

Assessment of the Relevance of Income Tax Revenue and Sustainable Economic Growth in Nigeria

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Abstract

This study examined the relevance of income tax revenue to sustainable economic growth in Nigeria, with specific emphasis on petroleum profit tax and education tax. The study was motivated by the persistent debate on whether tax revenue contributes meaningfully to economic growth in developing economies such as Nigeria. Annual time-series data covering the period 1993–2023 were employed, and the ordinary least squares (OLS) regression technique was used for data analysis. Gross domestic product growth rate (GDPGR) was used as a proxy for economic growth, while petroleum profit tax to GDP (PPTTGDP) and education tax to GDP (EDTTGDP) served as the explanatory variables. The empirical findings revealed that petroleum profit tax has a positive and statistically significant effect on economic growth in Nigeria. Specifically, the estimated coefficient of PPTTGDP was 3750.077 with a t-statistic of 3.09 and a probability value of 0.0046, indicating significance at the 5 percent level. This suggests that increases in petroleum profit tax revenue are associated with improvements in GDP growth rate. Similarly, education tax was found to exert a positive and highly significant effect on economic growth. The coefficient of EDTTGDP stood at 12,003.89, with a t-statistic of 4.83 and a probability value of 0.0000, confirming significance at the 1 percent level. These results provide empirical evidence that education tax contributes meaningfully to economic growth through enhanced human capital development. Based on the findings, the study concludes that income tax revenue, particularly petroleum profit tax and education tax, is relevant to sustainable economic growth in Nigeria. The study recommends effective utilization of tax revenue, improved tax administration, and diversification of revenue sources to enhance long-term economic growth.

Keywords: Income Tax Revenue; Petroleum Profit Tax; Education Tax; Economic Growth; Sustainable Development; Nigeria

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Introduction

Taxation is a pivotal instrument of economic policy and a primary source of government revenue in most economies. In Nigeria, income tax and other forms of taxation have historically played a crucial role in funding government expenditure, promoting infrastructural development, and fostering sustainable economic growth. Among these taxes, petroleum profit tax (PPT), company income tax (CIT), education tax, and value-added tax (VAT) are key contributors to the nation's fiscal resources. Additionally, innovations in tax administration, such as self-assessment and electronic taxation systems, have increasingly influenced the efficiency of revenue collection and, consequently, the country's economic development. Understanding the relevance of these revenue streams is critical for policymakers, economists, and development planners aiming to achieve sustainable growth in Nigeria.

Petroleum profit tax (PPT) is a major component of Nigeria's tax revenue, reflecting the country's dependence on crude oil. The volatility of global oil prices, combined with inefficiencies in tax collection and compliance, has made PPT a double-edged sword for sustainable economic growth. Studies by Yahaya and Bakare (2022) and Miftahu and Habiba (2022) highlight that PPT has a significant impact on Nigeria's gross domestic product (GDP) growth rate, given the substantial contribution of oil revenues to the federal budget. However, over-reliance on petroleum revenue has also exposed the economy to external shocks, making the evaluation of PPT's relevance to long-term economic growth imperative.

Company income tax (CIT) is another significant revenue source, targeting the profits of businesses operating in Nigeria. CIT has the potential to contribute to economic growth by providing funds for public investments and infrastructural development. Osho, Omotayo, and Florence (2018) assert that CIT directly affects GDP growth by influencing the capital available for government expenditure and development projects. Nevertheless, challenges such as tax evasion, complex regulatory frameworks, and administrative bottlenecks, as highlighted by Mohamed, Ndace, and Shettima (2022), hinder the optimal collection of CIT, thereby reducing its potential to drive sustainable growth.

Education tax, levied on companies to fund education development, serves as both a revenue source and a tool for human capital development. Ordu and Nkwoji (2019) emphasize that education tax promotes long-term economic growth by enhancing the quality of education and equipping citizens with skills necessary for productive engagement in the economy. Given the critical role of education in fostering innovation and workforce development, understanding how education tax influences GDP growth is essential for assessing its contribution to sustainable economic development.

Value-added tax (VAT) and custom duties represent indirect taxation forms that augment government revenue. Politicka (2020) and Olaoye and Ayeni (2022) highlight that VAT and customs duties influence economic development by affecting consumer behavior, trade balance, and investment flows. While VAT is a consumption-based tax that can provide steady revenue, excessive reliance on indirect taxes may disproportionately affect lower-income populations, raising concerns about equitable growth.

The administration of taxes has evolved significantly with technological advancements. Self-assessment systems and electronic taxation platforms have been adopted to improve compliance and efficiency in revenue collection. Olurankinse and Oladeji (2022) note that these systems reduce the cost of tax administration, enhance transparency, and increase revenue generation, thereby supporting government capacity to fund development projects. Similarly, Metin, Ali, and Matehan (2021) observe that e-taxation systems positively affect tax revenue collection and reduce operational inefficiencies, ultimately impacting economic growth.

Despite these potential benefits, Nigeria continues to face challenges in aligning tax revenue collection with sustainable economic growth. Issues such as tax evasion, inadequate enforcement, poor taxpayer education, and bureaucratic inefficiencies reduce the effectiveness of taxation in fostering development. Zwick and Mahon (2021) note that tax policy and its impact on investment behavior are interrelated; poorly structured tax systems can discourage business investment, limiting the growth potential of the economy.

Given the above, assessing the relevance of income tax revenue—specifically petroleum profit tax, company income tax, education tax, VAT, self-assessment, electronic taxation, and custom duties on Nigeria’s sustainable economic growth is crucial. This assessment provides insights into which revenue sources significantly influence GDP growth and highlights policy measures to optimize tax collection while fostering equitable and long-term development. A comprehensive understanding of these relationships will not only enhance tax administration efficiency but also support macroeconomic planning, investment promotion, and the attainment of sustainable development goals in Nigeria.

Statement of the Problem

Despite the critical role of income tax revenue in financing government expenditure and driving economic growth, Nigeria continues to struggle with suboptimal tax collection and its impact on sustainable development. Petroleum profit tax, company income tax, education tax, value-added tax, self-assessment, electronic taxation, and custom duties constitute significant sources of revenue; however, inefficiencies in administration, low compliance levels, and systemic challenges limit their potential to stimulate sustainable economic growth.

Petroleum profit tax, although substantial, is highly vulnerable to fluctuations in global oil prices. Over-reliance on PPT exposes Nigeria’s economy to external shocks, leading to periods of fiscal instability that hinder long-term development. Yahaya and Bakare (2022) and Miftahu and Habiba (2022) indicate that the inconsistent contribution of PPT to GDP growth necessitates alternative strategies to diversify revenue streams and ensure sustainable growth.

Company income tax (CIT) faces significant enforcement challenges, including widespread tax evasion, complex reporting requirements, and inadequate monitoring mechanisms. Mohamed, Ndace, and Shettima (2022) argue that these issues limit the ability of CIT to consistently fund developmental projects, creating a gap between potential and actual contributions to GDP growth. Similarly, education tax, intended to support human capital

development, often suffers from poor compliance and mismanagement, undermining its effectiveness in enhancing productivity and economic growth (Ordu&Nkwoji, 2019).

Indirect taxes such as VAT and customs duties, while important for government revenue, can also generate unintended consequences. Politicka (2020) and Olaoye and Ayeni (2022) note that excessive reliance on consumption-based taxes may increase the cost of living and reduce disposable income, thereby affecting consumer spending and overall economic growth.

Technological interventions in tax administration, including self-assessment and electronic taxation, have shown promise in enhancing revenue collection and efficiency. However, challenges such as inadequate taxpayer education, resistance to digital systems, and infrastructural limitations reduce their effectiveness (Olurankinse&Oladeji, 2022; Metin, Ali &Matehan, 2021). As a result, revenue generation falls short of expectations, constraining government capacity to invest in critical sectors and impeding sustainable development.

These issues collectively underscore a significant knowledge gap: despite the existence of multiple tax streams, the extent to which each contributes to sustainable economic growth in Nigeria remains unclear. Existing studies have examined individual taxes in isolation but have seldom provided a holistic assessment encompassing petroleum profit tax, company income tax, education tax, VAT, self-assessment, electronic taxation, and custom duties together. This fragmented understanding limits policymakers' ability to design effective tax policies that maximize revenue without hindering economic development.

Therefore, this study seeks to assess the relevance of income tax revenue to sustainable economic growth in Nigeria by examining the effect of petroleum profit tax, education tax, and other significant tax variables on GDP growth. By addressing this gap, the research aims to provide actionable insights for improving tax policy, enhancing compliance, and fostering long-term economic development in Nigeria.

Objectives of the Study

The broad objective of this research is to assess the relevance of income tax revenue and sustainable economic growth in Nigeria. The specific objectives of this research work include the following;

- i. To ascertain the effect of petroleum profit tax on gross domestic product growth rate in Nigeria
- ii. To evaluate the effect of education tax on gross domestic product growth rate in Nigeria

Scope of the Study

The study on the "Assessment of the Relevance of Income Tax Revenue and Sustainable Economic Growth in Nigeria" focuses on examining the relationship between various income tax streams and the economic growth of Nigeria. The research primarily covers both direct and indirect tax types, including petroleum profit tax (PPT), company income tax (CIT), education tax, value-added tax (VAT), and custom duties. In addition, it considers the

role of modern tax administration approaches such as self-assessment and electronic taxation systems in improving tax compliance and revenue generation.

Geographically, the study is confined to Nigeria, considering national-level data and statistics on tax revenue and gross domestic product (GDP) growth from relevant government agencies, such as the Federal Inland Revenue Service (FIRS) and the National Bureau of Statistics (NBS). The study period spans the recent two decades, providing insights into trends in tax revenue contributions and their impacts on sustainable economic growth.

Review of Related Literature

Conceptual Review

Income Tax Revenue

Income tax revenue is the portion of government income collected from individuals, companies, and other entities based on earnings or profits. It is a critical component of a nation's fiscal framework and plays a central role in mobilizing domestic resources to fund public expenditure, infrastructure, social services, and development projects. In Nigeria, income tax revenue is generated from several sources, including personal income tax (PIT), company income tax (CIT), petroleum profit tax (PPT), and education tax. Collectively, these taxes form the backbone of government revenue and are essential in ensuring that the state can meet its developmental and policy objectives (Yahaya & Bakare, 2022).

The effectiveness of income tax revenue depends not only on the tax base but also on the efficiency of its administration. Historically, Nigeria has struggled with low compliance rates, widespread tax evasion, and administrative inefficiencies, which have limited the ability of income tax to significantly contribute to sustainable economic growth. Studies have shown that improving tax administration through electronic taxation systems and self-assessment mechanisms enhances compliance, transparency, and revenue mobilization (Olurankinse & Oladeji, 2022; Metin, Ali & Matehan, 2021). For instance, self-assessment allows taxpayers to determine their own tax liabilities, simplifying the process, reducing bureaucratic bottlenecks, and fostering a culture of voluntary compliance. Similarly, e-taxation systems leverage digital platforms to automate filing, payment, and monitoring, reducing errors and fraud while increasing government revenue.

Income tax revenue is essential for macroeconomic stability. By providing the government with the funds necessary to invest in infrastructure, social welfare, and education, it indirectly stimulates economic activity and job creation. For example, revenue from company income tax and petroleum profit tax enables the government to invest in roads, power generation, and industrial projects, which in turn encourage business growth and private sector investment (Ofoegbu, Akwu & Oliver, 2020). Moreover, income tax contributes to reducing reliance on foreign loans and grants, thereby lowering debt-related vulnerabilities and strengthening fiscal independence.

In addition to its fiscal importance, income tax revenue has a distributive function. Taxes collected from high-income earners and profitable companies can be used to fund social programs, reducing inequality and promoting inclusive growth. However, challenges such as weak enforcement, complex tax laws, and insufficient taxpayer education continue to undermine the optimal contribution of income tax revenue to Nigeria's economy. Thus, examining the relevance of income tax revenue to sustainable economic growth provides policymakers with evidence on how to improve tax policy, administration, and compliance to maximize the impact of taxation on the nation's development.

Petroleum Profit Tax (PPT)

Petroleum profit tax (PPT) is a type of direct tax imposed on companies engaged in petroleum exploration, production, and related activities. In Nigeria, PPT represents one of the most significant sources of government revenue due to the country's heavy dependence on crude oil exports. The tax is typically calculated based on the net profits of oil-producing companies, after accounting for allowable deductions, and is designed to capture a substantial portion of the wealth generated from the nation's natural resources (Yahaya & Bakare, 2022; Miftahu & Habiba, 2022).

The contribution of PPT to Nigeria's fiscal system has been immense. It provides the government with funds to finance critical sectors such as infrastructure, healthcare, education, and security, thereby directly impacting economic growth. For instance, revenue from PPT enables the government to invest in roads, energy, and industrial development, which stimulate private sector activities and increase employment opportunities. Additionally, PPT forms a significant portion of the federal budget, highlighting its strategic importance in national development planning (Lyndon & Paymaster, 2020).

Despite its importance, PPT is highly susceptible to global oil market fluctuations. Changes in crude oil prices, production levels, and demand for petroleum products directly influence the amount of tax revenue collected. This volatility exposes Nigeria's economy to fiscal instability and underscores the need for diversifying revenue sources to reduce over-reliance on petroleum. Moreover, administrative inefficiencies and cases of tax evasion in the oil sector have further limited the optimal collection of PPT (Mohamed, Ndace & Shettima, 2022).

Beyond revenue generation, PPT also has implications for sustainable economic growth. By channeling resources into public investments, the tax has the potential to promote long-term development. However, over-dependence on PPT can create structural weaknesses in the economy, such as the neglect of other sectors like agriculture and manufacturing, which are crucial for economic diversification. Economists argue that a balanced approach to utilizing PPT revenue—investing in productive sectors and infrastructure while building a stable tax base from other sources—is essential for achieving sustainable growth (Yahaya & Bakare, 2022).

In recent years, there have been efforts to improve the administration of PPT through better regulation, transparency, and digital reporting systems. Such measures aim to increase compliance, reduce revenue leakages, and ensure that the benefits of PPT are aligned with Nigeria's broader economic development goals. Evaluating the

role of PPT in sustainable economic growth is therefore critical for policymakers, as it provides insights into how this major revenue source can be leveraged effectively while mitigating risks associated with volatility and over-dependence.

Education Tax

Education tax is a levy imposed on companies and certain organizations to generate funds specifically for the development of educational infrastructure, programs, and institutions. In Nigeria, education tax is legally mandated and usually calculated as a percentage of a company's assessable profits. The primary purpose of this tax is to fund educational institutions, improve the quality of teaching, expand access to education, and build human capital, which is essential for economic development (Ordu & Nkwoji, 2019).

Education tax contributes to economic growth by enhancing the quality of the workforce. A well-educated labor force is more productive, innovative, and adaptable, which positively affects business performance and overall national productivity. For instance, investments in higher education and vocational training funded through education tax can produce skilled professionals who drive technological innovation and entrepreneurial activities. These outcomes, in turn, stimulate industrial growth, increase GDP, and foster sustainable economic development (Ofoegbu, Akwu & Oliver, 2020).

Despite its potential, challenges in the administration and utilization of education tax revenue remain significant. Poor compliance by companies, inadequate monitoring, and mismanagement of funds can reduce the effectiveness of this tax in achieving its intended objectives. Ordu and Nkwoji (2019) note that while the education tax provides a stable source of revenue for education, lack of transparency and accountability in fund allocation can undermine its developmental impact. Effective administration and proper oversight are therefore essential to maximize the benefits of education tax for economic growth.

Education tax also has broader social implications. By funding educational programs, the tax promotes equity in access to quality education, reducing socioeconomic disparities and enabling more individuals to contribute meaningfully to economic activities. Furthermore, investments in education enhance a country's human capital index, which international organizations consider a critical determinant of economic competitiveness and sustainable growth.

In the Nigerian context, education tax represents an important policy tool linking fiscal revenue to human capital development and long-term economic progress. Studies have shown that strategic utilization of education tax funds particularly in improving infrastructure, teacher training, and curriculum development can significantly enhance productivity and foster innovation (Ordu & Nkwoji, 2019). Therefore, understanding the role of education tax in promoting sustainable economic growth is essential for policymakers seeking to align fiscal policies with national development objectives.

Economic Growth

Economic growth is defined as the sustained increase in the productive capacity of an economy, leading to higher levels of goods and services over a period. It is a fundamental indicator of a country's economic health and is closely linked to improvements in living standards, employment opportunities, and overall social welfare. In the context of Nigeria, economic growth has been influenced by multiple factors, including natural resource exploitation, government policies, investment flows, and revenue from taxation, particularly income tax revenue, petroleum profit tax (PPT), company income tax (CIT), and education tax (Yahaya & Bakare, 2022; Ofoegbu, Akwu & Oliver, 2020).

Economic growth is often measured by changes in gross domestic product (GDP), national income, and productivity levels. A growing economy enables the government to mobilize resources through taxation, which can then be reinvested into infrastructure, education, health, and social services. These investments further stimulate economic activities, creating a positive feedback loop that sustains growth. For example, taxes collected from petroleum, corporate profits, and other sources can be used to fund roads, power supply, and industrial projects, which attract private sector investment and generate employment opportunities (Osho, Omotayo & Florence, 2018).

In Nigeria, the relationship between income tax revenue and economic growth is complex. While tax revenue provides the government with the means to drive development, inefficiencies in tax administration, tax evasion, and over-reliance on volatile revenue sources like PPT can limit the potential for sustained growth. Yahaya and Bakare (2022) and Miftahu and Habiba (2022) argue that a diversified tax base and effective tax administration are essential for maintaining steady economic growth. Technologies such as e-taxation and self-assessment systems have emerged as tools to improve compliance, transparency, and efficiency, thereby enhancing the contribution of taxation to growth (Olurankinse & Oladeji, 2022; Metin, Ali & Matehan, 2021).

Economic growth is also closely tied to human capital development. Investments in education, funded through mechanisms like education tax, increase labor productivity, foster innovation, and expand entrepreneurial capacity. Ordu and Nkwoji (2019) highlight that human capital development is a key driver of long-term economic growth because it enables the workforce to adapt to changing technologies and market demands. Consequently, taxes that support education have an indirect but significant influence on the trajectory of Nigeria's economic growth.

However, achieving sustainable economic growth is not without challenges. Overdependence on oil revenue, inadequate tax collection mechanisms, and macroeconomic shocks such as inflation, currency volatility, and global market fluctuations can hinder consistent growth. Policies aimed at improving tax compliance, diversifying revenue sources, and strategically investing collected taxes in productive sectors are therefore crucial. Assessing the relevance of income tax revenue—including PPT, CIT, education tax, and other indirect taxes—in driving sustainable economic growth provides essential insights for policymakers to design fiscal strategies that foster long-term development in Nigeria.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) represents the total monetary value of all goods and services produced within a country's borders over a specified period, typically annually. It is the most widely used measure of economic activity and a central indicator of economic growth. In Nigeria, GDP reflects the performance of key sectors such as agriculture, manufacturing, oil and gas, trade, and services, and serves as a benchmark for assessing the impact of fiscal policies, including taxation, on national development (Osho, Omotayo & Florence, 2018).

Tax revenue, particularly income tax revenue, contributes significantly to GDP growth by providing the government with funds for investment in productive infrastructure and social services. Petroleum profit tax (PPT), company income tax (CIT), and education tax are key components of government revenue that influence GDP directly and indirectly. Yahaya and Bakare (2022) and Miftahu and Habiba (2022) note that higher tax revenues allow the government to finance large-scale development projects, which increase economic activity, stimulate demand, and create employment opportunities, all of which are captured in GDP growth figures.

GDP is also influenced by the efficiency and effectiveness of tax administration. Studies by Olurankinse and Oladeji (2022) and Metin, Ali, & Matehan (2021) show that e-taxation and self-assessment systems improve revenue collection, reduce administrative costs, and minimize leakages. As more taxes are collected and allocated efficiently, the government can invest in sectors that generate multiplier effects in the economy, further boosting GDP. For instance, revenues from education tax can improve human capital, resulting in a more productive workforce that enhances output across industries.

Additionally, GDP serves as a tool for policymakers to evaluate economic performance and the effectiveness of fiscal strategies. A growing GDP indicates a healthy economy with expanding production and consumption, while stagnating or declining GDP can signal economic distress. In Nigeria, fluctuations in GDP are often linked to changes in tax revenue, particularly from petroleum profit tax, due to the country's dependence on oil exports. This underscores the importance of sustainable and diversified revenue streams to maintain steady economic growth (Lyndon & Paymaster, 2020).

However, GDP is not only a measure of output but also a reflection of the broader structural dynamics of the economy. Efficient utilization of tax revenues, investment in infrastructure, human capital development, and sound economic policies all contribute to GDP growth. Conversely, corruption, mismanagement, and inefficient tax collection can dampen the impact of revenue on GDP. Thus, examining the relationship between tax revenue—direct and indirect—and GDP provides critical insights into how fiscal policy can be aligned with sustainable economic development objectives in Nigeria (Ofoegbu, Akwu & Oliver, 2020).

GDP serves as both a measure of economic performance and an indicator of the effectiveness of income tax revenue in fostering growth. The linkages between taxation, public investment, and productive output highlight the central

role of PPT, CIT, education tax, and other revenue streams in enhancing Nigeria's economic development and achieving long-term sustainability.

Theoretical Review

Laffer Curve Theory

The theory was propounded by professor Arthur Laffer created in 1974, it visually shows the relationship tax rates and the amount of tax revenue collected by the government. The theory explained the relationship between government revenue raised by taxation and all possible rates of taxation. Theory of Laffer Curve considers the amount of tax revenue raised at the extreme tax rate of 0% and 100%. The theory advocates that a 100% tax rate raises no revenue in the way that a 0% rate raises revenue stating that at 100% rate there is no longer incentive for a rational taxpayer to earn any more income, thus the revenue raised will be 100% of nothing while at the extreme end of 0% no tax revenue is generated to the government. It follows that there must be at least one rate in between where a tax revenue would be at maximum. The theory postulates that increasing tax rate beyond a certain point will become counter-productive for raising further tax revenue. Theory of Laffer Curve is very relevant to the current research work. At a 100% tax rate, government revenue increases but there is no longer incentive for a rational corporate entity to earn any more income. This theory is intended to guide the revenue authorities in tax.

This study therefore anchored on Laffer Curve theory, it a crucial framework for understanding the relationship between tax rates and government revenue, which is highly relevant when evaluating corporate income tax and its impact on sustainable economic growth in Nigeria. The Laffer Curve, introduced by economist Arthur Laffer, posits that there is an optimal tax rate that maximizes government revenue. The curve illustrates that both extremely high and extremely low tax rates can result in reduced revenue. The rationale is that very high tax rates might discourage investment and work, reducing taxable income, while very low rates might not generate sufficient revenue to fund government activities. In Nigeria, setting an optimal corporate income tax rate is crucial for maximizing government revenue without discouraging investment. A tax rate that is too high could lead to reduced corporate profitability and lower overall tax revenue as companies might engage in tax avoidance strategies or reduce their economic activities. The Laffer Curve suggests that moderate tax rates can incentivize corporate investment and economic activity. In Nigeria, setting a competitive corporate income tax rate could attract both domestic and foreign investment, fostering economic growth and development. The Laffer Curve Theory provides valuable insights into the dynamics of corporate income tax and its impact on economic growth. For Nigeria, understanding and applying this theory can help in formulating tax policies that balance revenue needs with the goal of fostering a robust and sustainable economy. By identifying the optimal tax rate, Nigeria can enhance its revenue base while supporting corporate investment and economic development.

Empirical Review

Onaolapo, Fasina, and Adegbite (2013) studied empirically the effect of petroleum profit tax (PPT) on Nigeria economy, secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1970 to 2010. In concluding the analysis, multiple regressions were employed to analyze data on such variables Gross

Domestic Product (GDP), petroleum profit tax, inflation, and exchange rate were all found to have significant effects on the Economics Growth.

Ihenyen and Mieseigha (2014) examined taxation as an instrument of economic growth in Nigeria. Using annual time series data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin during the period 1980 through 2013, data of Corporate Income Tax (CIT), Value Added Tax (VAT) and Economic Growth (GDP) was estimated using the Ordinary Least Square (OLS) technique. The empirical result suggests that the hypothesized link among corporate income tax, value added tax and economic growth indeed exist in the Nigerian context. Thus the result offer tantalizing evidence that taxation is an instrument of economic growth in Nigeria. This conclusion points to the need for additional measures by government in ensuring that taxpayers do not avoid and evade tax so that income can be properly redistributed in the economy.

Ogbonna and Ebimobowei (2012), studied the effects of petroleum income on the Nigerian economy for the period 2000 to 2009 using the gross domestic product (GDP), per capita income (PCI), and inflation (INF) as the explained variables, and oil revenue, petroleum profit tax/royalties (PPT\R), and licensing fees (LF) as the explanatory variables. The sample covers all the economic sectors of the country, including the oil sector and the non-oil sector. This study relied mostly on secondary data from Central Bank of Nigeria's Statistical Bulletin, Nigerian National Bureau of Statistics, and the Nigerian national Petroleum Corporation. Simple regressions models and Statistical Package for Social Sciences were used in this study to evaluate the data collected. The results show that oil revenue has a positive and significant relationship with GDP and PCI, but a positive and insignificant relationship with INF. Similarly, PPT/R has a positive and significant relationship with GDP and PCI, but a negative and insignificant relationship with inflation. It was also found that LF has a positive but insignificant relationship between GDP, PCI and INF, respectively. Based on these findings, this study concludes that petroleum income (oil revenue and PPT/R) has positively and significantly impacted the Nigerian economy when measured by GDP and PCI for the period 2000 to 2009. This study therefore suggests that the effect of petroleum income on the Nigerian economy was positive for the period reviewed.

Saheed, Abarshi and Ejide (2014) examined the empirical relationship between Economic growth and petroleum taxation. In an attempt to investigate the effect of petroleum taxation on economic growth, a simultaneous equation model was used to establish a relationship between the variables Domestic Consumption and production of crude oil, petroleum taxation and government policies. The result obtained from the analysis revealed that a strong positive relationship exist between domestic consumption, Petroleum profit tax (PPT), government policy and economic growth (GDP).

Also, Success, Success and Ifurueze (2012) examined the Impact of Petroleum Profit Tax on the economic development of Nigeria for the period 2000- 2010. The method of analysis used was ordinary least square method. Results showed that Petroleum profit tax impact positively on Gross domestic product growth in Nigeria and it is statistically significant.

Furthermore, Okafor (2012) explored the impact of income tax revenue on the economic growth of Nigeria as proxied by the gross domestic product (GDP) using the ordinary least square (OLS) regression analysis over the period 1981-2007. The regression result indicated positive and significant relationship. However actual tax revenue generated in most years fell below the level expected. The anomaly was attributed to dysfunctional ties in the income tax system, loopholes in tax laws and inefficient tax administration.

Ojong, Ogar and Oka (2020) examined the impact of tax revenue on the Nigerian economy from 2007-2014. The objectives of the study were; to examine the relationship between petroleum profit tax and the Nigeria economy, the impact of company income tax on the Nigerian economy and the effectiveness of non oil revenue on the Nigerian economy. Data were sourced from Central Bank Statistical Bulletin and extracted through desk survey method. Ordinary least square of multiple regression models was used to establish the relationship between dependent and independent variables. The finding revealed that there is a significant relationship between petroleum profit tax and the growth of the Nigeria economy. It showed that there is a significant relationship between non oil revenue and the growth of the Nigeria economy. The finding also revealed that there is no significant relationship between company income tax and the growth of the Nigeria economy. It was recommended that government should endeavour to provide social amenities to all nooks and crannies of the country. Also that government should engage in a complete re-organization of the tax administrative machineries; in order to reduced tolerable problems of tax evasion and avoidance and finally, to enhance the tax base of government, employment opportunities should be created and a good environment for entrepreneurship and innovation to thrive made using tax proceeds.

Guenther, Matsunaga and Williams (2013) distinguished between the concepts of tax avoidance, tax aggressiveness, and tax risk and examined which, if any, of those concepts is related to overall firm risk in USA. Prior research has argued that aggressive corporate tax avoidance, as measured by low cash effective tax rates or high reserves for unrecognized tax benefits, increases firm risk, thereby requiring firms to provide risk-taking incentives to managers. In this study it was tested whether tax avoidance, tax aggressiveness, or tax risk are related to future stock return volatility. The study found a significantly positive relation between tax risk and firm risk, but do not find evidence of a significant association between either tax avoidance or tax aggressiveness and firm risk.

Gatsi, Gadzo and Kportorgbi (2013) used panel data methodology covering ten listed manufacturing firms over seven years to empirically determine the effect of corporate income tax on financial performance in Ghana from 2007-2012. The study revealed that there is a significant negative relation between corporate income tax and financial performance. On the other hand, firms' size, age of the firm and growth of the firm show a significant positive relationship with financial performance.

Bingilar and Oyadonghan (2014) examined the relationship between cash flow and corporate performance in the Food and Beverages sector of Nigeria from 2008-2013. The study involved a survey of Six (6) Food and Beverages companies quoted in the Nigerian Stock Exchange. Data were obtained from the annual report and accounts of the selected companies under study. The relevant data were subjected to statistical analysis using the multiple regression technique. The results of the study revealed that operating and financing cash flows have significant positive relationship with corporate performance in the Food and Beverage Sector of Nigeria. It was also empirically

verified that investing cash flow and corporate performance have significant negative relationship. The researchers recommended that regulatory authorities such as IFRSB, FRCN, CBN, NSE, SEC, NDIC, etc. should encourage external auditors of these quoted Food and Beverages Companies to use cash flow ratios in evaluating the performance of a company before forming an independent opinion on the financial statement. This will give detailed information on the company to enable investors make rational investment decisions.

Edogbanya and Kamardin (2014) studied the concepts and issues of International Financial Reporting Standards (IFRS) adoption by corporate organisations in Nigeria. The research was based on data obtained from survey and literature in the context of worldwide convergence, compliance and adoption processes of IFRS. The study also compared the Nigerian GAAP and IFRS. There is high compliance in adoption particularly by financial institutions and other corporate bodies with little hitches. Recommendations were made amongst which are; provision of proper guidelines on implementation and introduce awareness programme to improve the degree of compliance. Stubelj (2014) presented the theoretical and empirical analysis of the causal relationship between company's investment and profits in EU countries. Following the previous research findings that are not unanimous, the study examined the causal relation between profits and investment both at the aggregate and at the industry level from 2005-2012. The theory on the field allows us to define three basic theses: profits determine investment on the aggregate level or industry sectors level in a national economy, investment determines profits, and profits determine investment and investment determine profits. The study used the Granger definition of causality and the Toda-Yamamoto procedure. Based on the results of the analysis, the study claimed that investment determines profits in a national economy. At the industry sectors level there is the greatest support for a cause-and-effect relation in the direction from profits to investment. The results of the empirical analysis and contextual interpretation can help in identifying potential factors and barriers that hinder the effective functioning of the economic system. It is undisputed that investment and profits is extraordinarily important for the economic system and that the investment and profits relation is undeniably strong.

Methodology

The study adopt *ex-post facto* research design. The choice of the *ex-post facto* design is because the research rely on already recorded events, and researchers do not have control over the relevant dependent and independent variables they are studying with a view to manipulating them (Onwumere, 2009). This research work focuses on of the relevance of income tax revenue and sustainable economic growth in Nigeria for the period 1993 to 2023. This study was conducted using secondary data comprising of company income tax, value added tax, petroleum profit, education tax, import duty, and export duty extracted from CBN Statistical Bulletin/national bureau of statistics, from 1993 to 2023. The study make use of purposive sampling techniques. Data for the study will be extracted from CBN statistical bulletin.

The study made use of time series analysis. Time series analysis involves analyzing data points collected or recorded at successive points in time. The goal is to identify patterns, trends, and other insights to make predictions, understand relationships, or gain insights into the dynamics of the underlying processes (Asteriou, 2006). The panel least squares (panel data technique) has some advantages that include: addressing more complex issues, and it can

estimate several time-series and/or cross sections available in the data. It offers a "dynamic" view about the effect of the variables, which increases the number of degree of freedom, which strengthens the power of the tests. Panel data analysis exploits both the cross section and the time dimension of the data.

Data analysis and Result

Table 1: Descriptive Statistics of the of the variables

	GDPGR	EDTTGDP	PPTTGDP
Mean	0.067775	0.001761	0.015744
Median	0.119430	0.001337	0.001138
Maximum	0.752736	0.009802	0.126872
Minimum	-1.000000	0.000000	3.25E-05
Std. Dev.	0.318203	0.002034	0.030542
Skewness	-1.408799	2.476653	2.457962
Kurtosis	6.635653	9.860514	8.246542
Jarque-Bera Probability	27.32758 0.000001	92.48579 0.000000	66.76949 0.000000
Sum	2.101029	0.054598	0.488060
Sum Sq. Dev.	3.037586	0.000124	0.027984
Observations	31	31	31

Source: Author’s Computation using EViews 10, (2026).

The descriptive statistics in Table 1 provide an overview of the behavior of gross domestic product growth rate (GDPGR), education tax to GDP (EDTTGDP), and petroleum profit tax to GDP (PPTTGDP) over the 31-year study period. The mean value of GDPGR (0.0678) indicates that, on average, Nigeria experienced modest positive economic growth, although the median (0.1194) suggests that growth outcomes were uneven across the years. The wide gap between the maximum (0.7527) and minimum (-1.0000) values of GDPGR reflects periods of strong economic expansion as well as severe economic contraction, highlighting the volatility of Nigeria’s growth performance. This volatility provides a relevant background for assessing how income tax revenues relate to sustainable economic growth.

With respect to education tax revenue, the mean value of EDTTGDP (0.001761) shows that education tax contributed a very small proportion to GDP on average during the period under review. The median value (0.001337), which is lower than the mean, suggests that education tax revenue was relatively low in most years, with occasional higher values pushing up the average. The maximum value of 0.009802 further indicates that even at its peak, education tax made a limited contribution to national output. This pattern implies that while education tax exists as a policy instrument, its scale may be insufficient to exert a strong and consistent influence on GDP growth in Nigeria.

Similarly, petroleum profit tax to GDP (PPTTGDP) recorded a mean value of 0.015744, which is higher than that of education tax, reflecting the dominant role of the petroleum sector in Nigeria’s fiscal structure. However, the

median value (0.001138) is significantly lower than the mean, indicating that petroleum profit tax revenue was highly uneven, with a few years of exceptionally high receipts raising the average. The large difference between the maximum (0.126872) and minimum (3.25E-05) values confirms the instability of petroleum profit tax revenue, largely due to fluctuations in global oil prices and production levels. This instability suggests that reliance on petroleum profit tax may pose challenges for achieving sustainable economic growth.

The measures of dispersion and distribution further reinforce these observations. The standard deviation of GDPGR (0.3182) indicates substantial variability in economic growth, while the relatively low standard deviations of EDTTGD (0.0020) and PPTTGD (0.0305) suggest that, although tax revenues are small relative to GDP, petroleum profit tax is far more volatile than education tax. The skewness values show that GDPGR is negatively skewed, implying that extreme negative growth rates occurred more frequently than extreme positive ones. In contrast, both EDTTGD and PPTTGD are positively skewed, indicating that most observations are clustered at low values, with a few years of high tax contributions.

Finally, the kurtosis and Jarque–Bera statistics reveal that all the variables are non-normally distributed. The high kurtosis values indicate leptokurtic distributions, meaning that extreme values are more pronounced than in a normal distribution. The Jarque–Bera probabilities of 0.0000 for all variables confirm the rejection of normality at conventional significance levels. This non-normal behavior suggests structural instability and shocks in both economic growth and tax revenue performance. Overall, the descriptive results imply that while petroleum profit tax has a relatively larger fiscal presence than education tax, both revenue sources exhibit instability, which may limit their effectiveness in promoting sustainable economic growth in Nigeria.

Test of Hypotheses

Hypothesis One: Petroleum profit tax does not have significant effect on gross domestic product growth rate in Nigeria

Table 2: PPTTGD and GDPGR

Dependent Variable: RGDP
 Method: Least Squares
 Date: 11/08/25 Time: 10:59
 Sample (adjusted): 1993 2023
 Included observations: 31 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PPTTGD	3750.077	1213.454	3.090416	0.0046
R-squared	-1.227812	Mean dependent var		148.2862
Adjusted R-squared	-1.227812	S.D. dependent var		106.3576
S.E. of regression	158.7479	Akaike info criterion		13.00757
Sum squared resid	680423.8	Schwarz criterion		13.05515
Log likelihood	-181.1060	Hannan-Quinn criter.		13.02212
Durbin-Watson stat	1.134603			

Source: Author’s Computation using EViews 10, (2026).

Table 2 presents the result of the ordinary least squares regression examining the effect of petroleum profit tax as a proportion of GDP (PPTTGDP) on gross domestic product growth rate in Nigeria. The estimated coefficient of PPTTGDP is positive (3750.077), indicating that petroleum profit tax revenue has a positive relationship with GDP growth. This suggests that increases in petroleum profit tax revenue are associated with improvements in economic growth performance in Nigeria. The positive sign of the coefficient aligns with theoretical expectations, given the importance of the oil sector as a major source of government revenue and public spending in the Nigerian economy.

The statistical significance of petroleum profit tax is confirmed by the t-statistic value of 3.0904 and a corresponding probability value of 0.0046. Since this probability value is less than the 5 percent level of significance, the null hypothesis that petroleum profit tax does not have a significant effect on gross domestic product growth rate is rejected. This implies that petroleum profit tax has a statistically significant effect on economic growth in Nigeria during the study period. Therefore, petroleum profit tax revenue plays a meaningful role in influencing GDP growth, supporting its relevance in the country’s fiscal framework.

However, the goodness-of-fit indicators suggest caution in interpreting the overall explanatory power of the model. The R-squared and adjusted R-squared values are negative, implying that the model does not adequately explain variations in GDP growth rate when considered in isolation. This may be due to model misspecification, scale differences, or the exclusion of other key growth-determining variables. The Durbin–Watson statistic of 1.1346 further suggests the possibility of positive autocorrelation in the residuals. Despite these limitations, the individual significance of petroleum profit tax indicates that it remains an important determinant of economic growth, although a more comprehensive model may be required to fully capture its long-run impact on sustainable economic growth in Nigeria.

Hypothesis Two: Education tax does not have significant effect on gross domestic product growth rate in Nigeria

Table 3: EDTTGDP and GDPGR

Dependent Variable: RGDP
 Method: Least Squares
 Date: 11/08/25 Time: 11:06
 Sample (adjusted): 1993 2023
 Included observations: 31 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EDTTGDP	12003.89	2486.494	4.827638	0.0000
R-squared	-0.618652	Mean dependent var		148.2862
Adjusted R-squared	-0.618652	S.D. dependent var		106.3576
S.E. of regression	135.3148	Akaike info criterion		12.68815
Sum squared resid	494372.5	Schwarz criterion		12.73572
Log likelihood	-176.6340	Hannan-Quinn criter.		12.70269
Durbin-Watson stat	1.452450			

Source: Author’s Computation using EViews 10, (2026).

Table 3 presents the ordinary least squares regression result examining the effect of education tax as a proportion of GDP (EDTTGDP) on gross domestic product growth rate in Nigeria. The estimated coefficient of EDTTGDP is positive and large (12,003.89), indicating that education tax revenue has a positive relationship with economic growth. This implies that increases in education tax revenue are associated with increases in GDP growth rate, reflecting the growth-enhancing role of education-related fiscal resources through improved human capital development and productivity in the economy.

The statistical significance of education tax is evident from the t-statistic of 4.8276 and the probability value of 0.0000. Since this probability value is far below the conventional 5 percent level of significance, the null hypothesis that education tax does not have a significant effect on gross domestic product growth rate in Nigeria is rejected. This result suggests that education tax revenue exerts a statistically significant effect on economic growth during the period under review, underscoring the importance of education financing in promoting sustainable economic growth in Nigeria.

Nevertheless, the goodness-of-fit statistics indicate that the model has limited explanatory power when education tax is considered in isolation. The negative R-squared and adjusted R-squared values suggest that variations in GDP growth rate are not well explained by education tax alone, pointing to the influence of other macroeconomic and structural factors. The Durbin–Watson statistic of 1.4525 indicates the possibility of mild positive autocorrelation in the residuals. Despite these limitations, the significant positive coefficient of education tax provides empirical evidence that education tax is a relevant fiscal instrument in influencing Nigeria’s economic growth.

Discussion of Result

The findings of this study on the relevance of income tax revenue to sustainable economic growth in Nigeria are discussed in the light of existing empirical evidence. In particular, the results relating to petroleum profit tax and education tax are compared with prior studies to establish areas of agreement and divergence. This approach helps to situate the study within the broader tax–growth and tax–investment literature.

The result of Hypothesis One revealed that petroleum profit tax has a positive and statistically significant effect on gross domestic product growth rate in Nigeria. This finding contrasts with the study by Anike (2020), which reported that corporate income tax does not exert a positive long-run effect on public investment in Nigeria. The divergence may be attributed to differences in tax types and macroeconomic channels. While Anike (2020) focused on corporate income tax and public investment, the present study emphasizes petroleum profit tax and overall economic growth. Given Nigeria’s heavy dependence on oil revenue for financing government expenditure, petroleum profit tax may translate more directly into growth-enhancing spending, unlike corporate income tax which may be constrained by financial sector bottlenecks and inefficiencies highlighted in Anike’s study.

Similarly, the positive effect of petroleum profit tax on GDP growth differs from the findings of Odia and Ogiedu (2020), who observed that corporate taxes have a negative and non-significant effect on the investment behavior of banks in Nigeria. Their conclusion that profitability, rather than taxes, is the major determinant of investment

suggests that corporate taxation may discourage private sector investment. However, petroleum profit tax largely targets the oil sector and accrues substantial revenue to government, which can stimulate growth through public expenditure. This distinction explains why petroleum profit tax may support aggregate economic growth even when corporate taxes negatively affect firm-level investment decisions.

The findings of this study also partially align with Azarmi and Schmidt (2020), who found that increases in corporate and personal tax rates significantly reduce investment inputs and corporate output in the United States. While their study emphasizes the distortionary effects of taxation on private sector investment, the present study highlights a positive growth effect of petroleum profit tax in Nigeria. This difference can be explained by structural and institutional variations between developed and developing economies. In Nigeria, oil-related tax revenue often serves as a major source of funding for public infrastructure and social services, which may outweigh the potential distortionary effects of taxation on private investment.

With respect to Hypothesis Two, the study found that education tax has a positive and statistically significant effect on gross domestic product growth rate in Nigeria. This result contrasts with the findings of Akhor and Ekundayo (2020), who reported that value added tax and customs and excise duties exerted negative effects on economic growth. The disparity may be due to the nature of the taxes examined. Unlike indirect taxes such as VAT and customs duties, which may raise production costs and reduce consumption, education tax is specifically earmarked for human capital development. Investment in education improves labor productivity and innovation capacity, thereby fostering long-term economic growth.

Overall, the results of this study suggest that not all taxes exert uniform effects on economic growth. While several previous studies report negative or insignificant effects of corporate and indirect taxes on investment and growth, the present findings indicate that petroleum profit tax and education tax play significant growth-enhancing roles in Nigeria. This underscores the importance of efficient tax administration and effective utilization of tax revenue. When tax proceeds are properly channeled toward productive sectors such as infrastructure and education, they can contribute meaningfully to sustainable economic growth, despite the mixed evidence reported in earlier empirical studies.

Conclusion and Recommendations

Conclusion

This study examined the relevance of income tax revenue to sustainable economic growth in Nigeria, with particular focus on petroleum profit tax and education tax. The empirical results revealed that petroleum profit tax has a positive and statistically significant effect on gross domestic product growth rate in Nigeria. This finding suggests that revenue generated from the petroleum sector contributes meaningfully to economic growth, largely due to its role in financing government expenditure and development projects. Despite volatility in oil revenue, petroleum profit tax remains an important fiscal instrument in influencing Nigeria's growth performance.

The study further found that education tax also has a positive and statistically significant effect on gross domestic product growth rate in Nigeria. This indicates that funds generated through education tax contribute to economic growth by supporting human capital development, improving labor productivity, and enhancing the long-term growth capacity of the economy. Although the descriptive statistics showed that education tax contributes a relatively small proportion to GDP, its impact on growth is statistically meaningful, highlighting the importance of targeted tax revenue utilization.

Overall, the findings demonstrate that income tax revenue, particularly petroleum profit tax and education tax, plays a significant role in promoting economic growth in Nigeria. However, the results also suggest that these taxes, when considered in isolation, may not fully explain variations in economic growth, pointing to the influence of other macroeconomic and structural factors. This underscores the need for complementary policies to enhance the growth impact of tax revenue.

Recommendations

In line with the findings and conclusions of this study, the following recommendations are made:

- i. Government should ensure that petroleum profit tax revenue is efficiently allocated to growth-enhancing sectors such as infrastructure, health, and industrial development. This will help maximize its positive impact on economic growth and reduce the adverse effects of revenue volatility.
- ii. There is a need to strengthen the administration and transparency of education tax to ensure that funds collected are adequately channeled toward improving educational facilities, research, and skills development. This will further enhance human capital and sustain long-term economic growth.

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