

# Non-oil Tax Revenue and Economic Sustainability in Nigeria

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**Abstract:** *This study examines the effect of non-oil tax revenue on economic sustainability in Nigeria. It seeks to address the persistent sustainability deficits that constrain long-term economic development in Nigeria. The study adopts an ex post facto research design using annual time-series data spanning 1984–2024. Data were sourced from the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics. The analysis employs the Autoregressive Distributed Lag (ARDL) approach to capture both short-run and long-run dynamics among the variables, given its suitability for small sample sizes and mixed order of integration. The results reveal that non-oil tax revenue had positive and statistical significant effect on economic sustainability in both the short run and long run. Furthermore, institutional quality significantly controlled this relationship, strengthening the impact of non-oil tax revenue on economic sustainability. The findings underscore the importance of strengthening institutional frameworks alongside improving non-oil tax revenue mobilization. Policymakers should prioritize efficient tax administration and governance reforms to achieve sustainable economic outcomes. This study contributes to the literature by integrating institutional quality into the non-oil tax revenue economic sustainability nexus using a dynamic ARDL framework, providing robust long-term evidence from Nigeria.*

**Keywords:** economic sustainability, company income tax, customs and excise duties, institutional quality, value added tax.

## INTRODUCTION

Economic sustainability has become a central concern for policymakers, particularly in developing economies where structural vulnerabilities and fiscal instability persist. It reflects the ability of an economy to support present needs while preserving the capacity to meet future demands through efficient resource allocation and stable macroeconomic conditions (Sunday et al., 2025; Okafor, 2024). Beyond growth, economic sustainability encompasses prudent management of financial, human, and natural resources to reduce poverty, narrow income inequality gaps, and promote long-term societal well-being (Iortyer & Williams, 2025; Sunday et al., 2025). In this regard, it plays a crucial role in addressing persistent development challenges such as unemployment, inadequate infrastructure, and regional disparities (Abdullahi, 2025).

In the Nigerian context, achieving economic sustainability remains particularly challenging. Although the economy experienced significant growth between 2000 and 2014 averaging over 7% annually this growth was largely driven by favourable global conditions and oil revenue (Abdulwahab & David, 2023; Ikechi et al., 2023). However, the subsequent period from 2015 to 2022 witnessed declining growth rates and stagnating GDP per capita, driven by macroeconomic distortions, fiscal imbalances, and external shocks, including the COVID-19 pandemic (Ngwoke, 2024; Mohammed et al., 2024). These challenges have been exacerbated by rising inflation, increasing poverty levels, and weak human capital development, which continue to constrain productivity and economic resilience (Mohammed et al., 2024; Ogbu, 2024; Nwobodo et al., 2022).

A major structural weakness underpinning Nigeria's economic sustainability challenges is its prolonged overdependence on crude oil revenue. Oil price volatility has exposed the economy to external shocks, resulting in unstable government revenue and persistent fiscal deficits (Nnamani & Akintoye, 2024; Iortyer & Williams, 2025). This dependence has also limited the diversification of the economy into productive sectors such as manufacturing and agriculture, thereby constraining inclusive growth and employment generation. Furthermore, institutional inefficiencies, including weak governance structures, corruption, and policy inconsistencies, have undermined effective resource allocation and eroded investor confidence, further weakening the sustainability of economic growth.

In response to these challenges, non-oil tax revenue has emerged as a critical fiscal instrument for promoting economic sustainability in Nigeria. By providing a more stable and predictable revenue base, non-oil tax revenue reduces fiscal vulnerability to oil price shocks and enhances government capacity to finance infrastructure and development projects (Nwachukwu et al., 2022; Okafor, 2021). It also contributes to fiscal sustainability by mitigating budget deficits and reducing excessive reliance on public borrowing (Oboro & Aguwamba, 2022; Odu, 2022). Moreover, expanding non-oil revenue sources can stimulate economic diversification by incentivizing growth in sectors such as agriculture, manufacturing, and services, thereby fostering innovation, employment, and export expansion (Okoye et al., 2023).

Despite the growing recognition of the importance of non-oil tax revenue, existing studies have predominantly focused on its direct impact on economic growth, with limited attention to its role in achieving broader economic sustainability. More importantly, the moderating role of institutional quality in shaping the effectiveness of non-oil tax revenue has received insufficient empirical attention. Strong institutional frameworks are essential for ensuring transparency, accountability, and efficient tax administration, which are critical for translating tax revenue into sustainable economic outcomes. Conversely, weak institutions may undermine revenue mobilization efforts and limit their developmental impact.

This study addresses these gaps by examining the effect of non-oil tax revenue on economic sustainability in Nigeria, while incorporating institutional quality as a moderating variable. Using time-series data spanning 1984 to 2024 and employing the Autoregressive Distributed Lag (ARDL) approach, the study provides robust evidence on both the short-run and long-run dynamics of this relationship. By integrating institutional quality into the analysis, this study contributes to the literature by offering a more comprehensive understanding of the fiscal–institutional nexus underpinning economic sustainability in Nigeria.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature and develops the study hypotheses. Section 3 outlines the methodology, including data sources and model specification. Section 4 presents and discusses the empirical results, while Section 5 concludes with policy implications and suggestions for future research.

## **LITERATURE REVIEW**

### **Economic Sustainability**

Economic sustainability refers to the capacity of an economy to achieve sustained growth while maintaining social equity, environmental balance, and long-term resource efficiency (Akighir et al., 2022). It involves the prudent management of financial, human, and natural resources to ensure intergenerational welfare and macroeconomic stability. Beyond traditional growth metrics, economic sustainability encompasses inclusive development outcomes such as poverty reduction, income equality, and improved living standards (Iortyer & Williams, 2025; Sunday et al., 2025).

Recent discourse positions economic sustainability within the broader framework of the Sustainable Development Goals (SDGs), emphasizing the integration of economic, social, and environmental objectives (Ngwoke, 2024). In this context, taxation plays a pivotal role as a fiscal instrument for mobilizing resources required to finance sustainable development initiatives (Atuma et al., 2024). However, the effectiveness of taxation in promoting sustainability depends largely on the structure of revenue sources and the institutional environment within which such revenues are managed.

### **Non-Oil Tax Revenue**

Non-oil tax revenue comprises all government tax receipts excluding those derived from petroleum-related activities (Ogba et al., 2018). It represents a critical component of fiscal diversification, particularly in resource-dependent economies such as Nigeria. The non-oil sector includes economic activities in telecommunications, agriculture, manufacturing, services, and other productive sectors that contribute to government revenue and economic expansion (Nwafor, 2017; Adegbe et al., 2023).

From a fiscal sustainability perspective, non-oil tax revenue provides a more stable and predictable revenue base compared to oil revenue, which is highly susceptible to global price volatility. Empirical evidence suggests that strengthening non-oil tax systems enhances revenue mobilization, supports public investment, and reduces fiscal vulnerability (Oboro & Aguwamba, 2022; Odu, 2022). In addition, expanding non-oil tax revenue can incentivize economic diversification by promoting productive sector activities and reducing dependence on extractive industries (Okoye et al., 2023). Key components of non-oil tax revenue include value-added tax (VAT), company income tax (CIT), and customs and excise duties, each playing distinct roles in revenue generation and economic regulation.

### **Institutional Quality**

The study introduces institutional quality in controlling the effect of non-oil tax revenue on economic sustainability. Some studies have considered the nexus between non-oil tax revenue and economic sustainability without considering the implications of the level of institutional interplay in enforcing compliance from taxpayers and tax administrations. For instance, the study of Okoye et al. (2023; Aguguom et al., 2023) studied the impact of non-oil tax revenue on Nigeria's growth using gross domestic product. The primary issue that prompted this investigation was the abandonment of the non-

oil industry in favour of the oil sector. This has impeded the expansion of the Nigerian economy's non-oil sector, which, if revitalized, would boost the country's GDP (Adegbe et al., 2021). Since the study was conducted ex post facto, data was gathered and supplied from secondary sources, such as the Federal Ministry of Finance and the CBN statistical bulletin. According to the study's conclusions, Nigeria's gross domestic product was significantly impacted by the personal income tax, capital gains tax, and tertiary education tax.

### **Theoretical Framework**

This study is anchored on the endogenous growth theory and the ability-to-pay theory, which jointly provide a robust framework for understanding the relationship between non-oil tax revenue, institutional quality, and economic sustainability. The endogenous growth theory, advanced by Romer (1986) and Lucas (1988), posits that long-term economic growth is driven by internal factors such as human capital development, innovation, and policy effectiveness. Within this framework, government revenue particularly tax revenue serves as a critical mechanism for financing productivity-enhancing investments in infrastructure, education, and technology. In the Nigerian context, the theory suggests that effective mobilization and allocation of non-oil tax revenue can stimulate sustainable economic growth by supporting structural transformation and reducing dependence on volatile oil revenue.

Also, the ability-to-pay theory, originally proposed by Adam Smith (1776) and further developed by Pigou (1928), emphasizes fairness and equity in taxation. It posits that individuals and firms should contribute to government revenue based on their income-generating capacity. This theory is particularly relevant to non-oil tax revenue, as it supports the expansion of tax bases and improved compliance through equitable tax systems. By ensuring that tax burdens are distributed fairly, the theory enhances revenue mobilization and strengthens the capacity of governments to finance sustainable development initiatives.

### **Empirical Evidence**

A substantial body of empirical literature suggests that non-oil tax revenue contributes positively to economic sustainability by enhancing fiscal capacity and supporting development outcomes. Studies have shown that non-oil tax revenue improves infrastructure development, reduces income inequality, and promotes economic diversification (Iortyer & Williams, 2025; Zhang et al., 2022; Erdogan, 2020; Sunday et al., 2025).

For instance, Jabir et al. (2020) found that non-oil revenue significantly influences economic growth in non-oil-producing countries using panel VAR analysis. Similarly, Iortyer and Williams (2025) reported both short-run and long-run positive effects of non-oil tax revenue on Nigeria's GDP, highlighting its importance in sustaining economic performance. These findings suggest that strengthening non-oil tax systems can enhance fiscal resilience and support long-term development.

Despite the positive evidence, other studies report negative or mixed effects of non-oil tax revenue on economic outcomes. For example, Abdulwahab and David (2023) found that company income tax negatively impacts Nigeria's economic growth, while other tax components exhibit positive effects. Similarly, Shakerin et al. (2020) reported negative impacts of certain tax revenues on economic performance in developing economies. These conflicting findings highlight the complexity of the tax-sustainability relationship and suggest that the effectiveness of non-oil tax revenue may depend on contextual factors such as policy design, economic structure, and institutional quality. Furthermore,

methodological limitations in some studies, including inadequate model specification and weak variable operationalization (Ngwoke, 2024), raise concerns about the robustness of existing evidence.

### Hypothesis development

The empirical literature reveals inconsistent and inconclusive findings regarding the relationship between non-oil tax revenue and economic sustainability. While some studies report positive effects, others document negative or insignificant relationships, indicating a lack of consensus in the literature (Ngwoke, 2024; Shakerin et al., 2020; Korolo & Omolaye, 2023). More importantly, existing studies have largely overlooked the role of institutional quality in shaping this relationship. Given that effective institutions are critical for ensuring efficient tax administration and resource allocation, their omission represents a significant gap in the literature. In addressing these gaps, this study examines both the direct effect of non-oil tax revenue on economic sustainability and the moderating role of institutional quality. Accordingly, the following hypotheses are formulated:

**H1:** Non-oil tax revenue has no significant effect on economic sustainability in Nigeria.

**H2:** Institutional quality does not significantly moderate the relationship between non-oil tax revenue and economic sustainability in Nigeria.

### METHODOLOGY

This study adopts an ex post facto research design to examine the relationship between non-oil tax revenue and economic sustainability in Nigeria. The study utilizes annual time-series data covering a 31-year period from 1994 to 2024. This period is selected to capture the evolution of Nigeria's fiscal structure across different policy regimes and economic cycles, thereby providing a comprehensive basis for empirical analysis.

Data were sourced from reputable and authoritative databases, including the Federal Inland Revenue Service (FIRS) Statistical Bulletin, National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN) Statistical Bulletin, World Development Indicators (WDI), and the World Income Inequality Database. These sources are widely recognized for their reliability and consistency in macroeconomic research

### Model Specification

The following models were formulated for the study:

$$ECSTB_t = F(VAT_t, CITA_t, CUED_t)$$

The econometrics models are expressed as:

$$ECSTB_t = \beta_0 + \beta_1VAT_t + \beta_2CITA_t + \beta_3CUED_t + \mu_t \quad (1)$$

$$ECSTB_t = \beta_0 + \beta_1VAT_t + \beta_2CITA_t + \beta_3CUED_t + INQT_t + \mu_t \quad (2)$$

Where:

- **ECSTB** = Economic Sustainability
- **VAT** = Value Added Tax
- **CITA** = Company Income Tax
- **CUED** = Customs and Excise Duties
- **INQT** = Institutional Quality
- $\beta_0$  = Intercept
- $\beta_1$ – $\beta_4$  = Estimated coefficients
- $\mu_t$  = Error term
- **t** = Time period

### Estimation Technique

Given the time-series nature of the data and the possibility of mixed orders of integration among the variables, this study employs the Autoregressive Distributed Lag (ARDL) model developed by Pesaran et al. (2001). The ARDL approach is appropriate because it allows for the estimation of both short-run and long-run relationships regardless of whether the underlying variables are integrated of order I(0) or I(1), provided none is I(2).

### Diagnostic Tests

To ensure the validity and robustness of the estimated models, several post-estimation diagnostic tests were conducted, including: Serial correlation test (Breusch–Godfrey LM test), Heteroskedasticity test, Normality test, Variance Inflation Factor (VIF) for multicollinearity. These tests confirm that the model satisfies the classical linear regression assumptions and that the results are reliable for inference.

**Table 3: Variable Definition, Measurement, and Data Sources**

Variable	Type	Measurement	Source
Economic Sustainability (ECSTB)	Dependent	Ratio of mineral resource depletion (percentage of mineral reserves extracted relative to remaining reserves and economic output)	Onuoha et al. (2015); Adeusi et al. (2020)
Value Added Tax (VAT)	Independent	Natural logarithm of total Value Added Tax revenue at year-end	Adeusi et al. (2020)
Company Income Tax (CITA)	Independent	Natural logarithm of total Company Income Tax revenue at year-end	Adeusi et al. (2020)
Customs and Excise Duties (CUED)	Independent	Natural logarithm of total Customs and Excise Duties revenue at year-end	Adeusi et al. (2020)
Institutional Quality (INQT)	Control Variable	Composite index of governance indicators (control of corruption, rule of law, regulatory quality, government effectiveness, political stability, voice and accountability)	Balogun (2024)

**Source:** Researchers' compilation (2026)

Table 3 presents the definitions, measurements, and data sources of the variables employed in this study. Economic sustainability is proxied using mineral resource depletion, consistent with prior studies (Onuoha et al., 2015; Adeusi et al., 2020). Non-oil tax revenue is captured through value added tax, company income tax, and customs and excise duties, measured in natural logarithmic form to reduce skewness and ensure comparability. Institutional quality is measured using a composite governance index, reflecting the effectiveness of institutional frameworks in shaping economic outcomes.

### Data Analysis, Results and Discussion of Findings

This section presents data analyses for the study, the interpretation of the estimations, and the pre and post estimation diagnostic tests, conclusion, recommendations, contribution to knowledge, limitation and suggestions for further studies.

#### Optimal Lag Length Selection Criteria

Prior to estimating the ARDL model, the optimal lag length was determined to appropriately capture the dynamic interactions among economic sustainability (LNRD), non-oil tax revenue components (LVAT, LCIT, LCED), and institutional quality (INQ). The selection of an appropriate lag structure is critical to avoid model misspecification and ensure efficient estimation.

**Table 4: Result of the Optimal Lag Length Selection Criteria**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-14.340	NA	0.246	1.433	1.673	1.504
1	-10.171	6.484	0.195	1.198	1.486	1.283
2	-7.577	3.843*	0.174*	1.080*	1.416*	1.180*
3	-7.125	0.636	0.183	1.120	1.504	1.235
4	-6.408	0.956	0.188	1.141	1.573	1.270

Source: Researcher's Computation, (2026)

The results in Table 4 indicate that the majority of the information criteria Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan–Quinn (HQ) converge at lag 2. Accordingly, lag 2 is selected as the optimal lag length. This suggests that the effects of non-oil tax revenue and institutional quality on economic sustainability persist beyond the contemporaneous period, extending up to two periods.

#### Co-integration Test Results

Following lag selection, the existence of a long-run relationship among the variables was examined. The results from the cointegration test indicate that both the Trace and Maximum Eigenvalue statistics (7.721) exceed the critical value at the 5% significance level, with a corresponding probability value of 0.006.

This leads to the rejection of the null hypothesis of no cointegration, confirming the existence of a stable long-run equilibrium relationship among economic sustainability (LNRD), value added tax (LVAT), company income tax (LCIT), customs and excise duties (LCED), and institutional quality (INQ).

The adjustment coefficient is negative and statistically significant ( $-0.176$ ), indicating that approximately 17.6% of short-run disequilibrium is corrected annually. This confirms a moderate speed of adjustment toward long-run equilibrium and justifies the use of the ARDL-ECM framework.

**Table 5: Result of the Co-integration Test**

Test Type	Hypothesized CE(s)	Eigenvalue	Statistic	0.05 Critical Value	Prob.	Cointegrating Coef. (LNRD)	Adjustment Coef. $\alpha$ D(LNRD)
Trace Test	None*	0.241	7.721	3.841	0.006	3.135	-0.176
Max-Eigen Test	None*	0.241	7.721	3.841	0.006	3.135	-0.176

Source: Researcher's Computation, (2026)

### Autoregressive Distributed Lag (ARDL) Model Results

The ARDL results provide evidence on both short-run dynamics and long-run relationships. The ARDL bounds test further confirms cointegration. The computed F-statistic (6.613) exceeds both the lower bound (2.86) and upper bound (4.01) critical values at the 5% level. This provides robust evidence of a long-run relationship among the variables.

**Table 6: Auto regression Distributed Lag Model (ARDL)**

Conditional ECM Regression				
Variables	Coefficient	SE	t-Stat	Prob.
C	13.957	3.471	4.021	0.001
LNRD(-1)*	-1.278	0.224	-5.702	0.000
LVAT(-1)	3.896	1.312	2.969	0.010
LCIT(-1)	-2.604	0.941	-2.766	0.014
LCED(-1)	-1.880	0.498	-3.772	0.002
INQ(-1)	-3.007	1.358	-2.214	0.043
D(LNRD(-1))	0.477	0.170	2.806	0.013
D(LVAT)	2.184	0.747	2.923	0.011
D(LVAT(-1))	-1.261	0.627	-2.011	0.063
D(LCIT)	-0.711	0.643	-1.105	0.287
D(LCIT(-1))	0.907	0.571	1.589	0.133
D(LCED)	-0.367	0.271	-1.353	0.196
D(LCED(-1))	1.201	0.462	2.599	0.020
D(INQ)	-1.596	1.167	-1.368	0.192
Level Equation Estimate				
Variables	Coefficient	SE	t-Stat	Prob.
LVAT	3.049	0.927	3.288	0.005
LCIT	-2.037	0.673	-3.029	0.009
LCED	-1.471	0.324	-4.540	0.000
INQ	-2.353	0.947	-2.484	0.025

ARDL Bound Test @ 5%:  $F - stat = 6.613$  ( $I(0) = 2.86$ ,  $I(1) = 4.01$ )

$R^2 = 0.871$        $Adj.R^2 = 0.758$ ;  $F - stat = 7.761$  (0.000)

$X_{JB}^2 = 1.793$  (0.408);  $X_{LM}^2 = 2.225$  (0.148);  $X_{BPG}^2 = 1.004$  (0.492);  $X_{RR}^2 = 2.014$  (0.178);  $DW = 2.043$  STABILITY: *CUSUM* & *CUSUMSQ*

Notes: SE: standard error;  $X_{JB}^2$ ;  $X_{LM}^2$ ;  $X_{BPG}^2$ ;  $X_{RR}^2$ ; DW represent Jarque-Bera normality test, LM test for serial correlation, Breusch-Pagan Godfrey test for heteroscedasticity, Ramsey Reset test; for linearity and Durbin-Watson respectively.  $I(0)$  and  $I(1)$  represent lower and upper bound, respectively. While the respective probability values are in bracket; ECT: Error correction term.

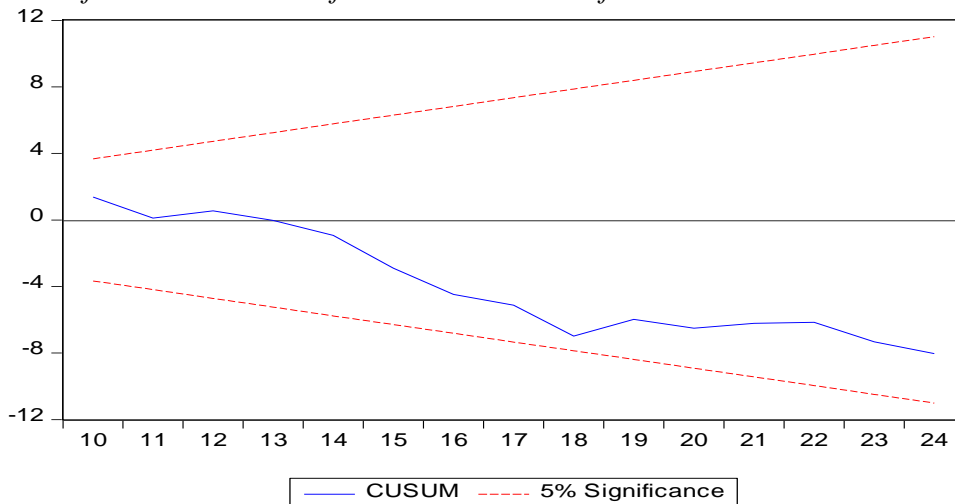
### Diagnostic Test Results

The reliability of the estimated model was assessed using several diagnostic tests. The Jarque–Bera statistic confirms that the residuals are normally distributed. The Breusch–Godfrey LM test and the Durbin–Watson statistic (2.043) indicates the absence of serial correlation. The Breusch–Pagan–Godfrey test confirms homoscedasticity, while the Ramsey RESET test suggests correct functional specification. Furthermore, the CUSUM and CUSUMSQ tests show that the recursive residuals remain within the critical bounds, confirming parameter stability throughout the sample period. Collectively, these results validate the robustness and reliability of the model.

These diagnostic outcomes collectively demonstrate that the model satisfies the classical regression assumptions and that the estimated coefficients are robust and reliable for inference.

Figure 1

*Plot of Cumulative sum of recursive residuals for Model*

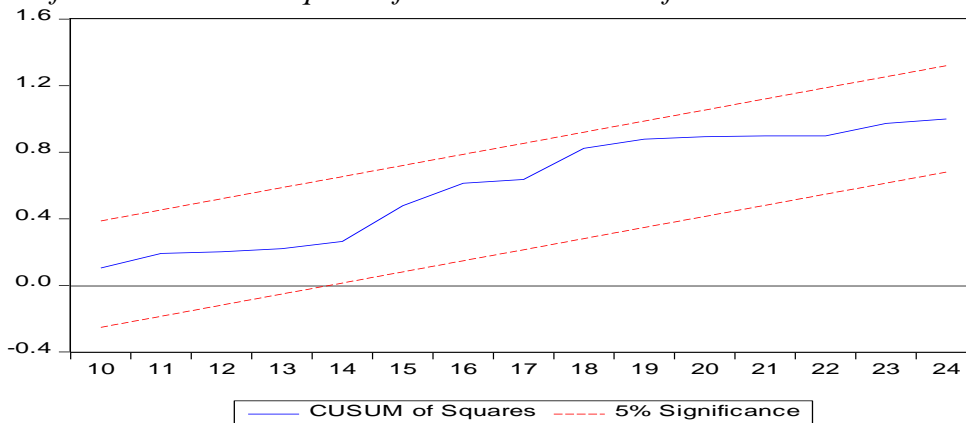


**Source: Author's compilation from E-views 12 output**

Note: The blue line is the solid line, while the red lines that bound the blue line are the critical bounds at 0.05

Figure 2

*Plot of Cumulative sum square of recursive residuals for Model*



**Source: Author's compilation from E-views 12 output**

Note: The blue line is the solid line, while the red lines that bound the blue line are the critical bounds at 0.05

### Short-Run Dynamics (Conditional ECM)

The estimated conditional ECM equation for Hypothesis One can be written as:

$$\begin{aligned} \Delta LNRD_t = & 13.957 - 1.278LNRD_{t-1} + 3.896LVAT_{t-1} - 2.604LCIT_{t-1} - 1.880LCED_{t-1} \\ & - 3.007INQ_{t-1} + 0.477\Delta LNRD_{t-1} + 2.184\Delta LVAT_t - 1.261\Delta LVAT_{t-1} \\ & - 0.711\Delta LCIT_t + 0.907\Delta LCIT_{t-1} - 0.367\Delta LCED_t + 1.201\Delta LCED_{t-1} \\ & - 1.596\Delta INQ_t + \varepsilon_t \end{aligned}$$

The error correction term (ECT), represented by  $LNRD(-1)$ , is negative and statistically significant ( $-1.278$ ,  $p < 0.01$ ), confirming the existence of a strong adjustment mechanism toward long-run equilibrium. The magnitude implies that deviations from equilibrium are corrected rapidly, with more than full adjustment within one period, indicating possible overshooting dynamics.

In the short run Value Added Tax (LVAT) exhibits a positive and statistically significant effect, suggesting that increases in VAT revenue are associated with higher levels of economic activity, which may intensify pressure on natural resource sustainability. Company Income Tax (LCIT) shows a negative but insignificant contemporaneous effect, though lagged effects suggest adjustment dynamics over time. Customs and Excise Duties (LCED) display mixed short-run effects, with lagged values indicating delayed adjustment mechanisms and Institutional Quality (INQ) is negative but statistically insignificant in the short run, suggesting that institutional improvements may take time to influence sustainability outcomes.

### Long-Run Level Equation:

The long-run equilibrium relationship is expressed as:

$$LNRD_t = 3.049LVAT_t - 2.037LCIT_t - 1.471LCED_t - 2.353INQ_t + \varepsilon_t$$

The long-run level estimates provide insight into the equilibrium relationship between economic sustainability and the explanatory variables, including institutional quality. The results show that value added tax (LVAT) has a positive and statistically significant coefficient of 3.049 ( $p = 0.005$ ), indicating that sustained increases in VAT revenue are associated with higher levels of economic sustainability over time. This suggests that expansion in VAT-driven economic activities may intensify long-term pressure on economic sustainability.

In contrast, company income tax (LCIT) exhibits a negative and statistically significant coefficient of  $-2.037$  ( $p = 0.009$ ), implying that corporate taxation contributes to reducing natural resource depletion in the long run. Similarly, customs and excise duties (LCED) have a negative and highly significant coefficient of  $-1.471$  ( $p = 0.000$ ), confirming that trade-related taxes play an important role in limiting resource exploitation over extended periods. Institutional quality (INQ) also carries a negative and statistically significant coefficient of  $-2.353$  ( $p = 0.025$ ), demonstrating that improvements in governance, regulatory effectiveness and institutional strength contribute significantly to reducing environmental degradation.

The overall model is statistically significant, with an F-statistic of 7.761 ( $p < 0.01$ ) and an adjusted  $R^2$  of 0.758. This indicates that approximately 75.8% of the variation in economic sustainability is explained by the model. Given that the explanatory variables jointly have a significant effect, the null hypothesis (H1) is rejected. This implies that non-oil tax revenue significantly affects economic sustainability in Nigeria.

The significance of institutional quality confirms its controlling role, leading to the rejection of H2. This indicates that institutional quality significantly influences the relationship between non-oil tax revenue and economic sustainability.

## DISCUSSION OF FINDINGS FOR THE MODEL

The findings provide strong empirical support for both the endogenous growth theory and the ability-to-pay theory. Consistent with endogenous growth theory, the results demonstrate that internally generated revenue, particularly non-oil tax revenue, plays a crucial role in shaping long-term economic sustainability. The positive effect of value added tax suggests that consumption-driven economic expansion may increase pressure on natural resources, thereby raising sustainability concerns. Conversely, the negative effects of company income tax and customs duties indicate that these fiscal instruments can serve as regulatory mechanisms that mitigate resource exploitation.

Importantly, the inclusion of institutional quality significantly enhances the explanatory power of the model, confirming that governance structures play a critical role in translating tax revenue into sustainable outcomes. Strong institutions improve regulatory enforcement, enhance resource allocation efficiency, and reduce environmental degradation. Generally, the results suggest that while non-oil tax revenue is essential for economic sustainability, its effectiveness is contingent upon the strength of institutional frameworks.

In the Model, which excludes institutional quality, the ARDL bounds test confirms the existence of a long-run relationship between natural resource economic sustainability and the components of non-oil tax revenue. The results show that value added tax (LVAT) exerts a positive and statistically significant long-run effect on natural resource economic sustainability, indicating that sustained increases in VAT revenue are associated with higher levels of environmental pressure. This is consistent with some prior studies (Olufemi et al., 2024; Ngwoke, 2024). Conversely, company income tax (LCIT) and customs and excise duties (LCED) exhibit negative and significant long-run effects, suggesting that these fiscal instruments contribute to mitigating resource exploitation over time. The error correction term is negative and significant, confirming a stable adjustment mechanism toward long-run equilibrium. On the contrary, some others have documented significant effects (Nwuzor, 2024; Oziegbe & Itua, 2024; Oladipupo, 2023).

When institutional quality (INQ) is introduced in Model, the explanatory power of the model improves considerably, as reflected in the higher  $R^2$  value (0.871) compared to Model (0.776). The ARDL bounds test in Model further strengthens the evidence of a long-run equilibrium relationship. Importantly, institutional quality emerges as a negative and statistically significant determinant of natural resource economic sustainability in the long run, implying that improvements in governance, regulatory effectiveness and institutional performance play a critical role in reducing environmental

degradation. The magnitude of the adjustment coefficient in Model is larger in absolute terms, indicating a faster correction of short-run disequilibria when institutional factors are accounted for (Ayebaenemi et al., 2024; Omoregbe et al., 2023). A comparative assessment of the model which reveals that the inclusion of institutional quality not only enhances model fit but also refines the estimated effects of fiscal variables. While VAT continues to exhibit a positive and significant relationship with natural resource economic sustainability in the model, its magnitude is larger in Model, suggesting that even in the presence of governance controls, VAT-driven economic activities may intensify pressure on economic sustainability. On the other hand, the negative effects of company income tax and customs duties remain consistent across both specifications, reinforcing the view that corporate and trade-related taxation can serve as moderating instruments that indirectly promote environmental sustainability and these are in tandem with studies (Atuma et al., 2024; Nwachukwu et al., 2022, Akeem et al., 2024).

Overall, the results from both models demonstrate that fiscal policy plays a significant role in shaping environmental outcomes in Nigeria. However, the findings from Model underscore that the effectiveness of tax policy in promoting sustainability is conditioned by the strength of institutional frameworks. Stronger institutions not only directly reduce natural resource depletion but also enhance the regulatory impact of fiscal measures. These findings suggest that achieving environmental sustainability in Nigeria requires a coordinated approach that combines sound non-oil tax policies with improvements in governance and institutional quality.

## **CONCLUSION AND RECOMMENDATIONS**

This study examined the effect of non-oil tax revenue on economic sustainability in Nigeria, incorporating institutional quality as a moderating factor. Using ARDL estimation techniques, the findings reveal that non-oil tax revenue significantly influences economic sustainability in both the short run and long run. The results indicate that while value added tax contributes positively to economic activity, it may also increase pressure on natural resources. In contrast, company income tax, customs duties, and institutional quality play significant roles in mitigating environmental degradation and promoting sustainable economic outcomes.

The study concluded that non-oil tax revenue jointly had a significant effect on GDP per Capita in Nigeria. Overall, the long-run coefficients indicate that while VAT tends to increase natural resource economic sustainability, company income tax, customs duties and stronger institutional quality exert mitigating effects that promote environmental sustainability in Nigeria. The results have significant implications for various stakeholders, including government, corporate and individual taxpayers, policymakers, investors (both domestic and foreign), the accounting profession, and the general public. The results have implications for the government who are required to prioritize tax reforms that enhance tax efficiency, compliance, and transparency in tax collection down to remittances. The results showing existence of cointegration relationship from the estimation could imply that non-oil tax revenue contributed to long-run economic sustainability when properly managed. On the contrary, the negative coefficient relationship with company income tax and customs and excise duties suggested that excessive reliance on these non-oil tax revenues may lead to high tax burden and discourage business expansion and economic growth.

The findings underscore the relevance of non-oil tax revenue on enhancing economic sustainability in Nigeria. In line with the findings, the following recommendations are made which may be useful to the government, present and potential investors, and many others will find this study useful for institutions and other stakeholders in Nigeria. Therefore, this study recommends the following in line with each of the baseline objectives of the study: The government should prioritize optimal utilization of non-oil tax revenue in overhauling and deepening economic sustainability in Nigeria. In addition, the government should increase reliance on value-added tax, which provides stable revenue generation without directly discouraging productive investment and sustainable resources management. For policymakers, they should consider introducing more tax incentives like tax credits, tax holidays, and environmental tax rebates to encourage environmentally responsible corporate practices and at the same time, the government should ensure tax revenues are invested in sustainable infrastructures, renewable energy, and environmental conservation programs in Nigeria.

The study has some limitations: The study considered non-oil tax revenue in Nigeria which may not fully capture the diversity of tax revenues for the government. This study provided fresh insights into existing academic literature by examining the effect of non-oil tax revenue on economic sustainability in Nigeria. More so, there was a scarcity of related empirical studies, which made it somewhat challenging to undertake a more synthesis of findings. However, the researcher demonstrated resilience and determination in overcoming the challenges encountered during the course of the study. Exploring a more mixed method of including all tax revenues and their implication on economic sustainability could provide a more deepening insights in future contextual factor which impact economic sustainability.

### **Contribution to Knowledge and Future Research**

By connecting fiscal capacity with governance effectiveness, this study adds to the body of literature by providing empirical evidence on how non-oil tax revenue and institutional quality jointly affect economic sustainability in Nigeria. The study contributed to knowledge as it emphasized the necessity for governments and policymakers to fortify institutional frameworks and tax systems in order to promote sustainable growth. It provided the management the value of strategic tax planning and compliance in a stable institutional setting. It also provided to investors information about how diversified revenue streams and better governance lower economic risk and encourage long-term investment choices. For future research, it the study suggested, that to enhance comprehension of the dynamic relationship between taxation, institutional quality, and sustainable economic performance, future research may consider to examining to break-down components of non-oil tax revenue, include more comprehensive governance indicators, and use longitudinal or cross-country comparative analyses.

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