Human Development Index and Tax Revenue in Nigeria: A Revised Analysis

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Abstract

This research examines the impact of tax revenues on human development in Nigeria, focusing on Company Income Tax (CIT), Personal Income Tax (PIT) and Value Added Tax (VAT). The study is motivated by persistent fiscal challenges, including overdependence on oil receipts, weak tax administration, low tax compliance, and inefficient public expenditure. Annual data from 2005 to 2024 were obtained from the Central Bank of Nigeria, National Bureau of Statistics, and the International Monetary Fund. The Autoregressive Distributed Lag (ARDL) bounds testing approach was employed to analyse the relationship between tax revenue, economic growth and human development. Government expenditure and inflation were included as control variables. The results reveal that tax revenue significantly explains economic growth, accounting for 80.6% of the variation in GDP ($F= 11.694$, $p < 0.001$). However, tax revenue has no significant effect on the Human Development Index (HDI), explaining only 13% of its variation ($F = 1.385$, $p = 0.302$). CIT and PIT exhibit positive but insignificant effects on HDI, while VAT is negatively associated with human development. The study concludes that Improving tax administration, broadening the tax base to include the informal sector, reforming the VAT system, and prioritizing public investment in health, education, and infrastructure are essential for translating tax revenue into improved human development outcomes in Nigeria.

Keywords: Tax revenues; company income tax; personal income tax; value added tax; human development index

1 Introduction

1.1 Background to the Study

Sustainable growth is a global concept which refers to economic activities that improve the quality of life and societal welfare, while not compromising the ability of future generations to meet their own needs, and is a key indicator of long-term prosperity and development for nations around the world. Despite the importance of sustainable growth, countries around the world are still facing key challenges such as income inequality, inflation, resource depletion, and economic volatility.

But since then, inflation has risen higher, income inequality has increased more widely, and natural resources are put under even greater pressure, which has made it difficult for an

economy to be stable enough as well as inclusive or sustainable development. Although some countries in Africa have advanced considerably over the last few decades (Onyemaechi & Chiamaka 2025), persistent issues such as inflation, unemployment, and infrastructural deficits still constrain growth and development prospects of many economies on the continent. On a more positive note, it has been found that federal government taxes also impact economic growth, which is a necessary component for sustainable development possibilities in each country, albeit with varying degrees of significance (Azubike et al. 2024).

However, although Nigeria has significant natural resources, its economic growth is weak and uneven due to poor policy implementation, corruption, and overdependence on volatile sectors such as oil, which has led to a narrow tax base and low domestic revenue generation (Onyemaechi & Chiamaka, 2025). Nigeria also faces widespread tax evasion and perceptions of unfair distribution of the tax burden, which are particularly challenging in a large informal sector where the ability to tax is weak, and taxpayer education and record-keeping are poor (Aina, 2025).

According to Ogbonna *et al.* (2020), Nigeria faces significant and multifaceted challenges that hinder its sustainable growth and development. Primarily, it has been challenging for Nigeria to broaden its tax base, which is closely linked to the inability to diversify the economy. The effect of this is the inadequate and suboptimal utilisation of tax revenue, which has deepened the infrastructural deficit. Despite significant socio-economic progress over the last two decades, Nigeria's infrastructure remains severely inadequate and has shown little substantive improvement, representing a significant barrier to economic growth and sustainable development, with the country's infrastructure deficit attributed to chronic under-investment, corruption, and weak institutional support (Asaju, 2023). It is normally expected that HDI should be enhanced when tax revenue increases, especially by having a direct effect on (i) Public health expenditure, which will improve life expectancy; (ii) education financing, which will increase the number of students enrolled in schools and literacy; and (iii) enabling social transfers that raise living standards. However, despite rising tax revenues post-2005 in Nigeria, the HDI has continued to be stagnant at 0.535 in 2022, behind Ghana (0.632) and South Africa (0.713), with comparable tax-to-GDP ratios, suggesting poor and inefficient revenue utilisation (UNDP, 2024). Previous research on how tax revenue relates to sustainable growth have produced a mixed result and inconclusive findings (Adegbie et al., 2023), this study steps in to provide clearer evidence for Nigeria by addressing three key gaps that past research has left unexplored, namely, the overreliance on GDP without considering broader measures like the Human Development Index (HDI), the lack of attention to how different tax structures shape human development, and the neglected role of unemployment in the growth equation. In this study, economic sustainability is shaped by tax revenue. It includes forms such as Value Added Tax, Personal Income Tax and Company Income Tax, which are aimed at funding development projects.

The primary sources of funding for development are tax revenue, including Value Added Tax, Personal Income Tax, and Company Income Tax, although taxation issues like significant losses in government revenues due to the issue of evasion, as well as inconsistencies with policy and weak compliance mechanisms, continue to be a challenge (Adefunke & Ivie 2024; Okoh and Ofor 2024).

This study will investigate the tax revenue effect on sustainable growth in Nigeria and propose recommendations for its enhancement.

The main objective of this study is to investigate the effect of tax revenue on sustainable growth in Nigeria. The specific objectives are to:

I. Analyse the tax revenue effect on Gross Domestic Product in Nigeria.
II. Examine the tax revenue effect on the Human Development Index in Nigeria.

The research questions that guide this study are;

I. What is the tax revenue effect on Gross Domestic Product in Nigeria?
II. To what extent does tax revenue affect the Human Development Index in Nigeria?

While the research hypotheses are;

$H_{0\ 1}$: Tax revenue has no significant effect on Gross Domestic Product in Nigeria.

$H_{0\ 2}$: Tax revenue has no significant effect on the Human Development Index in Nigeria.

2 Literature Review

2.1 Conceptual Framework

2.1.1 Sustainable Growth

Sustainable growth is explained as economic activities that improve the quality of life and the welfare of society while ensuring the long-term capacity of a nation to meet its future needs (Pearce & Barbier, 2020; Todaro & Smith, 2020). This kind of growth rests on a simple but powerful idea that economic gains should not be at the expense of our planet or our people. This balance of the need to grow the economy with the desire to protect the environment while ensuring that everyone has a chance at improved living standards in ways that do so wisely using resources in ways which ensure we take no more than nature can replace and leave nothing but a cleaner legacy for our children, grandchildren (Pearce and Barbier 2020; Sadiq et al. 2025), does not imply giving up prosperity to embrace responsibility. It is about realising that we can have both, but only if we are wise enough to plan for the long haul, respect our natural limits, and care as much about the future as we do about the present.

2.1.2 Gross Domestic Product

Since World War II, GDP has been seen by economists as a measure of a country's macroeconomic performance. Other social science researchers and Policymakers have long recognised the use of GDP to gauge the well-being and economic welfare of people living in a geographical area (Agrawal et al., 2025)

In another context, the World Bank defined Gross Domestic Product GDP as the gross aggregate of the worth of goods and services internally generated by all resident producers in a particular geographical setting of an economy, adding any taxes on products, minus subsidies not included in the value of output (World Bank, 2023). According to the IMF, GDP stands as the monetary value attached to all finished goods and services produced within a country during a specific period and which can be used for the assessment of macroeconomic stability (IMF, 2022). GDP gives a global assessment of the economy of a particular region by focusing on its expansion, contraction, or stagnation.

2.1.3 Human Development Index

The evaluation and the ability of a country to progressively utilise the three key pillars of education, life expectancy and standard of living, according to the United Nations Development Programme (UNDP, 2023), is the Human Development Index. The UNDP describes and focuses on the utilisation of resources for human wellbeing rather than focusing on income and development alone. Ranis (2020) explains the Human Development Index as "a broad mirror of national wellbeing"; in his view, he opined that capabilities and freedoms of people should be considered alongside what they earn. Klugman (2021) notes that HDI provides a balanced picture of human progress by combining social and economic dimensions into a single, understandable figure.

2.1.4 Tax Revenue

Tax revenue is the consolidation of various money collected by the government from individual and corporate bodies using various tax collection methods. The process allows the government to exert control over tax collection. Tax revenue redistributes wealth from the private sector to the public sector of the economy; it is through tax revenue that the government can achieve some of its social and economic objectives, which include the provision of essential facilities and services (Abomaye-Nimenibo et al., 2018). According to Smith and Turner (2023), a study stated that tax revenue is the obligatory transfer of financial resources from private individuals and firms to the government without any direct or immediate benefit.

Table 2.1: Theoretical Transmission from Tax Revenue to HDI Components

Tax Type	Primary Channel	Expected HDI Component	Condition for Effectiveness
CIT	Public infrastructure & business environment	Standard of living (GNI)	Low corruption, competitive procurement
PIT	Social transfers & public services	Education & health	Progressivity, effective targeting
VAT	General government revenue	All three (indirectly)	Non-regressivity, exemption for essentials

Source: Author's Compilation (2026)

2.2 Theoretical Review

2.2.1 Endogenous Growth Theory

The theory of Endogenous Growth offers a compelling answer to what drives long-term economic growth: the most important factors don't come from outside the economy; they emerge from within the economy. In this sense, economic policies, human capital investment, innovation, and the accumulation of knowledge are the lead characters, not supporting actors, in the play of sustained growth, unlike older models that often treated technological progress as something that happened offstage. This focus on internal dynamics is particularly valuable when we consider how taxation affects long-run economic performance, especially in developing countries such as Nigeria.

It is also closely aligned with the work of influential economists such as Paul Romer, who emphasized the role of ideas and innovation, because while physical goods are subject to diminishing returns, knowledge is not (Aghion and Howitt, 2015), Robert Lucas, who saw human capital as the primary driver of growth, and Robert Barro, who showed how to integrate fiscal policy into growth models. More recent work has built on these foundations, reinforcing the point that internal economic factors shaped largely by policy are critical in determining long-term growth outcomes (Odhiambo & Olashala, 2018; Nwaiwu, 2024).

The theory assumes that sustained growth is not an accident, but rather the result of intentional investments in human capital, innovation, and knowledge creation (education, healthcare, and workforce training) and research and technological development that increase what an economy can actually produce (Odhiambo and Olashala, 2018; Nwaiwu, 2024).

For Nigeria, this is important because the Nigerian economy has been heavily dependent on oil revenue and the economy has been struggling to diversify, an issue made more urgent by that dependence. A well-designed tax system can play a role here, too: If revenue is invested in ways that build up human capital, that can enhance productivity and provide a foundation for more robust, long-term economic growth.

2.3 Empirical Review

2.3.1 Tax Revenue and Gross Domestic Product

Adewale et al. (2022) used the autoregressive distributed lag (ARDL) model and found that personal income tax (PIT), company income tax (CIT), and value-added tax (VAT) are positive contributors to economic growth in both the short and long run, while Yahaya et al. (2018) using Fully Modified Ordinary Least Squares (FMOLS) found that CIT increased GDP, but PIT and VAT significantly increased GDP, while CIT had a significant negative effect.

2.3.2 Tax Revenue and Human Development Index

Ibadin and Oluwatuyi (2021) found a positive and significant long-run relationship between tax revenue, GDP, and the Human Development Index (HDI), with VAT having the strongest influence. Okolo (2024) reported that tax revenue and government expenditure jointly explain a significant proportion of variations in HDI. Fadipe et al. (2025) found that tax policy instruments such as tax incentives and harmonisation positively influence HDI. However, Ayano (2022) found that CIT and education tax negatively affect life expectancy, although they positively influence education enrolment. Halim and Rahman (2022) found that various tax types positively contribute to achieving sustainable development goals in a panel study of emerging economies,

2.4 Institutional Quality as a Moderator of Tax Revenue Effectiveness

A growing body of evidence suggests that tax revenue affects human development not directly, but conditionally on institutional quality. Omodero (2019) found that in Nigeria, corruption and weak public financial management completely negated the positive potential of CIT and VAT on health outcomes. Asiedu (2022) carried out studies on Ghana's tax system; these studies found that tax revenues only made a significant difference to the Human Development Index when they were earmarked specifically for health or education. Similarly, in Kenya, Wambui and Kipchumba (2023) discovered in their research work that giving local governments more control over tax collection actually made education spending more responsive to revenue changes at the regional level. Combining these results, it appears that the weak relationship between tax revenue and HDI in Nigeria may not be due to the tax system per se, but rather to how things are run (see $H_{0\ 2}$), so this study examines the direct statistical relationship between tax revenue and HDI (see Section 5.3).

3 Methodology

This study used an ex-post facto design, which was appropriate for this study, as the existing data will be analysed to determine the relationships between taxation and sustainable growth without the manipulation of any variables. The population for this study included all tax revenue and macroeconomic data records for Nigeria from 2005 to 2024. The twenty years from 2005 to 2024 were selected using a purposive sampling technique because the researcher could select a timeframe that would include complete and reliable data sets for all variables of interest.

The primary or secondary dataset used for this study was sourced from IMF, CBN, NBS, and FIRS between 2005–2024. Two control variables, government expenditure (GEX) as a

percentage of GDP obtained from CBN data, and the inflation rate (INF), measured by the consumer price index taken from NBS records, were included to improve model specification; these secondary data are considered reliable because they have been checked and cross-verified periodically on account of the regular checks that such national and international agencies undertake.

Model Specification

The study adapted the empirical models from earlier work in the literature to the specific objective of this study: to examine the impact of tax revenue on sustainable growth in Nigeria. We controlled for government expenditure and inflation, which have been shown by previous research to matter for growth outcomes, to avoid omitted variable bias.

Model 1 (GDP with Control Variables):

$$GDP_t = \beta_0 + \beta_1 CIT_t + \beta_2 PIT_t + \beta_3 VAT_t + \beta_4 GEX_t + \beta_5 INF_t + \varepsilon_t$$

Model 2 (HDI with Control Variables):

$$HDI_t = \beta_0 + \beta_1 CIT_t + \beta_2 PIT_t + \beta_3 VAT_t + \beta_4 GEX_t + \beta_5 INF_t + \varepsilon_t$$

Where:

β_0 = intercept

$\beta_1 - \beta_5$ = explanatory variable coefficients

GEX_t = Total Government expenditure (% of GDP)

INF_t = annual inflation rate of the Consumer Price Index (%)

ε_t = error term

t = period of time (2005–2024)

Method of Data Analysis

Autoregressive Distributed Lag (ARDL) bounds testing framework was considered for the long-run dynamics between tax revenue and sustainable growth indicators, as our variables had a combination of integration orders: some variables were integrated at levels and others were integrated in first differences. We performed all estimations in EViews 10 and conducted a battery of diagnostic checks for normality, serial correlation and heteroskedasticity, as well as a check for stability using the CUSUM procedure. Given that VAT showed signs of non-stationarity with a possible structural break, we ran an additional Zivot–Andrews unit root test (results are provided in Appendix A). Lastly, we calculated the error correction model to determine how quickly any short-run deviations return to the long-run equilibrium.

4 Data Analysis, Results, and Discussion of Findings

4.1 Descriptive Statistics

Table 4.1.1 Descriptive Statistics (2005–2024)

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
CIT (₦ billion)	1398.18	1068.47	6544.09	170.2	1442.65	2.49	9.28
PIT (₦ billion)	450.92	151.78	1965.72	0	571.18	1.09	3.39
VAT (₦ billion)	1325.17	802.82	6721.36	192.7	1525.95	2.5	9.05
GDP (₦ billion)	62749.2	68314.95	80606.53	38777.01	12702.79	-0.57	2.09

HDI	0.523	0.527	0.56	0.484	0.025	-0.03	1.69
GEX (% of GDP)	12.4	11.8	18.3	8.9	2.8	0.45	2.21
INF (%)	13.7	12.4	29.7	5.4	6.9	1.12	3.45

Source: Researcher's Computation (2026)

Interpretation: The results of this study show that CIT, PIT, and VAT all have mean values lower than their individual standard deviations, indicating high variability and volatility in tax revenues. The GDP and HDI show more stability. CIT and VAT are highly leptokurtic (kurtosis > 3), indicating the presence of extreme values or outliers; the extreme values were reported in the 2011 data for CIT and VAT. However, GEX and INF show moderate variability consistent with Nigerian macroeconomic history.

4.2 Unit Root Test

Table 4.1.2 Augmented Dickey-Fuller (ADF) Unit Root Test Results

Variable	Level (I(0)) p-value	First Difference (I(1)) p-value	Order of Integration
CIT	0.9289	0.0358	I(1)
PIT	0.8475	0.0059	I(1)
VAT	1	0.9393	**Non-stationary (see note below)**
GDP	0.0044	0.3053	I(0)
HDI	0.7566	0.0201	I(1)
GEX	**0.0321**	**0.2187**	**I(0)**
INF	**0.8923**	**0.0112**	**I(1)**

Source: Researcher's Computation (2026)

Interpretation: The test result shows that there are mixed orders of integration (I(0) and I(1)), justifying the appropriateness of the use of the ARDL bounds testing approach. However, the Augmented Dickey-Fuller test indicates that VAT remains non-stationary even after first differencing (p = 0.9393). This suggests the presence of structural breaks or extreme volatility. Following Pesaran and Shin (1999), we address this by: (i) applying the Zivot-Andrews unit root test allowing for one structural break, and (ii) re-estimating the model with log-differenced VAT. The main ARDL results presented here assume that the bounds test remains valid given the mixed integration order of other variables.

4.3 Test of Hypothesis One ($H_{0\ 1}$): Tax revenue and GDP

Table 4.2.1.2 ARDL Bound Test (Dependent Variable: GDP)

Test Statistic	Value	K	Significance	I(0) Bound	I(1) Bound
F-statistic	22.05	3	5%	2.79	3.67

Source: Researcher's Computation (2026)

There is a long-run relationship between tax revenue and GDP, with the F-statistic (22.05) exceeding the upper bound critical value of (3.67) at 5%.

Table 4.2.1.3 Long-Run Regression Results (Dependent Variable: GDP)

Variable	Coefficient	Std. Error	t-Statistic	Probability
CIT	0.208	0.137	1.519	0.156
VAT	0.055	0.14	0.397	0.698
PIT	-0.014	0.011	-1.251	0.236
GEX	**0.187**	**0.092**	**2.033**	**0.062**
INF	**-0.031**	**0.018**	**-1.722**	**0.108**
C	4.108	0.072	57.053	0.000
Statistic				**Value**
Adjusted R-squared				0.806
F-statistic				11.694
Prob(F-statistic)				0.000
Durbin-Watson				2.482

Source: Researcher's Computation (2026)

Regression Equation:

$GDP_t = 4.108 + 0.208CIT_t + 0.055VAT_t - 0.014PIT_t + 0.187GEX_t - 0.031INF_t$

Interpretation: CIT has a positive but insignificant effect on GDP (β = 0.208, p = 0.156). VAT also exhibits a positive but statistically insignificant effect (β = 0.055, p = 0.698). PIT shows a negative and insignificant effect (β = -0.014, p = 0.236). **GEX shows a positive and marginally significant effect (β = 0.187, p = 0.062), while INF shows a negative but insignificant effect (β = -0.031, p = 0.108).** 80.6% of the variation in GDP is explained by CIT, PIT, VAT, GEX, and INF following the adjusted R-squared of 0.806, while the overall model is significant with the F-statistic (11.694, p = 0.000).

Table 4.2.1.4: Error Correction Model (ECM) – Dependent Variable: ΔGDP

Variable	Coefficient	Std. Error	t-Statistic	Probability
ECT(-1)	-0.473	0.112	-4.223	0.001
ΔCIT	0.186	0.098	1.898	0.079
ΔPIT	-0.011	0.009	-1.222	0.241
ΔVAT	0.048	0.101	0.475	0.642
ΔGEX	0.165	0.088	1.875	0.083
ΔINF	-0.028	0.016	-1.75	0.102

Source: Researcher's Computation (2026)

ECM results: The error correction term is negative and statistically significant (-0.473, p = 0.001), meaning about 47.3% of the disequilibrium in GDP is corrected in one year, and there is a stable long-run relationship between tax revenue and GDP, as the earlier ARDL bounds test results had indicated.

Decision: $H_{0\ 1}$ is rejected. There is a joint significance of tax revenue in affecting Gross Domestic Product in Nigeria.

Discussion: The results show that the Company Income Tax (CIT) has a positive, but statistically insignificant effect on economic growth, which aligns with the findings of Nwosu et al. (2023) and Osamor et al. (2021), but contradicts the findings of Omuya (2025), who found a negative CIT-GDP relationship. Likewise, the positive, but statistically weak VAT effect in this study provides partial support for the findings of Nwanakwere (2021) and Nwosu et al. (2023). Personal Income Tax (PIT) results are negative, consistent with the argument that direct taxes tend to slow down the economy, discouraging income generation and consumption (Omuya 2025). The overall lack of statistical significance across these tax variables also hints that tax revenues are not being directed to growth-oriented sectors, which is consistent with the premises of Endogenous Growth Theory.

4.4 Hypothesis Two ($H_{0\ 2}$) Test: Tax revenue and HDI

Table 4.2.2.2 ARDL Bound Test (Dependent Variable: HDI)

Test Statistic	Value	K	Significance	I(0) Bound	I(1) Bound
F-statistic	9.55	3	5%	2.79	3.67

Source: Researcher's Computation (2026)

The long-run relationship between tax revenue and HDI was further confirmed by the F-statistic (9.55), which exceeds the upper bound critical value (3.67) at 5%.

Table 4.2.2.3 Long-Run Regression Results (Dependent Variable: HDI)

Variable	Coefficient	Std. Error	t-Statistic	Probability
CIT	1.074	12.024	0.089	0.93
VAT	-1.089	12.699	-0.085	0.933
PIT	0.024	0.199	0.125	0.902
GEX	0.312	0.421	0.741	0.471
INF	-0.087	0.113	-0.77	0.454
C	0.155	2.49	0.062	0.951
Statistic				Value
Adjusted R-squared				0.13
F-statistic				1.385
Prob(F-statistic)				0.302
Durbin-Watson				2.564

Source: Researcher's Computation (2026)

Regression Equation:

$$HDIt = 0.155 + 1.074CITt - 1.089VATt + 0.024PITt + 0.312GEXt - 0.087INFt$$

Interpretation: The results of the regression indicate that CIT has a positive effect on HDI but is not statistically significant (β = 1.074, p = 0.930), while VAT has a negative sign that is also not statistically significant (β = -1.089, p = 0.933), and PIT shows a positive and negligible effect (β = 0.024, p = 0.902). Government expenditure and inflation are not statistically significant and are not meaningful determinants of HDI either. The adjusted R-squared of 0.130 (13%) is also low and indicates the explanatory power of the model is still weak, with the included tax measures still explaining little. Furthermore, the overall fit of the model, as

measured by the F-statistic of 1.385 (p = 0.302), shows that the regression is not jointly statistically significant, indicating that the chosen fiscal indicators are not reliable predictors of changes in HDI during the period under consideration.

Conclusion: The null hypothesis ($H_{0\ 2}$) is not rejected. The Human Development Index in Nigeria is not statistically affected by tax revenue.

Discussion of HDI Findings:

The absence of a statistically significant relationship between tax revenue and HDI is further emphasized by the overall model fit: F-statistic = 1.385 (p = 0.302) and an adjusted R^2 of only 0.13, or a meager 13 percent of the variation in human development explained by the combination of CIT, PIT, and VAT, compared to an adjusted R^2 of 0.806 for the GDP model, which suggests a clear division in Nigeria's fiscal architecture: the tax system produces growth in output, but that growth is not reflected in better human welfare.

CIT does not come out significant (p = 0.93), a result that Omodero (2019) attributes to chronic evasion and weak administrative capacity. A more convincing reason, however, is the way in which revenues are spent: Nearly 44 per cent of the 2023 budget went to debt servicing, and another 28 per cent to administrative and recurrent expenses (BudgIT, 2024). Even if CIT collections rise, they are not likely to be channelled into HDI-related outcomes under these conditions.

VAT has a negative coefficient (-1.089), but it fails to meet conventional levels of statistical significance, although the sign is economically suggestive. Because VAT is a regressive tax, which places the heaviest burden on those with the lowest incomes (who spend a greater proportion of their incomes on consumption), that burden can reduce household spending on health and schooling, reducing human development in an indirect way, which might be softened by exempting basic goods from VAT.

The insignificant results for the tax variables overall in an Endogenous Growth framework suggest a broken transmission channel from public revenue to human capital formation, which institutional factors like weak governance, corruption, and systematic misallocation of funds are most likely to blame.

4.5 Summary of Empirical Findings

The findings make a clear distinction between economic growth and human welfare: about 80.6 per cent of the variation in GDP can be explained by tax revenue, but only 13 per cent of the variation in HDI. This finding suggests that fiscal expansion, as designed, does not necessarily translate into gains in education, health, or overall living standards: perhaps the tax system is good at stimulating output, but that output is not being channelled into the public goods that lead to higher human development.

Hypothesis	Finding	Decision
$H_{0\ 1}$: Tax revenue has no significant effect on GDP	F-statistic = 11.694 (p = 0.000); Adjusted R^2 = 0.806	**Rejected**
$H_{0\ 2}$: Tax revenue has no significant effect on HDI	F-statistic = 1.385 (p = 0.302); Adjusted R^2 = 0.130	**Not rejected**

Furthermore, empirically, the paper investigates the impact of tax revenue on sustainable growth in Nigeria, focusing on Company Income Tax, Personal Income Tax, and Value Added Tax, from 2005 to 2024, using GDP and HDI as twin indicators of sustainable growth. The three tax types, as a group, have a statistically significant impact on GDP, but they do not, as a group, have a statistically significant impact on HDI. The disaggregated results show that CIT and PIT have positive growth effects while VAT has a negative impact.

These results can be interpreted through the lens of Endogenous Growth Theory. When tax policy is complemented by strong institutional frameworks, improved compliance, and spending on human capital and infrastructure, then tax policy can act as a catalyst for sustainable growth, but the consistently low correlation between tax revenue and HDI underscores the fact that the fiscal system in Nigeria has yet to find a way to translate higher levels of revenue into greater levels of welfare.

5 Conclusion and Recommendations

5.1 Conclusion

The present study analyses the impact of tax revenue on the sustainable growth of Nigeria, focusing on three main types of tax: Company Income Tax, Personal Income Tax, and Value Added Tax, and employing both GDP and HDI as proxy indicators over the period 2005–2024.

The findings indicate that tax revenue has a statistically significant joint effect on GDP, but not on HDI. Specifically, the results indicate that CIT and PIT have a positive effect on growth, while VAT has a dampening effect.

As per Endogenous Growth Theory, tax revenue can contribute to sustainable development if accompanied by good policy design, enhanced compliance, and targeted investment in productivity-enhancing sectors such as education and health; however, the low correlation between revenue collection and HDI implies that in practice, Nigeria's tax system has not yet developed a consistent mechanism to convert fiscal gains into tangible human development indicators.

5.2 Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. **Strengthen Tax Administration:** The Federal Inland Revenue Service (FIRS) should ensure that the tax administration systems in Nigeria are modernised by digitalizing the tax collection platforms to reduce tax evasion and improve compliance, particularly in the informal sector, which remains largely untaxed in Nigeria.
2. **Prioritise Human Capital Investment:** The Nigerian government should ensure that the allocation of more tax revenues is directed towards education, health services and infrastructure development. Specifically, the Nigerian government should allocate not less than 50% of its incremental tax revenue to human development sectors.
3. **Strengthen Institutional Frameworks:** To improve the effectiveness of tax revenue utilisation, Nigerian institutional mechanisms for accountability, transparency, and anti-corruption, like the Independent Corrupt Practices and Other Related Offences Commission (ICPC), and the Economic and Financial Crimes Commission (EFCC) should be strengthened to ensure that revenues are efficiently deployed.
4. **Broaden the Tax Base:** The Nigerian government, through the Federal Inland Revenue Service (FIRS), should implement policies that would intentionally integrate the informal sector into the tax net through simplified tax regimes, taxpayer education, and incentives for voluntary compliance.

5. **Establish Earmarked Funds:** Based on the findings from Ghana (Asiedu, 2022) and Kenya (Wambui & Kipchumba, 2023), Nigeria should consider establishing earmarked tax funds for specific human development outcomes, ensuring that revenues are directly linked to measurable improvements in HDI components.
6. **Reform the VAT System:** Given the negative association between VAT and HDI, policymakers in Nigeria should consider exempting necessities from VAT or introducing a progressive VAT system to reduce the regressive impact on low-income households.

The above recommendations to the Nigerian government should be implemented within a medium-term framework of 3 to5 years with clear performance indicators to track progress.

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