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EFFECT OF TAX SYSTEM ON THE SUSTAINABLE ECONOMIC GROWTH IN NIGERIA

Odo John Onyemaechi (Ph.D) and Nwachukwu Basilia Chiamaka (PhD)
Department of Accountancy, Godfrey Okoye University, Enugu

Keywords: *Economic Growth, Sustainable, System, Tax*

Abstract: *The study examined the effect of the tax system on sustainable Economic Growth in Nigeria. The specific objectives are to examine the effect of corporate tax on sustainable economic growth in Nigeria and evaluate the effect of capital gains tax on sustainable economic growth in Nigeria. The study employs a quantitative research design. Data were collected from the National Bureau of Statistics (NBS) for economic growth, the Federal Inland Revenue Service (FIRS) for corporate tax and capital gains tax rates, and World Bank and International Monetary Fund (IMF) databases for additional economic metrics. The data was analyzed using multiple regression analysis. The result revealed that Corporate tax has a statistically negative effect on sustainable economic growth with a t-statistic of -2.133 and a p-value of 0.0617. While the Capital gains tax has a statistically negative effect on sustainable economic growth, with a t-statistic of -1.357 and a p-value of 0.2080 in Nigeria. The study concluded that the current Nigerian tax system is hindering sustainable Economic Growth in Nigeria. The study recommended, among others, that corporate tax rates be reduced to encourage domestic and foreign investment.*

1.1 Introduction

The tax system is a fundamental component of a nation's fiscal policy, serving as a primary mechanism for generating revenue to fund government operations and public services. It encompasses various forms of taxation, including income tax, corporate tax, value-added tax (VAT), and property tax, each designed to collect funds from individuals and businesses based on their economic activities. The effectiveness of a tax system is crucial for promoting economic stability, growth, and development, particularly in developing countries like Nigeria. In Nigeria, the tax system has undergone several reforms to enhance revenue generation and compliance. The government relies heavily on tax revenues to finance essential services such as education, healthcare, and infrastructure development. However, the complexity and multiplicity of taxes can create compliance challenges for taxpayers and tax administrators alike,

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potentially deterring investment and hindering economic growth (Ajayi & Jerome, 2017; Chukwuemeka & Akinwunmi, 2018).

The tax system in Nigeria is a complex framework designed to generate revenue for the government at various levels—federal, state, and local. Established through a series of laws and regulations, the Nigerian tax system is structured to meet the diverse economic needs of the country while ensuring compliance and efficiency in tax collection. The Federal Inland Revenue Service (FIRS) is the primary agency responsible for administering federal taxes, while state boards of internal revenue manage state taxes, and local government revenue committees oversee local levies and taxes. Historically, Nigeria's tax system has evolved through several phases, from traditional tax practices in pre-colonial societies to the formalized tax structures introduced during the colonial era. The British colonial administration implemented direct and indirect taxes to finance governance and infrastructure, laying the groundwork for the modern tax system. Post-independence, Nigeria has faced numerous challenges in its tax administration, including a narrow tax base, high levels of tax evasion, and inefficiencies in tax collection processes.

A well-structured tax system can provide a stable and predictable flow of revenue, which is essential for financing public services and infrastructure development. This is particularly important in Nigeria, where the government faces increasing demands for social services due to a growing population and technological advancements (Kusi, 1998). Effective taxation not only generates revenue but also promotes economic growth by redistributing wealth and fostering social equity (Bird & Zolt, 2003).

Moreover, the relationship between taxation and economic growth is significant. Research indicates that effective tax policies can stimulate economic activity by providing the necessary funds for public investment, which in turn can lead to job creation and improved living standards (Adebayo et al., 2024). Conversely, poorly designed tax systems can lead to inefficiencies, tax evasion, and a narrow tax base, ultimately limiting the government's capacity to invest in critical sectors of the economy (IMF, 2019; Ogundele et al., 2021). The tax system is a vital instrument for economic development, influencing both the government's ability to fund public services and the overall economic environment. Understanding the intricacies of Nigeria's tax system is essential for policymakers to foster sustainable economic growth and improve the quality of life for its citizens.

1.2 Statement of the Problem

Despite the critical role that taxation plays in funding government initiatives and fostering economic development, Nigeria's tax system faces significant challenges that hinder its effectiveness in promoting sustainable economic growth. The heavy reliance on oil revenue has created a narrow tax base, leading to insufficient domestic revenue generation. Compounded by high levels of tax evasion, complexities in tax

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administration, and a lack of comprehensive tax reforms, the current tax system does not adequately support the necessary investments in infrastructure, education, and healthcare essential for sustainable growth (Uzonwanne, 2015; Ogundele et al., 2021).

Moreover, the inefficiency of tax collection mechanisms and the perception of inequitable tax burdens further discourage compliance among taxpayers, particularly in the informal sector, which constitutes a significant portion of Nigeria's economy (Akinwunmi & Chukwuemeka, 2018). This ineffective tax system not only limits the government's capacity to fund critical public services but also exacerbates income inequality and hinders socio-economic development, ultimately affecting the quality of life for citizens (Adebayo et al., 2024).

In light of these challenges, it is imperative to explore the relationship between Nigeria's tax system and sustainable economic growth, identifying key factors that contribute to or impede effective taxation. This analysis aims to provide insights that can inform policy reforms necessary for revitalizing the tax system and fostering an environment conducive to sustainable economic growth in Nigeria.

1.3 The objective of the Study

The main objective of this study is to examine the effect of the tax system on sustainable Economic Growth in Nigeria. The specific objectives are to;

i. Examine the effect of corporate tax on sustainable economic growth in Nigeria

ii. Evaluate the effect of capital gains tax on sustainable economic growth in Nigeria

1.4 Hypotheses of the study

i. Corporate tax has no significant effect on sustainable economic growth in Nigeria.

ii. Capital gains have no significant effect on sustainable economic growth in Nigeria.

Review of Related Literature

Conceptual Review

Tax System

Bryzgalin (2002) defines the tax system as an interconnected community of all existing public relations (economic, political, organizational, and legal) in the field of taxation. According to the author, the main elements of any state's tax system are the economic characteristics of the tax system, current and future courses of the tax policy, the system of tax legislation principles, the system of tax and other fiscal bodies, the conditions of interaction between budgetary and tax systems, the procedures of tax distribution among budgets, the forms and methods of tax control, the order and conditions of tax proceedings, the responsibility of tax legal relations' participants, the means of protecting the rights and interests of taxpayers, etc. Is a set of tax regulations, institutes, and norms, bound in a unique mechanism to achieve a certain tax policy. The tax system includes a large number of tax forms that differ in each system. This system is a set of institutes and instruments available to tax authorities for achieving certain fiscal, economic, social, and political goals within the economic system.

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The tax system is structured in a way that allows domestic corporations to be taxed on their assessable profit which is generated from all its activities carried out globally while foreign corporations are subjected to tax only on income from domestic activities within the jurisdiction (Adejare, 2015). Ivanova (2004) views the tax system as a complex legal, socioeconomic, and political phenomenon of public life, wherein the following constituents can be distinguished: the juridical construction of the tax as the fundament for the tax system formation (distinguished from the taxation system to emphasize the special role of the legal category as a system-forming element); the state taxation system that is formed, based on the unification of the juridical constructions of all imposed and introduced taxes; the rulemaking activity of representative government bodies in the field of taxation; the system of tax bodies; tax control; the state tax policy; the tax culture of the population. Yutkina (1999) argues that the tax system is a set of taxes, duties, and fees that are charged in the territory of a state under the tax code, and also the set of rules and regulations that determine the powers and responsibilities of parties that participate in tax legal relations. Different nations have different tax systems, which can be impacted by factors like political concerns, social goals, and economic policies. Generally, the tax system is essential for paying for public spending, allocating revenue, and affecting economic activity. It is a subject of continuous discussion and changes meant to increase effectiveness, equity, and openness.

Corporate tax

A tax levied on the earnings, corporation profits of businesses, or other commercial organizations collected by a government as a source of income is known as corporate tax. It applies to a company's income, which is revenue minus expenses. Corporate taxes are taxes directly paid by companies periodically to the government of a particular country or nation where they operate. The government imposes corporate taxes on the net profit of the corporations (Olaoye & Alade, 2019). Corporate taxes are one of the major sources of revenue available to finance government expenditures, and they're also an important factor that determines capital investment in every nation of the world (Ileana et al, 2016). The concept of corporate tax has different dimensions from a conceptual standpoint.

The first dimension considers corporate taxpayers, which is about the evaluation of how this tax affects the income of firms whilst carrying out production activities, while the second dimension considers corporate tax based on its influence on the way firms are financed. The first and second dimensions of corporate tax go hand in hand in influencing the company's preference for a financing decision that is centered on the company's sustainable performance. Corporations must file yearly tax returns, which reveal their income, allowable deductions, and final tax liability. This deduction

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may include operations-related costs, such as personnel salaries, equipment purchases, and research and development costs. Corporate tax obligations contribute to the cost of investment and thereby encourage the substitution of other productive factors (such as labour) for capital used by corporations.

Corporation tax is an issue that has often been addressed by many people for decades. In the surf revival and change of the world economy, corporate tax is often associated with the issues of reformation (Llemona et al, 2019; Nwaorgu et al, 2020). Corporate tax rates vary widely by country, with some countries considered to be tax havens due to their low rates. Corporate taxes can be lowered by various deductions, government subsidies, and tax loopholes, and so the effective corporate tax rate, the rate a corporation pays, is usually lower than the statutory rate, the stated rate before any deductions. Corporate taxation increases the cost of producing corporate output, thereby raising output prices, depressing demand, and shifting output from the corporate sector of the economy to the non-corporate sector. Corporate tax rates may also differ for domestic and foreign corporations. Many countries have tax laws that require corporations to pay taxes on their worldwide income, regardless of where the income is earned. However, some countries have territorial tax systems, which only require corporations to pay taxes on income earned within the country's borders.

A country's corporate tax may apply to:

i. Corporations incorporated in the country,
ii. Corporations doing business in the country on income from that country,
iii. foreign corporations that have a permanent establishment in the country, or
iv. Corporations deemed to be residents for tax purposes in the country.

Company income subject to tax is often determined much like taxable income for individual taxpayers. Generally, the tax is imposed on net profits. In some jurisdictions, rules for taxing companies may differ significantly from rules for taxing individuals. Certain corporate acts or types of entities may be exempt from tax (W.C, 2024).

Capital gains

Capital gains are income derived from the sale of a capital asset. Gain here means increases resulting in the market value of assets to a person who does not regularly offer them for sale and in whose hands they do not constitute stock in trade. Capital gains may arise in two instances, in the first place, where the asset appreciates while still in the hands of the owner, or maybe he realized gains when the assets are sold or disposed of. Capital gains tax is payable on stocks, shares, securities, land and buildings, plant and machinery every business asset, such as goodwill and secret processes. Capital gains tax has been justified on the ground that capital gain on assets increases a person's or a person's taxable capacity by increasing their power to spend or save. Capital gains are not distributed among the different members of the tax-paying

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community in a fair proportion to their taxable incomes, but are concentrated in the hands of property owners and it has been argued that their exclusion from the scope of taxation constitutes a serious discrimination in tax treatment in favor of a particular class of taxpayers. Non-payment of capital gains tax will create discrimination in favor of property owners that will lead to further reinvestment of those gains in assets, thereby perpetuating further severe inequalities in income and wealth, as capital gains only accrue to those who own property. Non-payment of capital gains tax accruing especially to those in the upper-income bracket, puts a greater relative burden on the income tax of those who do not enjoy such gains (Ayua, 1999). In developing countries, capital gains tax is a lucrative source for raising money for development.

This gain, Tripathy (1978) has argued that in developing countries there exist large opportunities for the realization of capital gains because of the tendency of rising prices inevitably accompanying a process of accelerated economic development, besides, the process of economic development itself tends to generate capital gains because of the rise in real income, company profits and the value of shares. However, the proportion of wealth held in the form of equity shares of the capital gain arises to the owners of property such as land and real estate. Thus, the taxation of capital gains tax constitutes an important fiscal mechanism to plow back a proportion of the increased benefits accruing to the holders of property as a result of a process of development into the developmental funds of public sectors. Whatever arguments are in favor of capital gains tax, capital gain tax like other types of taxation has been criticized as having a kind of a lock-in effect on business in the sense that it inhibits the sale of capital assets that have appreciated (Brown, 1955). It is also argued that it reduces the flow of investment, especially in developing countries where there is a high need for greater investment mobility (Amatong, 1975). The negative effect on the sale of the asset will be minimal where capital gains are payable on the value of appreciation, where the tax is not only through the sale of asset.

Sustainable Economic Growth

Sustainable economic growth refers to economic activities that improve the quality of life and the welfare of society. Sustainable economic growth also refers to a rate of economic growth maintained without creating future significant problems. Sustainable economic growth is the long-term increase in a nation's wealth and productive capability without compromising the ability of future generations to meet their requirements. Economic progress, environmental preservation, and social inclusion are all integrated into this idea. Sustainable development strives for moderate and responsible use within the economic activity of the limited resources of our planet, whereas economic growth does not limit resource exploitation and energy, being mainly focused on productivity increase. The concepts of economic growth and development are closely related.

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Sustainable economic growth comprises essential elements such as:

I **Institutional Framework:** Achieving sustainable economic growth requires strong institutions and sound governance. Institutions that uphold transparency and accountability foster confidence and trust among the public, companies, and investors, which stimulates the economy.

ii. **Environmental sustainability:** It refers to resource management that avoids irreparably harming the environment or depleting natural resources. It covers methods like waste reduction, the development of renewable energy, and sustainable agriculture.

iii. **Technical Advancement and Innovation:** Ongoing innovation and technical advancement are essential to sustainable growth. Research & development expenditures boost productivity, develop new markets, and generate job possibilities.

IV. **Long-Term View:** Planning and decision-making for sustainable growth must consider the long-term effects of present activities. The well-being of future generations shouldn't be sacrificed for short-term profits.

v. **Social Equity:** Not only a privileged few, but all facets of society should profit from economic prosperity. Inequality and poverty are decreased by social equity policies that support healthcare, education, and income redistribution.

vi. **Economic Efficiency:** The optimal use of resources to maximize output while avoiding waste is ensured by efficient resource allocation. To increase productivity, this entails making investments in technology, infrastructure, and education.

The goal of sustainable economic growth is to provide a higher standard of living for both the current and future generations by striking a balance between social progress, environmental conservation, and economic prosperity. To do this, a comprehensive strategy combining social, environmental, and economic policies is needed (Pearce and Barbier, 2020; Todaro and Smith, 2020).

2.2 Theoretical Review

Optimal Corporate Tax Theory

According to Mirrlees (1971), optimal corporate tax theory is based on the principle of utilitarianism. This principle is hinged on the argument that the marginal corporate tax rate should not increase the financial burden of taxpayers. The optimal corporate tax theory embodies an assumption that the imposition of a given tax rate should create incentives, efficiency, and information sharing to maximize social welfare without increasing tax liability. It is argued that one opportunity to lessen the negative effect of corporate taxation on investments and increase private investments is by the government providing investment incentives. The theoretical principles surrounding corporate taxation are used to expound on the analysis that a non-zero effective corporate tax rate (ECTR) is in itself a problem adequate for research investigation. High taxation is one of the precursors to the tragedy of

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the common good. According to Koehne (2017), the interest of optimal corporate taxation is to eliminate deadweight loss in the economy to increase economic efficiency.

The Endogenous Growth Theory:

The use of the endogenous growth model has dominated development economics despite the peculiarities in various tax-related studies. The endogenous growth theory advocates the stimulation of the growth rate in per capita output within the system through economic policies such as tax policies (Ugwunta and Ugwuanyi, 2015). The theory explains that economic growth is achieved from within the system as a result of the internal workings of the system. Hence, there is a need for policies like taxation, which will enhance revenue generation and promote economic growth. Therefore, the endogenous growth theory is relevant because a well-harnessed and administered capital gains tax has the potential to not only increase revenue generation but to stimulate economic growth and development.

2.3 Empirical Review

Fasina and Adegbite (2016) conducted a study to assess the impact of capital gain tax on economic growth in Nigeria. The study aims to ascertain the effect of capital gain tax on economic growth and the significant components of Economic growth in Nigeria. Data were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and the Federal Inland Revenue Service Bulletin from 2006 to 2015. The results revealed that Capital gain tax had a positive significant impact on Economic growth but the level of significance is very low in Nigeria

Ngu (2020) conducted a study to examine the effect of capital gains tax on total tax revenue and economic growth in Nigeria. The study aims to analyze capital gains tax and its effect on total tax revenue and capital gains tax and its effect on economic growth in Nigeria. The ex-post facto research design was adopted for this study. The results revealed that capital gains tax has not significantly contributed to total tax revenue and economic growth in Nigeria.

Adewale and Godwin (2022) conducted a study to examine the effect of corporate taxes and the financial performances of Small and Medium Enterprises in Nigeria. The study aims to investigate the extent to which various corporate income taxes and education taxes have affected the financial performances of Small and Medium Enterprises in Nigeria. The study adopted the longitudinal research design using secondary data with ordinary least square regression technique of analysis and time series data. The results revealed that the company's income tax has a positive and insignificant effect on the financial performance of small and medium enterprises in Nigeria.

Nganyi et al (2024) conducted a study to determine the relationship between investment incentives on the effective corporate tax rate of manufacturing firms in Kenya. This study aims to determine the effect of profit-based incentives on the effective corporate tax rate, establish the effect of capital investment incentives on the

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effective corporate tax rate, and establish the effect of custom duty incentives on the effective corporate tax rate for manufacturing firms in Kenya. The study adopted a positivist philosophy and longitudinal research design. The results established that investment incentives are statistically significant predictors of effective corporate tax rates for manufacturing firms in Kenya.

3. Methodology

This study employs a quantitative research design to analyze the effect of the tax system on sustainable economic growth in Nigeria, focusing specifically on the influence of Corporate Tax (CT) and Capital Gains Tax (CGT) on GDP growth. The target population for this study comprises Nigerian businesses and economic data from national statistical agencies. Data for the study were collected from the National Bureau of Statistics (NBS) for economic growth, the Federal Inland Revenue Service (FIRS) for corporate tax and capital gains tax rates, and World Bank and International Monetary Fund (IMF) databases for additional economic metrics. The data was analyzed using multiple regression analysis. To assess this relationship, the study employs the Ordinary Least Squares (OLS) regression technique, a widely accepted econometric method for estimating linear relationships between variables. OLS estimation minimizes the sum of squared residuals to produce the best linear unbiased estimates (BLUE) of the regression coefficients. This approach aligns with the econometric principles outlined by Wooldridge (2012). The functional form of the model is presented as;

$$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2 + \hat{\beta}_3 x_3 + \cdots + \hat{\beta}_n x_n + \cdots \alpha_i \ldots . (1)$$

where $\hat{y}$ denotes the dependent variable (GDP), X_i represents the independent variables (CT and CGT), $\hat{\beta}_i$ are the estimated coefficients, and α_i is the error term capturing random disturbances? The goal of the model is to assess the direction and magnitude of the relationship between tax policies and economic growth. The time series model used in this research is further summarized in Table 1, which provides a simplified representation of the regression framework.

Table 1: Time series data models

Terms	Model
Equation	$y_i = (\beta_0) + X_i\beta + \alpha_i$
Intercept	β_0
Independent variable	X_i
Slope	$\beta_.$

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Table 1 is the time series data model. The model equation $y_i = (\beta_0) + X_i\beta + \alpha_i$ represents a linear regression framework where y_i is the dependent variable being predicted? The intercept β_0 indicates the expected value of y when the independent variable X_i is zero. The slope β_0 signifies the change in y for each one-unit increase in X_i. Lastly, the error term α_i accounts for the variation in y that is not explained by the model, capturing the influence of other factors or randomness. The data collected for this study is sourced from the website of the Federal Inland Revenue of Nigeria from 2012 to 2023. Results

ADF Unit Root Test

The Augmented Dickey-Fuller (ADF) test is a fundamental statistical procedure in time series analysis, used to determine whether a data series is stationary. A time series is considered stationary when its characteristics, such as the mean and variance, remain consistent over time. This quality is crucial because many econometric models, particularly those based on regression, rely on the assumption of stationarity. If the data is not stationary, any analysis performed on it may produce distorted or misleading conclusions. At the core of the ADF test is the concept of a unit root, which indicates non-stationarity. The test is built around two hypotheses: the null hypothesis asserts that the series has a unit root (i.e., it is non-stationary), while the alternative hypothesis suggests the series is stationary. To evaluate this, the ADF test incorporates lagged values of the variable in a regression model to account for autocorrelation. The significance of the lagged term's coefficient helps determine whether the null hypothesis can be rejected.

4 Result

Exploratory Data Analysis

Exploratory Data Analysis (EDA) is a vital starting point in any research that relies on data, especially when the goal is to understand complex economic relationships. In this study, EDA is used to investigate how fiscal indicators such as Corporate Tax (CT), Capital Gains Tax (CGT), and Gross Domestic Product (GDP) have behaved over time within the Nigerian economy. Exploring these variables offers valuable context before diving into more technical modeling, helping to shed light on how government revenue sources relate to broader economic growth.

Through the use of visual tools like graphs and trend lines, alongside basic descriptive statistics, the EDA process reveals important features in the data, such as trends, fluctuations, and patterns that might otherwise go unnoticed. It helps pinpoint moments of sharp increase or decline, periods of stability, and signs of volatility. This stage also helps identify potential problems in the data, such as outliers or missing values, and ensures that the dataset is clean and reliable enough for further statistical analysis. Ultimately, EDA sets the tone for the entire research process by grounding it in a clear understanding of the real-world data behind the numbers.

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Table 2: Descriptive Summary

	GDP	CT	CGT
Mean	461.2375	365.7379	21.23754
Median	462.6043	246.769	14.69835
Standard Deviation	52.98221	258.7427	27.28269
Skewness	0.498148	1.271021	2.187726
Kurtosis	3.056010	3.497728	6.817896
Jarque-Bera	0.497872	3.354857	16.86046
Probability	0.779630	0.186854	0.00022

Table 1 above is the descriptive summary of the study variable. The mean values show the average figures recorded over the study period, with GDP at approximately 461.24, Corporate Tax (CT) at 365.74, and Capital Gains Tax (CGT) at 21.24. The median values for each variable are relatively close to their respective means, especially for GDP, suggesting a fairly symmetrical distribution. However, CT and CGT show some disparity between their mean and median, indicating possible skewness in their data distribution. The standard deviation provides insight into the level of variability in each dataset. GDP has a moderate standard deviation (52.98), implying relatively stable changes over time. CT, however, has a higher standard deviation (258.74), indicating more significant fluctuations. CGT, with a standard deviation of 27.28, also shows noticeable variability, although lower than CT.

The skewness values confirm the direction of the asymmetry: GDP is moderately right-skewed (0.50), CT is more right-skewed (1.27), and CGT is highly right-skewed (2.19), suggesting that these tax variables experienced occasional very high values that pulled the distribution to the right. The kurtosis values reveal the "peakedness" of each distribution. GDP and CT are close to the normal distribution benchmark of 3, while CGT shows a high kurtosis of 6.82, indicating a heavy-tailed distribution with the presence of extreme values. The Jarque-Bera (JB) statistics and their associated probabilities help assess normality. GDP has a high p-value (0.7796), indicating it is normally distributed. CT's p-value (0.1869) also suggests no significant deviation from normality. In contrast, CGT has a very low p-value (0.00022), strongly rejecting the null hypothesis of normality and confirming the presence of non-normal features, likely due to its high skewness and kurtosis.

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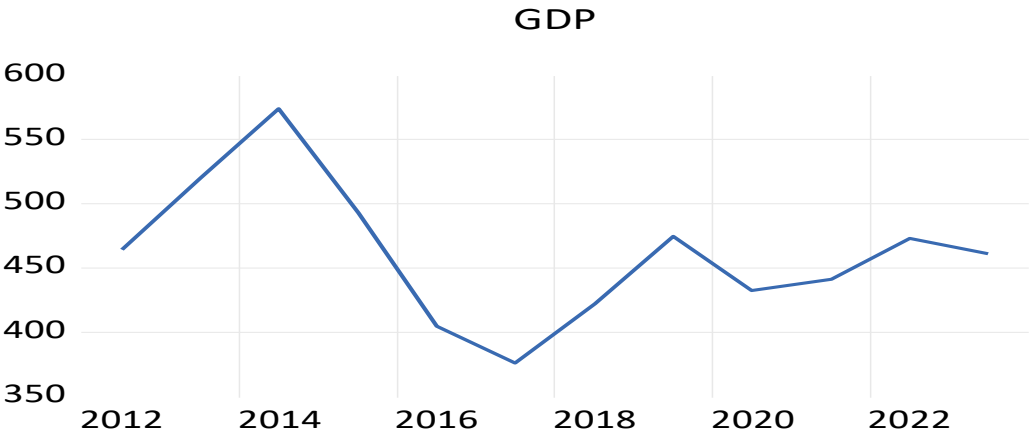

Fig 1: Line plot of GDP

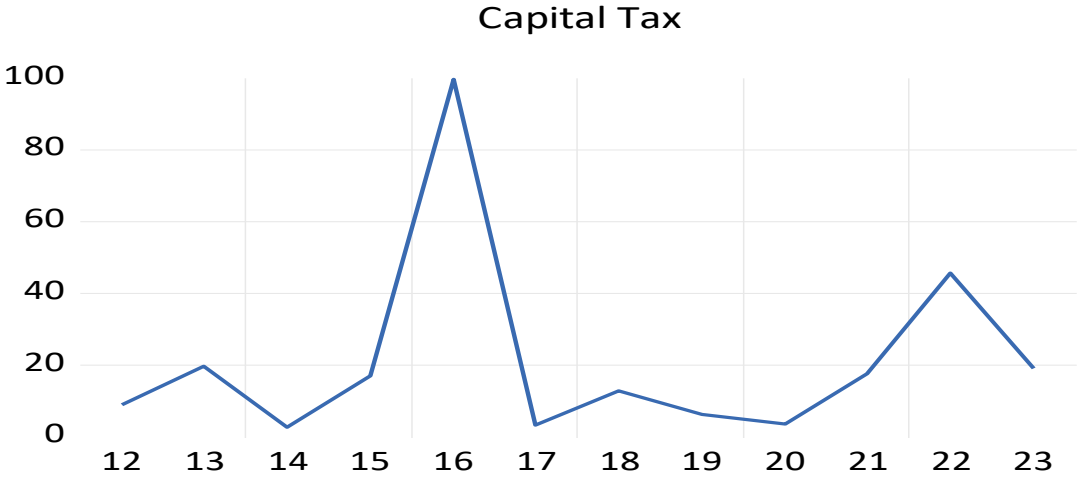

Fig 2: Line plot of Capital gain tax

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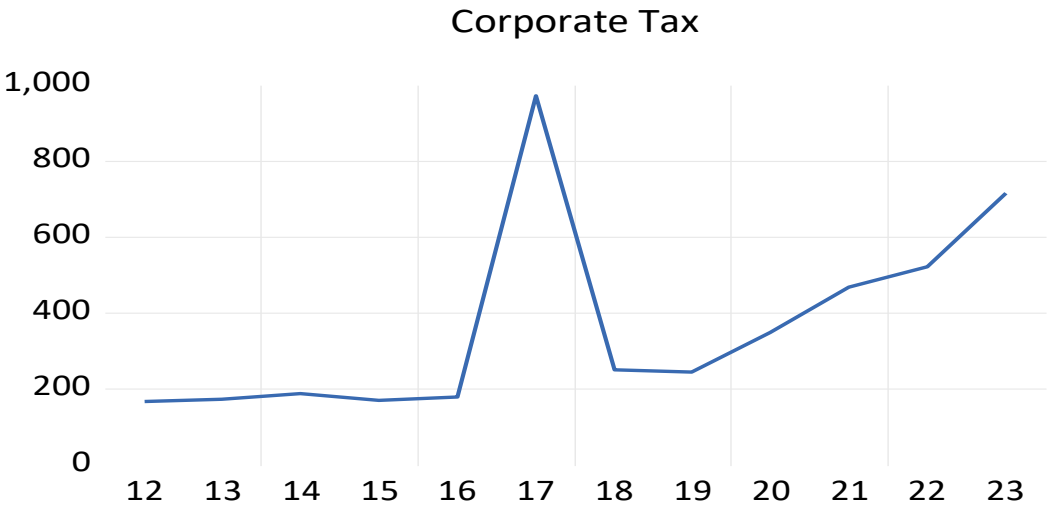

Fig 2: Line plot of Corporate Tax

Result of the ADF unit root test

The results of the panel unit root tests are displayed in Tables 2. Two test statistics are calculated for each variable. The results show that all the variables are stationary in the level form.

Table 3: Panel Unit Root Test

	ADF	INTERGRATION ORDER	Comments
GDP Growth Rate	-4.131293 [0.0148]	I (1)	Stationary after the first difference
CT	-4.688268 [0.0058]	I (1)	Stationary after the first difference
CGT	-3.490210 [0.0305]	I (0)	Stationary after the level stage

The Augmented Dickey-Fuller (ADF) unit root test results indicate that both GDP Growth Rate and Corporate Tax (CT) are not stationary at their level forms but become stationary after first differencing. This means they are integrated of order one, I (1), suggesting that their statistical properties, such as mean and variance, are not constant over time in their original form but stabilize after taking the first difference. The p-values for GDP and CT are below the 0.05 threshold (0.0148 and 0.0058, respectively),

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which confirms the rejection of the null hypothesis of non-stationarity.

On the other hand, Capital Gains Tax (CGT) is found to be stationary at level, or I (0), with an ADF statistic of -3.490210 and a p-value of 0.0305. This implies that the CGT time series does not require differencing to achieve stationarity, making it suitable for inclusion in models without transformation. The mixed integration orders of the variables I(1) for GDP and CT, and I(0) for CGT, highlight the need for careful model specification in subsequent regression analysis to avoid biased or inconsistent results.

Correlation

Correlation analysis is used to measure the strength and direction of a linear relationship between two variables, essentially showing how they move together over time. It provides a straightforward way to explore associations without implying any cause-and-effect relationship. The correlation coefficient gives a numerical value that reflects how closely the variables are linked. However, it's important to note that correlation does not account for the influence of other factors outside the two variables being examined, nor does it indicate causality. With this in mind, the correlation table below has been generated to show the relationships among the variables used in this study.

Table 4: Bivariate Correlation of all the variables

Correlation	GDP	CGT	CT
GDP	1		
CGT	-0.2666	1	
CT	-0.5068	-0.1650	1

Table 4 is the correlation table, which presents the relationships between Gross Domestic Product (GDP), Capital Gains Tax (CGT), and Corporate Tax (CT). From the table, GDP has a negative correlation with CGT (-0.2666), indicating a weak inverse relationship, meaning that as CGT increases, GDP tends to decrease slightly, and vice versa. Similarly, GDP has a moderate negative correlation with CT (-0.5068), suggesting a stronger inverse relationship: higher corporate taxes may be associated with lower GDP. Additionally, the correlation between CGT and CT is also negative but weak (-0.1650), implying that there is a slight tendency for these two taxes to move in opposite directions. Overall, these results point to inverse relationships among the variables, but they do not imply causation.

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Regression Analysis

Table 5: Model Summary

	Coefficient	Standard Error	t-Statistic	P-value
CT	-0.115948	0.05436	-2.132973	0.0617
CGT	-0.699333	0.515534	-1.356520	0.2080
R Square	0.383007			
F-Statistic	4.793443			
Prob (F-Statistic)	0.0113831			

Table 5 is the model summary. The regression result analyzes the impact of Corporate Tax (CT) and Capital Gains Tax (CGT) on Gross Domestic Product (GDP), the coefficient for CT is -0.1159, indicating a negative relationship with GDP meaning that, holding CGT constant, a unit increase in corporate tax is associated with a 0.116 unit decrease in GDP. The t-statistic of -2.133 and p-value of 0.0617 suggest that this effect is marginally significant at the 10% level, though not at the conventional 5% level. For CGT, the coefficient is -0.6993, also implying a negative relationship with GDP. However, the t-statistic of -1.357 and p-value of 0.2080 show that this result is not significant, indicating insufficient evidence to conclude that CGT has a meaningful impact on GDP in this model. The R-squared value of 0.3830 means that approximately 38.3% of the variation in GDP is explained by changes in CT and CGT. The F-statistic of 4.793 with a p-value of 0.0114 shows that the model is statistically significant overall, suggesting that together, the independent variables have a meaningful explanatory power over GDP.

Summary of the result

The descriptive statistics presented in Table 1 provide an overview of the central tendencies, dispersion, and distribution characteristics of Gross Domestic Product (GDP), Corporate Tax (CT), and Capital Gains Tax (CGT) in Nigeria for the study period. The mean value for GDP is ₦461.24 billion, while CT and CGT averaged ₦365.74 billion and ₦21.24 billion, respectively. Median values for GDP (₦462.60 billion) closely align with the mean, suggesting a symmetrical distribution, whereas CT (₦246.77 billion) and CGT (₦14.70 billion) show a noticeable gap between mean and median, indicating right-skewed distributions. This is further corroborated by the skewness values: GDP (0.498), CT (1.271), and CGT (2.188), with CGT exhibiting the highest positive skew. Standard deviations highlight the level of volatility within each variable—GDP at 52.98, CT at 258.74, and CGT at 27.28, indicating that CT experienced the most substantial fluctuations during the

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observed period. Kurtosis values were 3.06 for GDP, 3.50 for CT, and 6.82 for CGT. While GDP and CT are near the normal distribution benchmark of 3, CGT's high kurtosis indicates a leptokurtic distribution with fat tails, i.e., the presence of extreme outliers. The Jarque-Bera (JB) test results show p-values of 0.7796 for GDP and 0.1869 for CT, supporting the assumption of normality. However, CGT, with a JB value of 16.86 and a very low p-value of 0.00022, strongly rejects normality, confirming the presence of significant deviations in its distribution.

The stationarity of the variables was tested using the Augmented Dickey-Fuller (ADF) unit root test, as shown in the ADF results table. The GDP growth rate yielded an ADF statistic of -4.1313 with a p-value of 0.0148, while CT had an ADF statistic of -4.6883 and a p-value of 0.0058. Both p-values are below the 5% significance level, implying that the null hypothesis of non-stationarity is rejected after first differencing. Therefore, GDP and CT are integrated of order one, I(1). In contrast, CGT recorded an ADF statistic of -3.4902 and a p-value of 0.0305, allowing rejection of the null hypothesis at the level. This shows that CGT is stationary at level, or I(0), and does not require differencing. The mixed integration orders—GDP and CT as I(1), and CGT as I(0)—necessitate careful model selection to avoid spurious results in regression analyses.

The correlation matrix provided further insights into the linear relationships among the variables. GDP shows a moderate negative correlation with CT (-0.5068), suggesting that as corporate taxes rise, GDP tends to decline, possibly reflecting the disincentive effects of higher corporate tax burdens on investment and growth. GDP and CGT are also negatively correlated, though more weakly, at -0.2666. This implies a mild inverse relationship where increases in CGT may be associated with slight decreases in GDP. Interestingly, CT and CGT have a very weak negative correlation (-0.1650), indicating limited co-movement and potential independence between these two types of tax revenue. It is important to note that while these correlations identify relationships, they do not confirm causality.

Finally, the regression analysis sheds light on the effect of CT and CGT on GDP. The coefficient for CT is -0.1159, which means that a one-unit increase in corporate tax corresponds to a 0.116 unit decline in GDP, holding CGT constant. The t-statistic for CT is -2.133, and the p-value is 0.0617, indicating that this negative effect is marginally significant at the 10% level, though not at the 5% threshold. For CGT, the coefficient is -0.6993, suggesting a stronger negative effect, but the t-statistic of -1.357 and p-value of 0.2080 imply that this effect is not statistically significant. The R-squared value of the model is 0.3830, indicating that approximately 38.3% of the variation in GDP is explained by CT and CGT. The F-statistic is 4.7934 with a corresponding p-value of 0.0114, confirming that the overall model is statistically significant at the 5% level. This suggests that, collectively, CT and CGT exert

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a meaningful influence on GDP, even though only CT shows a borderline individual significance.

5 Conclusion

In conclusion, the analysis of Nigeria's tax system reveals significant implications for sustainable economic growth. The findings indicate that both corporate tax and capital gains tax exert a statistically negative effect on the country's economic development. High corporate tax rates can discourage investment, hinder business expansion, and reduce overall productivity, while capital gains tax may deter individuals and businesses from making long-term investment decisions. To foster sustainable economic growth, policymakers must reassess and potentially reform these tax structures. Creating a more favorable tax environment could stimulate investment, encourage entrepreneurship, and ultimately enhance economic resilience. By balancing the need for government revenue with incentives for growth, Nigeria can pave the way for a more sustainable and prosperous economic future. The study concluded that the current Nigerian tax system is hindering sustainable Economic Growth in Nigeria.

Recommendation

To mitigate the negative effects of the current tax system on sustainable economic growth in Nigeria, the following recommendations are proposed:

i. Consider reducing corporate tax rates to encourage domestic and foreign investment. A lower tax burden can enhance business profitability, leading to increased reinvestment and job creation.

ii. Implement reforms to the capital gains tax framework to make it more conducive to long-term investments. This could include exemptions or reductions for investments held over extended periods, thereby incentivizing stability in the market.

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