect of these tax components on gross domestic product (GDP). While excise duties and customs duties exhibited negligible and statistically insignificant effects, stamp duties displayed significant positive impacts on GDP. Among all the tax variables. The strong long-run relationship among the variables, confirmed by the cointegration results, indicates that indirect taxes and GDP move together over time, allowing fiscal authorities to rely on these tax heads for sustained revenue mobilisation.

The findings highlight that tax policy effectiveness depends not only on revenue mobilisation but also on its capacity to stimulate productive activities without discouraging trade or investment. In particular, the insignificance of excise and customs duties suggests that excessive trade taxation may have dampened economic activities, while the robust positive effect of VAT points to its efficiency in supporting growth. Therefore, reforms aimed at improving the structure, administration, and compliance of indirect taxes, especially VAT and stamp duties, could strengthen fiscal sustainability and economic development. In conclusion, a balanced and evidence-driven tax policy framework is essential to optimise revenue mobilisation and promote inclusive economic growth. Indirect taxesespecially VAT and stamp dutiesshould be positioned as central instruments of fiscal policy in Nigeria while addressing inefficiencies in excise and customs duties to minimise distortions in trade and production.

5.3 Recommendations

Based on the analysis and findings of the study, the following recommendations were made;

i. Government should reassess excise duty rates and coverage, particularly on locally manufactured goods, to prevent excessive burden on producers. Instead of frequent rate hikes, emphasis should be placed on broadening the excise base to emerging industries such as beverages, telecommunications, and luxury goods, while offering

incentives for productive sectors. This would enhance domestic competitiveness and encourage industrial expansion.

ii. The Federal Inland Revenue Service (FIRS) should consolidate digital payment systems and expand stamp duty coverage across financial technology (fintech), e-commerce, and real estate sectors. In addition, improved inter-agency coordination between the FIRS, Central Bank of Nigeria (CBN), and Deposit Money Banks will help maximize stamp duty revenue and ensure transparency in remittances.

iii. The Nigeria Customs Service should streamline import and export procedures, reduce tariff complexity and corruption at entry points, and promote automated customs operations to enhance trade efficiency. Policies should shift from revenue extraction toward facilitating trade and industrial growth, ensuring customs policies complement rather than constrain economic activity.

iv. Government should maintain the current VAT framework but focus on widening compliance, especially in the informal sector and digital economy. Strengthening VAT automation, enhancing taxpayer education, and curbing evasion through real-time monitoring can further boost VAT efficiency. Moreover, part of VAT revenue should be strategically reinvested in infrastructure and SMEs to sustain growth momentum.

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