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Investigating the Impact of Taxation Revenue Management and Its Implications on the Sustainability of Nigerian Economic Growth

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Abstract This paper examines the significance and contributions of taxation revenue in stimulating economic activities, which leads to economic growth and development. The study is carried out critically to examine the impact of taxation revenue and its sustainability on economic growth of Nigeria from 1994 to 2021, with empirical evidence. Taxation revenue has been a major sustenance of economic growth in both developed and developing countries, as government is saddled with responsibility to cater for its citizens' wellbeing through the provision of infrastructures, public goods, and services. However, the dwindling tax revenue and it attendant public debts in Nigeria became a subject of research. Findings are made through application of time series secondary data, using regression analysis, correlation, cointegration and Augmented Dicky-Fuller tests. The study uses the quantitative design in its findings. The research gauges the perception of taxpayers and the government's social responsibilities on tax revenue management. The research results led to four main conclusions. First, value added tax is reported to impact significantly on economic growth. Secondly, custom and excise duty tax is reported to have contributed positively on economic growth. Thirdly, the study revealed petroleum profit tax has negative downturn on economic growth due to the huge subsidy cost of petroleum product bore by government. Finally, the study indicates that company income tax revenue do not impact much on economic growth due to multiple taxation on corporate income which affects savings and investment. The research also looks into the future implications of this findings on the Nigerian tax administration and economic growth and recommends some policy measures to be put in place to hold a more sustainable revenue drive, effective and efficient tax administration, and good management of tax resources in Nigeria. Moreover, suggestions are made for further research.

Keywords: *taxation, regression, time series, cointegration, ADF, economic growth*

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1. Introduction

Every government owes a major responsibility globally in ensuring security, freedom, and welfare of its citizen. Section 16(1b) of the 2011 Constitution of the Federal Republic of Nigeria as amended stipulates that "the government has the responsibility of ensuring the maximum welfare, freedom and happiness of its citizens" [1]. To effectively discharge its primary functions and other ancillary functions, adequate funding is a fundamental requirement. Unfortunately, as government's burden and responsibility in providing it statutory social infrastructures increases in Nigeria due to the increase in the teeming population and technological challenges, tax revenue could not sustain the desirable economic growth. The volume of tax revenue is fundamental to sustainable economic growth. According to [2], tax revenue is a fundamental stimulant to economic growth and performance in a developing country like Nigeria, which has given to empirical debates. This corroborates the views in [3], which states that the growth and development of any nation depends on the amount of revenue generated for the provision of infrastructural facilities for the common good of all. Under the prevailing Nigerian legislation, the 3 tiers of government which are the Federal, State and Local Government ensure compliance with tax revenue; however the Taxes and Levies Act of 1998 clearly spelt out their different sections that guide their operations. These 3 tiers of government do no longer perform their statutory responsibility because of dwindling internally generated revenue. This can further be attributed to several reasons but not limited to tax legislation, poor tax administration, weak regulations, weak or ineffective tax policies, tax payment apathy of the

Nigerian citizens, corrupt practices in tax collections, and ease of tax payment which pose a major challenge in the country as it affects tax payment. This appears to worsen the situation due to lack of trained staff that could adequately drive the tax collection in Nigeria.

Despite the government steps to improve on its tax system recently, the issue remain unabated, evidence from the World Bank Doing Business Report 2011 and 2012, shows that Nigeria is ranked 109 and 138, respectively, out of 188 countries in the world; and it ranked 27 out of 46 in the Sub-Saharan African countries and beyond. As economic growth (EG) focuses mainly on the increase in the value of goods and services produced by a country over a period, economists use this increase in country's gross domestic product (GDP) to measure it. According to [4], the primary essence of generating tax revenue by government is to ensure that the basic necessities of life for it citizens are provided and cater for. This also enables the citizens to keep fate to their statutory obligations, which is payment of tax. [5] mentioned two main sources of federal government revenue namely; oil and non-oil revenue. Oil revenue is revenue from crude oil and gas local sales and exports, receipts from petroleum profits tax (PPT) and royalties; while non-oil revenue includes revenue from company income tax (CIT), custom and excise duties, (CED), valued added tax (VAT), amongst others. [6] opined that, tax revenue mobilization as a source of financing developmental activities in Nigeria has been a different issue, primarily caused by various forms of resistance, such as tax evasion, tax avoidance, connivance of taxing officials with taxing population as well as others earlier enunciated. These acts go a long way to sabotaging the economy of the country which is part of the obvious reasons for the present state of Nigeria's under-development and growth.

The need for governments at all levels to generate adequate revenue from internal sources has therefore become a matter of extreme urgency and importance. This need underscores the eagerness on the part of local, state and the federal governments to resort to desperate measures which further unsettled the issue of economic growth and development. Other research works focusing on the impact of tax revenue on economic growth in Nigeria and /or in other countries includes [7], [8], [9], [10], [11], [12], [13], and [14]. It is observed that none of these research works dealt with the inherent root causes of the dwindling tax revenue and nature of tax administration in Nigeria and its economic growth from 1994 to 2021. This formed the fulcrum of this study, which is the impact of tax revenue management on the Nigerian economy from 1994 to 2021.

This paper investigates the impact of taxation revenue management and its sustainability on economic growth of Nigeria (1994–2021). To achieve this objective, the paper is divided into five interconnected sections. Section one is the introduction, which captures key elements relating to taxation and the economic growth of Nigerian. Section two will critically address the academic context of the research by looking at relevant literature review of the study. This helps to explicate the meaning of taxation and sustainable economic growth which is a major basis of the study. Besides the hypothetical relationships between taxation and economic growth debate, their effects on development and topical concepts will also be generally studied in this section. Section three introduces the research methodology by representing the data and the quantitative design approach and applied time series regression models. Section four presents the results and discussion and findings relating to this study, and finally, Section five presents the summary, conclusion and recommendations drawn from the study.

Tax revenue has been a factor and major source of government revenue in Nigeria and many other countries across the globe. Tax proceeds is fundamental source of government funding or rendering services to its citizens in the form of provision of public infrastructures, defence against external aggression, maintenance of law and other, maintenance of internal and external trade business, and maintain it social and economic investments. However, the expectations and reality of tax revenue in promoting sustainable economic growth in Nigeria is not felt, as a result of poor administration of its tax policies. [15] stated that the challenges facing tax administration in Nigeria are poor accountability and transparency, lack of awareness of the general public of the imperatives and benefit of taxation, corruption of tax officials, tax avoidance and evasion by taxing units, connivance of taxing officials with taxing population, high rate of tax, poor method of tax collection, multiplying the number of tax base similar to the existing ones. And in most instances poor tax awareness pose challenge, especially in the local government sector, because most of the rural dwellers are peasant farmers who know little or nothing about tax laws and regulations etc. In fact, the lukewarm attitudes of most tax collectors toward taxpayers could be attributed to poor remuneration and motivation. There are also problems of accurate tax statistics and data management by the agencies saddled with duty to manage tax institutions such as; the federal inland revenue service (FIRS), central bank of Nigeria (CBN), and national bureau of statistics (NBS).

Other challenges arising from multiple taxation and high tax rates can be identified as:

a. High tax rate on labour diminishes labour supply, which is a major factor of production. Multiple tax incident on labour will discourage most vibrant and high skilled intellectuals to contribute to national development.
b. It can lead to capital flight and brain drain. When taxes become a major problem on skill labour, most citizens will look ensure to earn a better deal and become more productive.
c. Affecting productivity in the area of research and development investment, as most researcher will become discouraged thinking their efforts and knowledge would not be better channelled and utilized.
d. Lastly, the high tax rate on labour supply can affect the efficiency and conversion of human capital to public gains, as this can inhibit social productivity on the long run. High cost of labour can equally raise inflation.

The problems highlighted above, if not tackled will continue to affect abysmally the tax generation drive in Nigeria, with consequences of government inability to fulfil its statutory duties, growth and developmental agenda to its citizens in Nigeria.

It follows therefore, that the major question raised is what possible effect does tax revenue have to sustaining the Nigeria's economic growth?

The main objective of this research is to investigate the impact of taxation revenue management and its sustainability on economic growth of Nigeria. However, other specific objectives include:

i. To determine the impact of VAT on the real GDP of Nigeria.
ii. To determine the impact of CED on the real GDP of Nigeria.
iii. To examine the effect of PPT on the real GDP of Nigeria.
iv. To examine the impact of CIT on the real GDP of Nigeria.

The other achievable objective of this rigorous and painstaking study is to investigate the persistence decline and dwindling fortunes of government revenue in Nigeria tax system and the issues or reluctance on the part of citizens in tax payment and compliance. The study will further measure the effectiveness and contributions of the various taxes to economic growth of Nigeria through instrument of statistical modelling, testing and correlation analysis. There is hope that the result of this study will proffer reasonable solution to the current identifiable issues impeding growth and development and to make valid recommendations to the Nigerian government for an improved revenue drive, creation of gainful employment opportunities, alleviating poverty, and improving standard of living among the people. This can only be achieve through infrastructural development, which is a bedrock to a sustainable economic growth, development and stability.

According to [16], findings from empirical studies conducted and available information aided through literature reviews, come up with the view that country who operate under poor tax administration, inefficient, lack of effective policies has impeded the positive sustainability of economic development and growth in achieving a better life for her citizenry. Arising from these factors, the three (3) tiers of government contended that their currently assigned taxes are poor in terms of their tax bases, therefore, accrued revenue are not enough to meet their expenditure obligations for its citizens. Against this backdrop, the research seeks to provide answers to the following research questions:

a. What is the effect of VAT on the real GDP of Nigeria?
b. What is the impact of CED to the real GDP of Nigeria?
c. What is the impact of PPT on the real GDP of Nigeria?
d. To what extent does CIT impact on the real GDP of Nigeria?

For the individual variables, the null versus alternative hypotheses will be stated as follows:

H_0: VAT Revenue has no significant effect on EG
versus
H_1: VAT Revenue has significant effect on EG
H_0: CED Revenue has no significant effect on EG
versus
H_1: CED Revenue has significant effect on EG
H_0: PPT Revenue has no significant effect on EG
versus
H_1: PPT Revenue has significant effect on EG
H_0: CIT Revenue has no significant effect on EG
versus
H_1: CIT Revenue has significant effect on EG

2. Literature Review

Taxation is said to have had its root from the ancient empire of a city in Greek. Some scholars equally believe that tax levies evolved in an ancient city in Roman. Tax is also mentioned in the Holy Bible. At the time in the ancient cities of Greek and Rome, tax levies were imposed on goods consumed as well as savings made from investment of properties [17]. As earlier stated, tax was equally mentioned in the bible, specifically in the book of St. Mark gospel. In Mark chapter 12:14-16, one of the disciples of Jesus precisely St Peter was accosted by the tax collectors, Peter met Jesus Christ for advice, it was affirmed and he has to pay for himself and the Lord Jesus Christ. This is a clear demonstration that tax payment obligation is ordained by God. In fact, the historical account stated that Jesus asked His disciples to give what belonged to king Caeser to the king, and what belonged to God be duly surrendered to the Almighty Creator after he discovered the king Caesar's portrait and inscription on the coin money. In another account in the book of Saint Matthew of the Holy Bible (Matthew chapter 17:24-27) it corroborates and admitted as above that Jesus Christ fulfilled His tax obligations, because He knew without tax revenue it will be practically impossible for the rulers of the Roman Empire to provide goods and services to the people. When strong institution is established to manage public resources, including revenue this is a sure way for growth of that economy.

Taxation is a deliberate fiscal policy tool of government and serves as major source of revenue to levels of government and a mechanism for regulating economic and social policies. According to [18] and [19], taxation is an instrument employed by the government for generating public funds. It is through tax that the government can raise revenue to finance public expenditure. Individuals or private organizations cannot provide public goods because of the large capital involved, more so sovereignty is vested to the government.

[7] and [20], opined that *"a well-designed tax system can help governments in developing countries prioritize their spending, build stable institutions, and improve democratic accountability"*. Unfortunately, the tax system in Nigeria is not all inclusive as complain has been taxpayers not adequately considered when tax policies and laws are deliberate. Major stakeholders and captains of industries, traditional heads are not well informed of the nitty-gritty and implications of abeyance or otherwise to the tax laws. When such gaps are created it hindered effective implementation.

[21] describes tax as "*main source of government revenue and should be accorded strict and close monitoring to achieve maximum compliance*". In Nigeria most of the tax agents are uneducated taut who goes round to harass unsuspecting citizens, extort money in the name of tax drive assignment, not bothered if person is paid tax or not. This happens when tax collections have become

political patronage for the boys. Tax can be used as an economic tool for achieving both micro and macroeconomic policies in developed and developing countries. Microeconomic policy aims to control expenditure of government etc., while macroeconomic policy is aimed at providing a stable economic environment that will promote a robust and sustainable economic growth. [10] and [22] noted that the dwindling level of tax revenue generation in the developing countries makes it difficult to use tax as an instrument of fiscal policy for the achievement of economic growth and development. This has been the major reason Nigeria has resorted to borrowing to be able to perform its functions. The country's loan indebtedness according to the Nigeria's Debt Management Office [23] is gulped about $70 Billion. According to [17], tax can be used as a catalyst to influence economic activities by influencing private sector investment decisions, attracting capital inflows, encouraging and/or prohibiting the production of certain goods and services, as well as contributing to government revenue and enhancing economic growth. However, [24] argues that the scope of these functions depends on the political and economic orientation of the people, their needs, and aspirations as well as their willingness to pay tax.

Although, it is believed by most economist that the structure of taxation differs or same from many developed and developing countries. However, for the purpose of this study, some identified objective of taxation according to [25] are: 1. To generate revenue through tax collection, which aimed at providing basic public goods and services which ordinary citizens cannot afford. Provision of adequate protection and security for citizens, maintenance of law and order, good healthcare services and quality education services are also desirable. 2. Another objective according to [25] is the government Income Redistribution policy, where emphasis is on ability to pay tax by both the privileged rich and the downtrodden. 3. Government also use taxation for Price Stability mechanism. One of the economic tools of government used in controlling the amount of money in circulation, both in the private and public sector expenditure, without which it will lead to inflation or deflation. Generally, it is used to check private sector expenditure and to fix countries inflationary and deflationary trends in the economy. Finally, taxation plays an important role in raising the economic potential of a country. Government is to maximize the economic resources of the State, including human capital to promote equitable distribution of wealth, economic growth, and development. This is geared towards improving the standard of living of her citizens. Taxation can be used in different ways in economic administration of providing good governance. It should not impact negatively on economic efficiency.

There are two major categories of taxes; direct and indirect. These taxes differ in accordance with the taxpayer and the incidence of tax. They are either collected progressively and or proportionally in relation to its base or rate. Tax rate is the percentage of the net value of the tax base, while tax base is the object that is being taxed. Tax rate is expressed in percentages like 5%, 10%, etc. Direct tax is charged on income of individual salary earner and on company's income before tax. Before collection of tax, the due process of assessment must be followed and the taxpayer must be notified. In Nigeria, the tax system is flooded with quacks and corrupt officials whose stock in trade is personal enrichment. Direct tax for this work is PPT and CIT. According to [17], the taxpayer must be notified of the incidence of such tax before enforcement. Therefore, Direct tax is a tax levied directly on the income and property of individuals and Companies which includes the following: petroleum profit tax, company income tax, etc. The different prominent components of indirect taxation in Nigeria include; Value Added Tax and Custom and Excise Duty [26]. The tax is referred to as consumption tax. The tax incidence on commodity products and it does not fall on the producer of goods but on the final consumer. It is also referred to as transfer tax. It applies to services provided. Indirect tax used in this work is CED and VAT.

Figure 1. Conceptual model, based on Abomaye-Nimenibo (2018)

The class of taxes commonly applicable in the Nigerian tax system as enunciated in this study are the: value added tax, customs and excise duty, petroleum profit tax, and company income tax. Value added tax is introduced to add value to goods and/or services. The final consumer of the product bears the burden of the total value amount built into the product at the sale of the commodity. It is an indirect type of tax that the Nigeria government

introduced to encourage productivity for those who manufacture and made the goods available. The government aim to use this type of tax to discourage or slow down importation of goods and encourage local manufacturing. The tax is charged at uniform rate, previously VAT rate was 5%, current is 7% with effective from around 2019, although different charges are imposed depending on the type of goods. Luxurious goods are charged more, to enable government tax the rich who are believed to be wealthier. The federal government of Nigeria is the only tier of government that collects VAT through the FIRS. VAT revenues are shared to the other tier of government; States and Local government. Globally, France first introduced this tax system, it is known as a convenient sale tax paying, unlike the direct taxes that are somewhat compelling. The more you consume the more tax you pay, when consume less you pay less.

[27] defined value added tax as "a consumption tax levied at each stage of the consumption chain and is borne by the final consumer". The nature of this tax type is prone to lots of loopholes as most goods produced in the rural areas especially by peasant farmers do not account for this tax. Since the tax is not paid by the individual who use the commodity or service. Those peasant farmers do not remit VAT to FIRS coffers, they are supposed to net off the rate applicable to the cost of the commodity or the product and remit same to the institution concerned. This does not happen because of lack of awareness.

However, [28] posits that "the Nigerian tax system is skewed towards the petroleum and trade taxes whereas broad-based taxes like Value added tax are neglected, he alludes that VAT has potential for expansion, and that its impact is limited because of the dominance of the informal sector in the country".

The Custom and Excise Duties (CED) are regulated by the Custom and Excise Management Act of 1990. By this Act, all goods and services coming into the country are charged. The percentage varies depending on the type of goods and service imported. The Nigerian Custom Service, which is like a para-military organization supervised by the Federal Ministry of Finance, Abuja, are by virtue of the Act are solely responsible for the collection of this tax referred to as import duty. The duty is chargeable on all goods and services imported into Nigeria and the duties ranged between 2.5 percent to 100 percent depending on the type or nature of the goods and services [26]. The challenge faced by this class of tax in Nigeria is smuggling of goods through the Nigeria porous borders. This is deplorable as sometime security agents, custom officials or personnels connive to smuggle good. The action impedes or impact negatively on revenue generation from CED, which invariably affects economic growth.

[29] opined that "custom and excise duty refers to taxes levied on imported or exported goods". Under international trade, we have two types of custom and excise duties, such as; import duty and export duty. These duties are stipulated in every country's tariff schedule. The duty clearly spelt out the amount of unit of currency to be levied per unit of quantity.

The Petroleum Profit Tax Act (PPTA) of (1959), define petroleum operation as "the winning or obtaining and transportation of petroleum or chargeable oil in Nigeria by or on behalf of a company for its own account by any drilling, mining, extracting or other like operations or process, not including refining at a refinery, in the course of a business carried by the company engaged in such operations, and all operations incidental there to and sale of or any disposal of chargeable oil by or on behalf of the company". The petroleum industry has both downstream and upstream sectors with huge revenue contribution to the Nigerian government through royalty payment by multination oil companies.

Petroleum profit tax involves the charging of tax on the income accruing from petroleum operations [30]. [28] sees petroleum profit tax as a tax applicable to upstream operations in the oil industry. Petroleum Profit Tax (PPT) is the tax imposed on companies which are engaged in the extraction and transportation of petroleum products. It is particularly related to rents, royalties, margins, and profit-sharing elements associated with oil mining, prospecting, and exploration leases. Petroleum profit tax is a tax applicable to upstream operations in the oil industry as it is related to rent, royalties, margin, oil mining prospecting and exploration leases. It is the most important tax in Nigeria in terms of its share of total revenue, contributing over 70% of government revenue and 95% of foreign exchange earnings [28].

The rates of Petroleum Profits Tax based on level of petroleum operations are 85% for exports, 65.75% for domestic sales, and 50% for deep offshore. According to [28] petroleum profits tax is complemented with two different contractual relationships under the Joint Operating Agreement and the Production Sharing Contract not formally covered by tax legislation. These relationships have the propensity to create room for lots of manipulations in the sector.

Company income tax is one of the major sources of revenue of the federal government. This type of tax is charged on income of every registered business in Nigeria. The rate is about 30%. It is imposed on profit, also on dividends gains of corporations. Oil companies do not pay CIT, they are exempted to paying, it, so it doesn't amount to multiplicity of taxes for the oil companies. They pay a type of tax call royalty to the central government. CIT are paid by companies other than oil companies. It has a specific payment term, usually per annum, usually referred to as accounting year. Most companies report low income to evade tax, however, government has stipulated laws to check against such incident. This tax is essential as government spend hugely to provide the enabling environment for smooth operations of these companies. Depending on the nature of company, government do partner with some of them for expansion of their business for the purpose of employment generation.

Tax evasion and Tax avoidance: Tax evasion is deliberate or outright falsification of figures, misrepresentation and filing of incorrect returns to tax liabilities. Tax evasion is a criminal offence because defaulters can be charged to court due to it willful act of default to tax legislations and regulations. Whereas tax avoidance on the other hand is observed when tax transactions are presented in such a manner that the resulting tax computations are in complete inconsistence to tax legislation. Under the tax laws, tax evasion is an illegal act, while tax avoidance is not illegal. Tax evasion and tax avoidance could be referred to as "twin devil" in

tax administration. They are the major social problems inhibiting development in developing countries and eroding the existing welfare state in developed economies in the world, and this has led to a growing attention among policymakers, western countries, international agencies and scholars.

Six tax theories formed the framework for this study. First is the Socio-Political Theory, second is the Benefit Received Theory, third is Faculty theory, fourth is Tax structure development theory, fifth is the Economic deterrence theory, and Sixth is Expediency theory.

Socio-Political Theory: According to this taxation philosophy, the theory states that social and political objectives should be the major consideration in taxing. The theory advocated that a tax system should not be designed to serve individuals but should be used to cure the ills of society generally. This theory has envisaged the equitable distribution resource generated through tax. This tends to balance the gap between the rich and the poor when it comes to resource allocation. The idea is that resources be utilized to provide general social facilities for the good of everyone. Best described as a commonwealth resource. The theory ultimately is to addresses the need for government to effectively utilize tax revenue in providing economic and social facilities to the populace, and by extension contribute to economic growth and development. Although, this can be subject to political abuse by corrupt leaders who will amass wealth to their cronies.

Benefit Received Theory: This theory assumes that there is basically an exchange relationship between taxpayers and the government of the states, because the state provides certain goods and services to the members of the society, therefore, members of the society should contribute to the cost of these supplies in proportion to the benefits received [31]. This theory explains the fact that as citizens pay their tax to government, they expect a commensurate benefit to the amount of tax paid. This agitation is observed especially from the bottom and middle-class citizens where they perceived government not doing enough to provide the needed social infrastructure after citizens pay tax. They feel cheated, robbed, and swindled because they earned little unlike the rich, yet they are compelled to pay for what benefit is no derived. They expect the government to make life easy in terms of awarding scholarships to their children to reduce the burden high cost in education. Provision of free healthcare for their families, these are some of the many expectations from government.

Faculty Theory: According to [32], this theory states that one should be taxed according to the ability to pay. Rational individual cannot pay what they do not have. This comes to mind the theory of proportionate, progressive, and regressive taxes. The government is to apply good judgement. It can apply the proportionate tax type to encourage an effective compliance, except it apply to exceptional situations where there is need to tax the stinkingly wealthy individuals in the society. [31] shares this same view by arguing that patriotic taxpayer citizens fixed to be able to pay what he or she is capable to pay as tax. When citizens are excessively taxed, they will not be able to save and invest for the future, which would have a long run negative effect on the economy. Sometimes government is required to create tax incentives that will serve as reliefs to citizens.

Economic Deterrence Theory: This theory is based on tax evasion compliance behaviour by taxpayers. The theory is of the assumption that taxpayer's behaviour towards taxation is determine or influenced by tax audit, detection of evasion and the extent of the severity of penalties that is melted on tax evaders. In other words when severe penalties are melted on tax evaders, there is the tendency that few people will evade tax. On the other hand, more people will evade tax if the penalties are relaxed and lenient thereby giving room to noncompliance. The model relies upon a wide range of major assumptions that are generally unrealistic for determining taxpayer's behaviour. Focusing on the use of coercion on compliance rather than the use of consensual method led to more criticism of the model. However, despite the criticism of the model, it is widely used in tax administration especially when enforcement strategies involving the use of penalties and tax audit is to be adopted as people exhibit lukewarm attitude when it comes to payment of tax. There are evidence to support the relevance of deterrence theory in addressing taxpayer's noncompliance. Due to the fear of tax audit, the detection of evasion and the penalties that follows, it is an effective strategy to induce taxpayer's behaviour towards compliance. It therefore implies that when situation demands that coercive measure be adopted for tax compliance and penalties on defaulters, these will make people to comply with the resultant effect of increase in tax revenue generation.

Expediency Theory: The expediency theory proposed that every tax must pass the practicality test. It must be the only consideration weighted by tax authorities and policy makers in choosing a tax proposal. [31] explained that the expediency theory is based on a link between tax liability and state activities. What is clear is that government is to provide a convincing basis for the tax the government wants citizens to pay. Here the government is to charge it citizens for provision of the needed infrastructures. This is the only way government will be able to do more to fulfil its statutory obligation required by law and the oath of office taken.

Empirical literature: This study looks at the different empirical reports and studies, and their contributions to EG in Nigeria, with their different claims and arguments hope it aid the researcher's quest for answers and knowledge. The nexus between taxation and EG has been examined severally by different research scholars, with divergence views and results. Thus, the researcher will look at these previous empirical works that borders on value added tax, custom and excise duty, petroleum profit tax, and company income tax of Nigeria's economy.

[33] carried out research in Pakistan from the year 1973 to 2010 to find out how VAT affect or relate to economic growth (proxy GDP), using the Johansen's co-integration tests and other statistical tools. The finding after empirical analysis conducted revealed that high tax rate on goods and services can spell doom to the economy of Pakistan because it will result to high cost of goods or services, which would not be affordable to the low-income earners. Which made up major population of Pakistan. The trend if

drastic policy measure is not taken in the short run, will lead to a low GDP of the country.

In a related study carried out by [34], in India through the application of some descriptive analysis and other tools for estimation purposes. Finding has shown that VAT has been the bedrock of development in the country of India. Obviously, India is known for its massive productivity. India is a productive economy unlike Nigeria.

[35] investigate the impact of taxation on the Nigerian economy for the period 1994 - 2012. The variables used in the model were subjected to Augmented Dickey Fuller Unit Root test, which revealed that the variables were stationary. The co-integration test also revealed that the variables are co-integrated, and that long run relationship existed between the variables. The results of the statistical analysis revealed that positive relationship also exist between the explanatory variables (Custom and Excise Duties, Company Income Tax, and Petroleum Profit Tax) and the dependent variable (Gross Domestic Product).

This result run contrary to the view that higher tariffs are universally detrimental to growth. [36] examine the relationship between tax revenues and three economic indicators namely change in gross domestic product, savings, and investment in Greece during the period 1965-2002. They apply the seemingly unrelated regression (SURE) approach to determine the relationship between tax categories and economic indicators. Their results showed that a long run relationship exist between tax categories and economic indicators and are significant. Particularly, they found a robust negative relationship between custom and excise duties and gross domestic product.

[30] conducted a study on the impact of petroleum revenue on the economy of Nigeria for the period 1970 - 2009. The study showed that a strong correlation exist between petroleum revenue and GDP. They concluded that oil-based revenue if invested efficiently in the economy will to a large extent make material difference on GDP. From the findings in [30], it can be deduced that PPT has a positive impact on Nigeria ‘s economy but it will be good to further investigate the roles other taxes play on the economy‘s GDP both individually and as a lump sum which is one of the objectives this study aims to achieve.

Research conducted by [37] investigates the impact of petroleum profits tax on economic development (2000-2010) using the ordinary least square method of analysis and posited that petroleum profit tax impact positively on the gross domestic product (used as proxy for economic growth) of Nigeria. In another study of Nigerian economy for the period 2000-2009 using simple regression model in [38] claimed that petroleum profit tax has a significant positive relationship with economic growth. [39] conducted a research work to find out if PPT affect economic growth in Nigeria, with the use of some statistical tools and models. In the study, the findings revealed that PPT had an adverse impact on EG (proxy GDP). Generally, from varied studies done by several scholars, oil mineral had negatively affected economic growth.

An empirical study was conducted by [40] to ascertain the relationship between CIT and Nigeria economic growth between 1981 to 2007, and using GDP to measure annual revenue from company income tax for the period. The use of Chi-square and multiple linear regression models were adopted for the analysis, taking both primary and secondary data into consideration. The outcome of the study revealed a significance relationship between company income tax and economic growth. The results further revealed that tax evasion and avoidance are the major impediments to increased revenue generation in Nigeria. Poor tax administration has caused tremendous damage to the Nigeria economy. The government have allowed arbitrary imposition of tax and levy which resulted to tax revenue accounted for, by the agencies, that is why most of the studies could be predictable. They asserted that the incidence of tax evasion and avoidance are loopholes that inhibits an efficient and effective tax administration and in turn reduces revenue generation. There are several other studies that have similar outcome with data captured for empirical investigation in Nigeria.

3. Methodology

3.1. Introduction

This section discusses the methodology adopted in the study, setting out the materials and methods to be used. It provides the necessary tools and techniques which makes collection of data feasible, workable and reliable.

3.2. Sources of Data and Description

This research study adopts data from secondary sources extracted from financial reports of the Central Bank of Nigeria (CBN) statistical bulletin, Federal Inland Revenue Service (FIRS) and National Bureau of Statistics (NBS) over the period 1994 - 2021. The data is made up of GDP (at the prevailing and current basic price) in Nigeria from the year 1994 to 2021 covering the research period.

3.3. Expression of Model Specification

This research model is centred and underpinned by theory of expediency of taxation, which helps to appreciate and recognize the fact that tax liability and economic activities are intertwined considerably. The research adapts the empirical models in [35], [40], and [37]. The model specification in this study is expressed as follows:

$$GDP = f(VATR, CED, PPTR, CITR) \quad (1)$$

Where:
GDP = GDP at current basic price
VATR = VAT Revenue
CEDR = CED Revenue
PPTR = PPT Revenue
CITR = CIT Revenue

The response or dependent variable in model (1) is the GDP, while the explanatory or independent or predictor variables are VATR, CED, PPTR, and CITR

From equation 1 the econometric model specification is:

$$GDP = \beta_0 + \beta_1 VATR + \beta_2 CEDR + \beta_3 PPTR + \beta_4 CITR + \epsilon \quad (2)$$

Where:

β_0 = Autonomous tax rate or model intercept (constant term)

β_1 = Coefficient of parameter VATR

β_2 = Coefficient of parameter CEDR

β_3 = Coefficient of parameter PPTR

β_4 = Coefficient of parameter CITR

ϵ = Stochastic variable or normally distributed error term (random term)

Based on the property of the linearity of variables, the log of both sides is taken to yield equation (3):

$$LGDP = \beta_0 + \beta_1 LVATR + \beta_2 LCEDR + \beta_3 LPPTR + \beta_4 LCITR + \epsilon \quad (3)$$

Where:

LGDP = Log of GDP

LVATR = Log of VAT Revenue

LCEDR = Log of CED Revenue

LPPTR = Log of PPT Revenue

LCITR = Log of CIT Revenue

If the variables are time-dependent and are time series variables, then model (2) will take the form:

$$GDP_t = \beta_0 + \beta_1 VATR_{t-1} + \beta_2 CEDR_{t-1} + \beta_3 PPTR_{t-1} + \beta_4 CITR_{t-1} + \epsilon_t \quad (4)$$

And the functional form of the GDP at time t, will be:

$$GDP_t = f(VATR_{t-1}, CEDR_{t-1}, PPTR_{t-1}, CITR_{t-1}) \quad (5)$$

Where GDP_t = GDP at time t

$VATR_{t-1}$ = history of VAT Revenue,

$CEDR_{t-1}$ = history of CED Revenue,

$PPTR_{t-1}$ = history of PPT Revenue,

$CITR_{t-1}$ = history of CIT Revenue,

If the history of GDP_{t-1} is also included as an explanatory variable, then model (4) will become:

$$GDP_t = \beta_0 + GDP_{t-1} + \beta_1 VATR_{t-1} + \beta_2 CEDR_{t-1} + \beta_3 PPTR_{t-1} + \beta_4 CITR_{t-1} + \epsilon_t \quad (6)$$

Equation (6) takes the Granger-Causality approach in which the use of the history of various taxes could help to predict GDP and improve its predictive task rather than using the history of the GDP alone.

3.4. Model Parameter Estimation

The unknown parameters of models (2) and (3) above can be estimated by Ordinary Least Squares (OLS) method. For the avoidance of spurious regression, the assumptions of multiple linear regression model will be taken into consideration. A correlation matrix with appropriate scatter plots will be obtain and hypothesis testing will be conducted to investigate the statistical significance of the linear relationship between two or more variables. The Shapiro-Wilk or Kolmogorov-Smirnov tests will be used to investigate whether the dataset follow normal distribution or not. As nonstationary regressor could invalidate the expected outcome or empirical results, it will be plausible to ensure feasibility and stability of the time series variables. Stationarity tests will be conducted to ascertain the level or trend stationarity, and the Augmented Dicky-Fuller (ADF) tests will be used to investigate the presence or absence of a unit root in the variable(s). An investigation will also be carried out in this work through the use of Johansen co-integration. The purpose is to find out if, whether there is a long run nexus existing in the time series variables that are deployed for the purpose of this work. The Johansen cointegration test will be used to determine cointegrating relationships based on optimal lag length, and this can influence the overall result. Suffice it to say that high lag lengths could give rise to a misleading result. The optimal lag length will be obtained from the Akaike Information Criterion (AIC) as well as the Schwarz Information Criterion. However, if both AIC and SC pick optional lag length other than expected, a better alternative remain the SC criterion to determine the optimal lag length [41]. Moreover, a further statistical investigation will be made to determine whether the history of the various taxes Granger-cause (or significantly predict) the GDP (economic growth) or not, using the Granger-Causality test.

Hypothesis Testing

For the individual variables, the null versus alternative hypotheses will be stated as follows:

H_0: VAT Revenue has no significant effect on EG
versus
H_1: VAT Revenue has significant effect on EG
H_0: CED Revenue has no significant effect on EG
versus
H_1: CED Revenue has significant effect on EG
H_0: PPT Revenue has no significant effect on EG
versus
H_1: PPT Revenue has significant effect on EG
H_0: CIT Revenue has no significant effect on EG
versus
H_1: CIT Revenue has significant effect on EG

The *t* test statistic will be:

$$t_{stat} = \frac{\hat{\beta}}{SE\left(\hat{\beta}\right)} \sim t_{(\alpha;n-k)} \quad (7)$$

where $\hat{\beta}$ is the parameter (coefficient) estimate,

$SE\left(\hat{\beta}\right)$ is the standard error of $\hat{\beta}$,

k is the number of parameters in the model,

n is the sample size of the data,

$t_{(\alpha;n-k)}$ is the t critical value with $n-k$ degrees of freedom at α significance level.

The null versus alternative hypotheses for the overall regression model will be:

H_0: $\beta\_0=\beta\_1=\beta\_2=\beta\_3=\beta\_4=0$
versus
H_1: $\beta\_0 \neq \beta\_1 \neq \beta\_2 \neq \beta\_3 \neq \beta\_4 \neq 0$

where the *F* test statistic from the analysis of variance (ANOVA) table will be:

$$F_{stat} = \frac{MSR}{MSE} = \frac{SSR/k}{SSE/(n-(k+1))} \sim F_{(\alpha;q,n-k)} \quad (8)$$

where MSR is the mean square regression,
MSE is the mean square error,
SSR is the sum of square regression,
SSE is the sum of square error,

$F_{(\alpha;q,n-k)}$ is the F critical value with q and n-k degrees of freedom at α significance level.

4. Data Presentation and Discussions

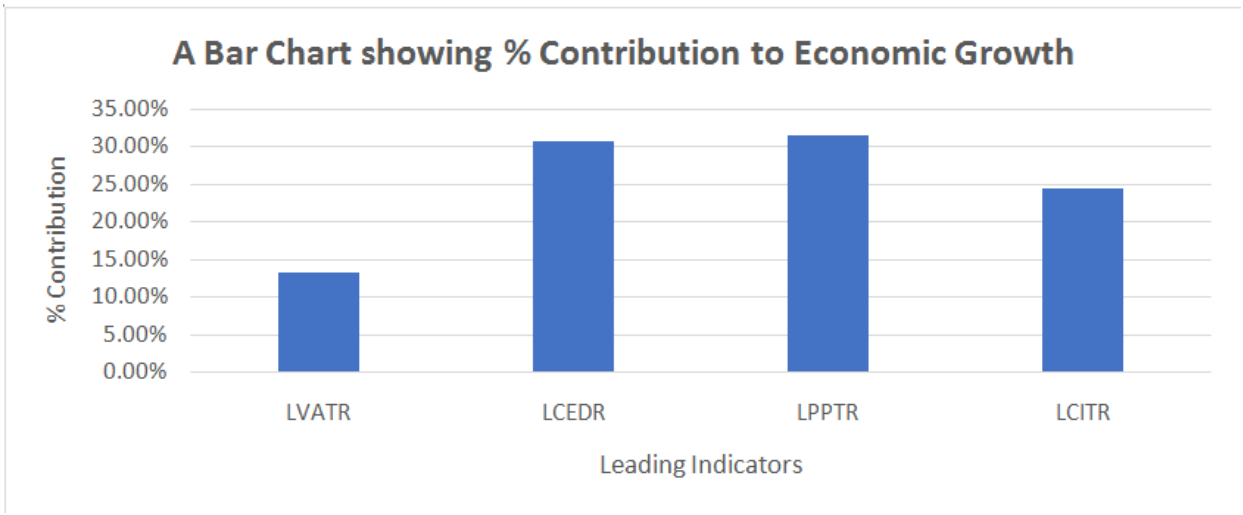
4.1. Data Presentation and Analysis

This section gives detailed data presentation and empirical investigation (analysis of findings) by the instrumentality of statistical tools discussed in section 3. It involves data presentation, estimation of model parameters, and interpretation of results. The objective of this study is to determine the impact of taxation revenue management and its sustainability to economic growth of Nigeria. The data utilized was time series data covering a range from 1994 to 2021, for both the dependent as well as the explanatory variables. The data were extracted from the Central Bank of Nigeria (CBN), Federal Inland Revenue Service (FIRS), and Annual Abstract from the National Bureau of Statistics (NBS) financial bulletins.

Table 1. Descriptive Statistics

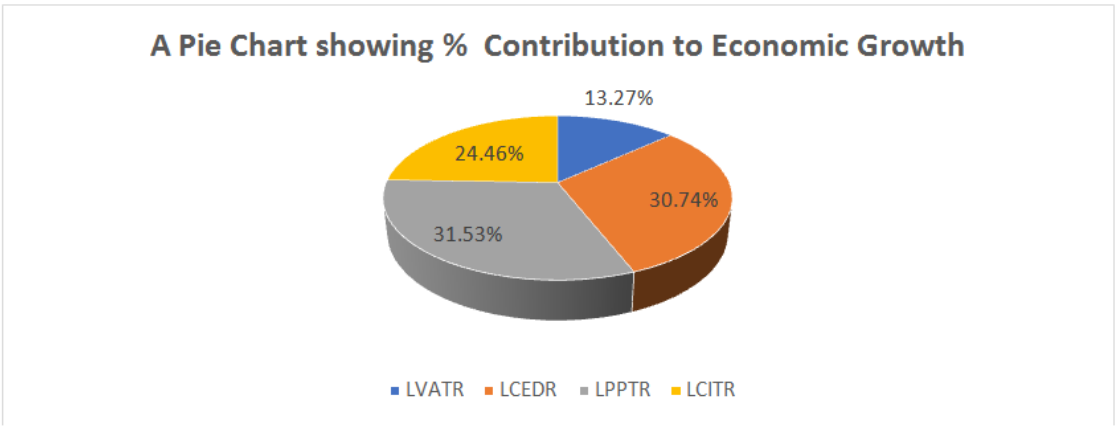
variables	LGDP	*LVATR*	*LCEDR*	*LPPTR*	*LCITR*
Mean	4.43888571	2.274842857	5.270557	5.405143	4.194493
Maximum	5.2457	3.3166	5.7	6.7418	5.8525
Minimum	3.2477	0.7016	4.0065	3.181	2.8159
Standard Deviation	0.60106567	0.723455091	0.454195	1.158228	1.010154
Coefficient of Variation (CV)	13.54%	31.80%	8.62%	21.43%	24.08%
Observation	28	28	28	28	28

**Computed results using Excel*



**Bar Chart obtained using Excel*

Figure 2. A Bar Chart showing Percentage (%) Contribution to Economic Growth



**Pie Chart obtained using Excel*

Figure 3. A Pie Chart showing Percentage (%) Contribution to Economic Growth

4.2. Descriptive Statistics

Table 1 gives the descriptive statistics of the variables used in the study. The descriptive statistics include the mean, maximum, minimum, standard deviation and coefficient of variation. The dependent variable is the log of GDP (LGDP), while the independent variables (predictors) are the log of Value Added Tax (LVAT), log of Customs and Excise Duty (LCED), log of Petroleum Profit Tax (LPPT) and log of Company Income Tax (LCIT). LVATR has the minimum value while LPPTR has the maximum value; correspondingly, the LVATR has the lowest mean revenue while LPPTR has the highest mean revenue. We employ the coefficient of variation (CV) to determine the extent of variability of each variable in relation to their sample means. The LCEDR has the least CV, whereas the LVATR has the highest CV. It is worth noting that the higher the CV, the greater the dispersion. Thus, the LCEDR and LVATR have the smallest and greatest dispersion respectively.

Figure 2 and Figure 3 are Bar Chart and Pie Chart respectively, representing the percentage contribution of tax revenues to economic growth in Nigeria from the year 1994 to 2021. LPPT is 31.53% which means that about a third of tax revenues collections comes from this tax component. LCED contribution to tax revenue is second with 30.74%. Based on this analysis, it can be deduced that LPPT and LCED revenues make more than 52% of the total revenue for Economic Growth out of these four tax components. Furthermore, LCIT is 24.46% and LVAT had 13.27% contribution to economic growth. Invariably, LVAT and LCIT are the least tax revenue contributors to the Nigeria economic growth and development.

4.3. Regression Analysis and Discussions

In this study, the estimation result for the regression analysis was obtained by OLS method using the data analysis package in Excel.

From Table 2, the observed regression line has a positive intercept of 2.6940, and it is statistically significant at 1% significance level. Moving to the predictor variables, the analysis reveals that LVATR and LCEDR are statistically significant at 1% and 5% significance level respectively. As the estimated coefficient of LVATR is positive while the estimated coefficient of This is suggestive of the fact LCITR is negative, it implies that has a positive significant impact on economic growth while LCIT has a negative significant impact on economic revenue. It is worth noting that LVATR and LCEDR have positive coefficient respectively, which suggests that a unit increase in the value of LVATR and LCEDR will yield 0.7907 and 0.0204 increase in economic growth. Whereas LPPTR and LCITR have negative coefficients -0.0019 and -0.0359 respectively, which implies that a unit increase in LPPTR and LCITR will lead to -0.0019 and -0.0359 commensurate reduction respectively on economic growth in Nigeria, when other factors remain constant.

Table 2. Summary output

Regression Statistics	
Multiple R	0.99539927
R Square	0.990819707
Adjusted R Square	0.989223134
Standard Error	0.06239764
Observations	28

a. Predictors: (constant) LVAT, LCED, LPPT, LCID.
b. Dependent variable: GDP

Table 2 shows R^2 coefficient of 0.990819707 which indicates that the expression of the strength of the variables is very high. This can be interpreted that 99.08% of economic growth is explained or accounted for by the independent variables (LVAT, LCED, LPPT and LCIT) within the period under study. While other variables not included in the model accounted for 0.92% of the variations in economic growth of Nigeria. The Adjusted R^2 is in consonant with the claim of the R^2 indicating that 98.92% of the overall variation in the dependent variable (LGDP) is explained by the independent variables.

The F-statistics in Table 3 which gives an F-value of 620.59, with a p-value of 0.0000 indicates a strong statistically significant result in the overall performance of the model.

Table 3. ANOVA

	df	*SS (sum of square)*	*MS (mean square)*	*F*	*Significance F*
Regression	4	9.665008529	2.416252132	620.5916492	4.63529E-23
Residual	23	0.089549705	0.003893465		
Total	27	9.754558234			

a. Predictors: (constant) LVAT, LCED, LPPT, LCIT. b. Dependent variable: GDP

Table 4. Estimated Model Coefficients (parameters of 4th regression model)

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2.6940	0.2430	11.0860	< 0.0001	2.19126	3.19665
LVATR	0.7907	0.0395	20.0417	< 0.0001	0.70907	0.87229
LCEDR	0.0204	0.0606	0.3362	0.739746	-0.10502	0.14578
LPPTR	-0.0019	0.0115	-0.1681	0.867997	-0.02577	0.02190
LCITR	-0.0359	0.0144	-2.4933	0.020293	-0.06573	-0.00612

**Estimation of Coefficients and ANOVA results using Excel*

From Equation (3) of section 3, which is the log of linearity of both sides of variables (dependent and independent variables), we have the estimated regression model as;

$$LGDP = 2.6940 + 0.7907LVATR + 0.0204LCEDR - 0.0020LPPTR - 0.0359LCITR + \epsilon$$

$$LGDP = 2.6940 + 0.7907LVATR + 0.0204LCEDR - 0.0020LPPTR - 0.0359LCITR + \epsilon \quad (9)$$

4.4. Test of Hypotheses and Discussion of Findings

The test of hypothesis is expressed in three different steps:

i. **The first step is**: highlight of the null and alternative hypothesis.
ii. **Second step is**: expression of the decision criteria:
iii. Reject *Ho*: and accept (H_1): if the probability value (p-value) is < 0.05.
iv. **Third step is**; the decision rule:

Test of Hypothesis One:

First step;

H_0: VAT Revenue has no significant effect on EG
versus
H_1: VAT Revenue has significant effect on EG

Second Step; From the analytical review of Table 4: it indicates that p-value < 0.05, we reject the null hypothesis and accept the alternate Hypothesis (H_1).

Third Step; Decision rule; given that (H_o) is rejected to accept (H_1), if p-value is < 0.05, the Table 4: indicate that (p-value) 0.0000 < 0.05, therefore we conclude that LVAT revenue has significant effect on EG of Nigeria. From the finding LVAT indicate a positive coefficient sign implying that a positive relationship exists between VAT and EG in Nigeria. The empirical analysis of this study corroborates with the findings in [34]. They identified LVAT as having a strong and positive impact on EG, and LVAT as a real goal maker in achieving economic prosperity.

However, this view is contrary to the findings in a study conducted by [33], in utilizing Johansen's cointegration and time series data from 1973 to 2010, which opined that high tax rate on VAT can have negative effect on consumption, negative effect on investment and by extension to economic growth. Therefore, all tiers of government are advised to fix moderate and affordable tax rate for the citizens that will have a striking balance with income and expenditure.

Test of Hypothesis Two:

First step;

H_0: CED Revenue has no significant effect on EG
versus
H_1: CED Revenue has significant effect on EG

Second Step; from Table 4: it indicates that p-value > 0.05, we accept the null Hypothesis (H_o) and reject the alternate Hypothesis (H_1).

Third Step; Decision rule; given that (H_o) is accepted and to reject (H_1) if p-value is > 0.05, the Table 4 indicate that 0.7397 > 0.05, therefore we conclude that LCED revenue has no significant effect on EG of Nigeria. From the findings in this study, LCED tax revenue contribute and increase the revenue base of the federal government of Nigeria, which make funds available to the three tiers of government for infrastructural development that will accelerate economic development. From the statistical results LCED is the second with 30.74% contributor to economic growth (proxy GDP) than LCIT and LVAT. This is owing to the huge import inflows resulting from internal and external trade activities. Increase in imports increases the volume of custom and excise duties receipts. This analysis is in line with the result of study carried out by [35], evidently stated that CED has a positive development to economic development. However, in a diverse opinion poll in the research conducted by [36], it was revealed that CED has a negative significant effect on EG. In the diverse views of these scholars is that, while effective policy measures and good custom administration will bring about a positive impact on economic growth, the latter believes a higher custom tariff will have negative bearing on economic growth. From a policy perspective, maintenance of high tariff barriers is not really the cause of the myriad of economic challenges bedeviling the Nigeria economy, but other factors.

Test of Hypothesis Three:

First step;

H_0: PPT Revenue has no significant effect on EG
versus
H_1: PPT Revenue has significant effect on EG

Second Step; from Table 4: it indicates that p-value > 0.05, we accept the null Hypothesis (H_o) and reject the alternate Hypothesis (H_1).

Third Step; Decision rule; given that ($H_{o)}$ is accepted and to reject (H_1) if p-value is > 0.05, the Table 4: indicate that 0.8680 > 0.05, therefore we conclude that LPPT revenue has no significant effect on EG of Nigeria. The coefficient of LPPT in the result appears with a negative sign. This means that 1% increase in LPPT will give rise to -0.001936501 decrease in EG in Nigeria. This is in agreement with the findings in [39], in which the findings revealed that PPT had a low elasticity and is negatively related to GDP. However, this view contrast with that of [30] and [37], as their research findings revealed that PPT contribute positively to economic growth in Nigeria. Obviously accrued revenue from PPT is not transparently and judiciously utilized to build public infrastructures to achieve diversification of the economy due to inherent corruption and ineptitude of political leadership.

Test of Hypothesis Four:

First step;

H_0: CIT Revenue has no significant effect on EG

versus

H_1: CIT Revenue has significant effect on EG

Second Step; From the analytical review of Table 4: it indicates that p-value < 0.05, we reject the null hypothesis (H_0) and accept the alternate Hypothesis (H_1).

Third Step; Decision rule; given that (H_0) is rejected to accept (H_1), if p-value is < 0.05, the Table 4: indicate that 0.0203 < 0.05, therefore it is revealed that LCIT revenue has significant effect on EG of Nigeria. The coefficient of LCIT in the result appears with a negative sign. This means that a unit increase in LCIT will result to-0.035925764 decrease in EG in Nigeria. These results aligned with the findings in [40] which revealed that the role of CIT revenue in promoting EG in the Nigerian economic system is not felt much by the citizens primarily due to lack of acceptable tax policies. Imposition of arbitrary increase of tax rate and high cost of production and sundry operational cost has resulted to the winding-up of most companies in Nigeria. Arbitrary increase in CIT rate without commensurate social and infrastructural provisions will have negative impact on economic growth.

The correlation matrix shown in Table 5 and Figure 4 indicates that LGDP has a strong positive correlation with LVATR and LCEDR respectively. This positive relationship implies that log of economic growth moves in the same direction with the log of value added tax revenue and log of customs and excise duty revenue, respectively. Whereas the findings revealed a negative correlation between LGDP and LPPTR, and LGDP and LCITR respectively. The negative relationship or association indicates that the log of economic growth moves in opposite direction with the log of petroleum profit tax revenue and log of company income tax revenue respectively. Thus, the value added tax and, customs and excise duty grow together with the Nigerian economy; while the petroleum profit tax and company income tax are down-turning the Nigerian economy.

Table 5. Correlation Matrix

	LGDP	***LVATR***	***LCEDR***	***LPPTR***	***LCITR***
LGDP	1.0000	0.9939	0.8867	-0.1380	-0.5096
LVATR	0.9939	1.0000	0.8922	-0.1176	-0.4646
LCEDR	0.8867	0.8922	1.0000	0.0110	-0.3683
LPPTR	-0.1380	-0.1176	0.0110	1.0000	0.3735
LCITR	-0.5096	-0.4646	-0.3683	0.3735	1.0000

**Correlation Coefficient results using Excel*

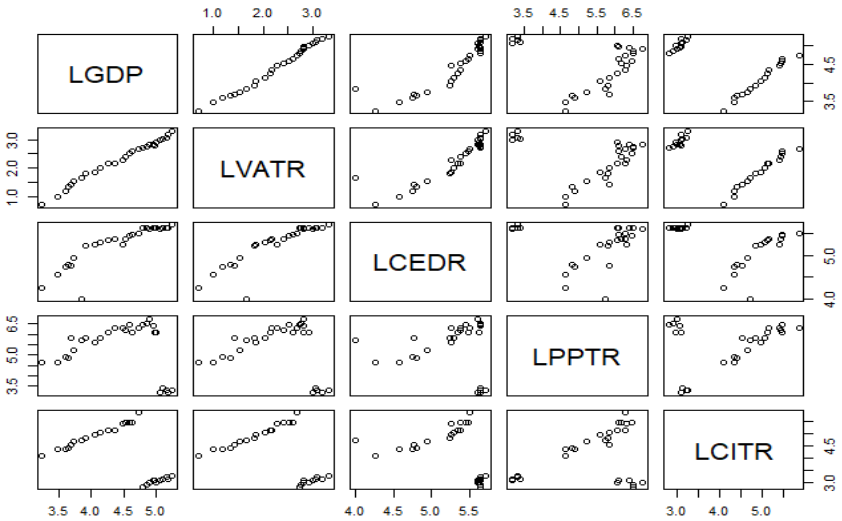


Figure 4. Matrix of Scatter Plot for the Indicators (*using RStudio 4.2.1*)

Table 6. Estimation Results for Model (4): Dependent Variable: $LGDP_t$

Variable	***Coeff. Estimate***	***Std. Error***	***t-value***	***p-value***	***Decision Rule***
Intercept	0.290869	0.433348	0.671	0.509	Insignificant
$LGDP_{t-1}$	0.912847	0.146839	6.217	<0.001	Strongly Significant
$LVATR_{t-1}$	0.020660	0.120581	0.171	0.866	Insignificant
$LCEDR_{t-1}$	0.025670	0.041604	0.617	0.544	Insignificant
$LPPTR_{t-1}$	-0.004780	0.008358	-0.572	0.573	Insignificant
$LCITR_{t-1}$	0.002958	0.011112	0.266	0.793	Insignificant
Multiple R-Squared = 99.54%			*Adjusted R-Squared = 99.43%*		
F-Statistic = 906.7			*p-value = <0.0001*		

**Estimation of Coefficient results using Excel*

Table 7. Granger Causality Test Results

Lag Order 1				**Lag Order 3**			
Variable	*F value*	*p-value*	Decision Rule	*Variable*	*F value*	*p-value*	Decision Rule
$LVATR_{t-1}$	0.1227	0.7291	Insignificant	$LVATR_{t-3}$	13.143	<0.001	Significant
$LCEDR_{t-1}$	0.3950	0.5356	Insignificant	$LCEDR_{t-3}$	4.5201	0.0157	Significant
$LPPTR_{t-1}$	0.0920	0.7643	Insignificant	$LPPTR_{t-3}$	0.1948	0.8988	Insignificant
$LCITR_{t-1}$	0.1088	0.7444	Insignificant	$LCITR_{t-3}$	1.0721	0.3858	Insignificant

**Computed results using RStudio 4.2.1*

4.5. Econometric Techniques and Interpretations

In this section, the statistical analytical tools utilized are; Granger Causality test, Augmented Dicky-Fuller (Unit Root) test, Johansen Cointegration test, and the KPSS level and trend Stationarity test.

The estimation results for model (4) shows that only the past values of the LGDP would significantly predict the future LGDP at 1% significant level. Whereas the historical values of the other predictor variables (LVATR, LCEDR, LPPTR, and LCITR) do not provide any significant evidence of statistical predictability of LGDP at 5% significant level, at lag order 1. The overall estimation results provide strong evidence of statistical significance at 1% significance level, with a clear indication of a good model fit, as judged by the coefficient of determination. Thus, the history of economic growth is statistically proven to be a significant predictor of future economic growth at lag order 1.

At lag order 1, none of the other variables could Granger-cause LGDP. Whereas there is statistically significant evidence that LVATR and LCEDR Granger-cause LGDP at 1% and 5% significance levels respectively. The inclusion of the historical values of LVATR and LCEDR seems to improve the predictive task of the model. It suggests that economic growth is more predictive using its history together with the history of LVATR and LCEDR, rather than using the economic growth history alone.

In the Augmented Dicky-Fuller (ADF) result, all the variables were not stationary (indicating the presence of unit root) at difference order 0 (without differencing). After differencing (at difference order 1), each time series variable become stationary, clearly indicating the absence of unit root with a statistically significance evidence, as shown by the ADF statistics and corresponding p-values. In each case, the null hypothesis of non-stationarity (unit root) is rejected in favour of the alternative hypothesis of stationarity (no unit root) at 5% significance level. This approach helps to avoid spurious regression, and hence the stability conditions are satisfied.

Table 8. Augmented Dicky-Fuller Results

Variable	Order	Dicky-Fuller statistics	p-value	Decision Rule
$LGDP_t$	1	-3.9751	0.02391	Stationary, no unit root
$LVATR_t$	1	-4.9049	<0.001	Stationary, no unit root
$LCEDR_t$	1	-4.214	0.01551	Stationary, no unit root
$LPPTR_t$	1	-3.9888	0.02365	Stationary, no unit root
$LCITR_t$	1	-4.4899	<0.01	Stationary, no unit root

**Computed results using RStudio 4.2.1*

Table 9. Johansen Cointegration Test Results

	Test	*10% Critical Value*	*5% Critical Value*	*1% Critical Value*	Decision Rule
r <= 4	4.19	7.51	9.24	12.97	At most 4 are cointegrated
r <= 3	12.58	17.85	19.96	24.60	At least 3 are cointegrated
r <= 2	25.50	32.00	34.91	41.07	At least 2 are cointegrated
r <= 1	48.36	49.65	53.12	60.16	At least 1 cointegration
r = 0	81.46	71.86	76.07	84.45	

**Computed results using RStudio 4.2.1*

The Johansen cointegration test was conducted for the variables without differencing. The Johansen cointegration test results revealed that, there exists at least one cointegration and at most four are cointegrated, as judged by their respective test statistics compared to the benchmark 5% critical value. This test results concord with the empirical analysis of the ADF, hence the differencing approach seek to overcome any misleading outcome, resulting from the long run relationship existing among time series variables in the model. Thus, the diagnostic approach in this study helps to maintain the basic assumptions of the models and provide meaningful interpretation to the output of the empirical findings.

Table 10. KPSS Level & Trend Stationarity Test Results

	Level			Trend		
Variable	*KPSS Level*	*p-value*	*Decision Rule*	*KPSS Trend*	*p-value*	Decision Rule
$LGDP_t$	1.021	<0.01	Level stationary	0.25266	<0.01	Trend stationary
$LVATR_t$	1.0122	<0.01	Level stationary	0.25472	<0.01	Trend stationary
$LCEDR_t$	0.91509	<0.01	Level stationary	0.19222	0.01892	Trend stationary
$LPPTR_t$	0.27327	0.10	Not level stationary	0.22159	<0.01	Trend stationary
$LCITR_t$	0.53039	0.03482	Level stationary	0.17308	0.02744	Trend stationary
	Truncation Lag Parameter = 2			*Truncation Lag Parameter = 2*		

**Computed results using RStudio 4.2.1*

As the ADF could not guarantee the exact form of stationarity, the KPSS level and trend stationarity tests become necessary in order to ascertain the exact form of stationarity, if it exists, using a truncation lag parameter of 2. The KPSS test results revealed that LGDP, LVATR, LCEDR and LCITR are stationary in levels at 5% significant level; while LPPTR is non-level stationary at 5% significance level. As for the trend stationarity test, there is statistically significant evidence that all the variables LGDP, LVATR, LCEDR, LPPTR and LCITR are trend stationary. This implies that there is stationarity along a deterministic trend in each time series variables, at 5% significant level.

5. Summary, Conclusion, and Recommendations

5.1. Summary

This paper has provided the required evidence and answers to the numerous research questions as highlighted. Section 1 gives the introductory part that highlighted detailed background and major focus of the study. Section 2 provides the literature review which accounts for existing empirical reviews and concepts that guide the study. The study investigates the impact of taxation revenue and its sustainability on EG of Nigeria from 1994 to 2021. The motivation for this study is primarily to investigate the root causes of the recent infrastructural decay and the dwindling tax revenue profile in Nigeria and to make recommendations arising from the study. In trying to achieve this objective, several analyses were carried out, guided by the methodological approaches in Section 3. Such statistical analysis is the Johansen's Cointegration Test, (OLS) test. The empirical results of the study indicated that petroleum profit tax (PPT) and custom and excise duty (CED) contributes huge revenue with minimal impact to economic growth due to huge petroleum subsidy cost and a negative balance of trade (more import than export) respectively. Whereas company income tax (CIT) revenue, especially value added tax (VAT) revenue do have significant impact on Nigeria's economic growth given their individual ratio of contributions in a time series data of Nigeria's economy. However, it has negative effect on EG. This corroborates the findings in [42] in which taxes as non-oil producing sector contributes to revenue generation and economic growth in Nigeria. Invariably, it does not contribute much to economic growth due to unstaining high tax rate on income of companies; for the period covered 1994 to 2021. The results of the Johansen's cointegration test carried out showed a long run stable relationship between the predictor variables. The research bridged the knowledge gap of the inconclusive evidence and the fluctuated effects of economic growth (proxy GDP) of Nigeria.

5.2. Conclusion

The objective of this research is to investigate the impact of taxation revenue and it sustainability effect on the Nigeria economic growth (proxied by GDP) from 1994 to 2021. Based on the research findings and the empirical evidence and discussions it can be concluded that:

i. first, the aim of the study was to determine the effect of value added tax (VAT) revenue on the economic growth of Nigeria for the period 1994 to 2021. The results in the regression analysis in Table 4 shows that 1% increase in VAT revenue would increase EG by 0.7907. VAT revenue will increase the revenue base of Federal Government of Nigeria. Therefore, from our findings, there is overwhelming evidence that support the fact that VAT revenue has great significant contribution to economic growth (proxy GDP) of Nigeria, all things being equal. From the investigation carried and findings made there is still lot more expected of government to do. The major problem has been a weak tax management system. Adequate enlightenment of people will make them realize tax payment is civic responsibility. Tax enlightenment campaign at the rural area is key because pupils studying at the primary and secondary level will grow up not having any idea whatsoever relating to tax. VAT is a consumption tax, most perishable goods such that requires preservations are left to rot away. Produce such as yam, fish, vegetables etc., are left to rot away because of complete absence of preservative facilities; such as electricity to power this equipment are epileptic. Means of transportation of consumable is costly because of absence or no road network to rural settlements. Agricultural activities are experiencing a decline due to annual perennial flood and insecurity. Currently Nigeria is experiencing serious security threat as a result of terrorist Boko Haram and bandits. They either kill the farmers or ask them to pay heavy levy to be able to access their farmland. The country's survive through importations of consumable goods.
ii. The second was to determine the impact of CED on the EG in Nigeria from 1994 to 2021. Analysis of the research conducted revealed a positive significant effect on economic growth of Nigeria. From Table 4: It shows if there is a 1% increase in (CED) revenue, EG in Nigeria will be multiplied by 0.8867 increase. From the contribution ratio of CED revenue, it was concluded that CED revenue has a strong significant positive effect on economic growth of Nigeria. Duties collection from custom is considerably increased due to it high volume of importation and low in export. Recently, the World Trade Organization (WTO) report shows Nigeria need to cut down on trade cost. Associated cost such as infrastructural cost, regulatory cost of product, custom and linkage cost, all these is frustrating the efforts of exporters, leaving the country an import dependant State. The cost of moving goods from industrial sites or farmgate to final consumer for export is exorbitant with high imposition of tariffs by custom officials. Sometimes most senior officers in the custom service are appointed on political patronage, for role played during elections and not on merit. Such officials end up doing damage or sabotaging the system through unruly behaviours and connivance.
iii. Furthermore, in the study to determine the impact of petroleum profit tax (PPT) revenue on economic growth of Nigeria. From the analysis result in Table 4: It shows if there is a 1% increase in petroleum profit tax (PPT) revenue, this will give rise to a reduction in value on economic growth in Nigeria by -0.1380 ratio. Indicating that PPT revenue does not grow the country's GDP because of lack of per capita production in the domestic sector or real economy and huge cost of subsidy for petroleum products. The country is endowed with abundant oil and gas resources, but it imports even the oil it produces. The action has rendered all the four refineries moribund; it earns so much from oil but nothing to shows for the affluent or boom because of it subsidy cost for oil importation (landing cost).
iv. Finally, this work intends to determine the impact CIT revenue has on the Nigerian economy. From the analysis result in Table 4: It reveals that if there is a unit increase in company income tax (CIT) revenue, it will lead to a reduction in value on EG

in Nigeria by -0.5096. Most companies have shut down due to high tax rate impose by the government. The trend can lead to increase in labour as the companies will resort to desperate options to keep itself afloat. Such action can lead to tax evasion and discourage investment. There is need to exercise little consideration in contemplating upward reviewing of tax rate on direct taxes, as such action can cause a backlash.

To achieve this research objectives, secondary data within the period of this research (1994 to 2021) was extracted from the websites of the apex bank (CBN), the (FIRS), and from the annual abstract of Nigeria's (NBS) bulletins.

5.3. Recommendation

To maximize an efficient and effective tax driven economic growth for Nigeria, the following recommendations are proffered for immediate implementation by the Federal Government of Nigeria:

i. The government should ensure that tax revenue is efficiently and judiciously utilized and channelled to produce basic social amenities and infrastructures. This will build confidence and trust in the mind of the citizens. This will equally alleviate poverty and increase the social wellbeing of patriotic citizens.
ii. It is important for government to design a sustainable tax system favourably linked to (GDP). Because GDP is a direct base for consumption tax which is the (VAT) and the (CED). The increased in this tax base is sustainable and it will give a predictable positive impact on the Nigeria economic growth.
iii. Government should provide tax incentives such as; tax holidays and tax rebate to infant industries and agro-allied industries to reduce operations cost and to increase the production base tax of the economy. This will have the propensity to increase both the volume of direct (PPT and CIT) and indirect (VAT and CED) tax base and collections.
iv. There should be deliberate effort to provide adequate professional training and retraining of tax officials. And provide adequate rewards, bonuses, promotions, and incentives to motivate honest and committed tax officials who meet set targets and tasks.
v. Government should provide good road networks, stable electricity supply, adequate security network, provision of water reticulation project, construction of roads and bridges, good healthcare system, all these to enhance development and economic growth.
vi. Government should institute a strong judicial system to try prosecuting erring tax defaulters for deterrent purposes. This will curb corruption, especially the incidence of tax evasion and connivance, and to check against incidence of tax avoidance in the system.
vii. Government to introduce the e-payment system of tax remittances to instill transparency and ease of audit.
viii. Taxes should be paid proportionately according to one's income status. In this regards, the rich should neither oppress nor inflict pains on the poor, as noted in [43].
ix. There should be routine review of tax policies, through sensitization, conventions and seminars aimed at adequately addressing and strengthening micro-economic indices that promote efficient fiscal policies of taxation in Nigeria.

5.4. Limitations of the Study

This research study has its settings restricted to the Nigerian economy and its growth and development. It should not be used to generalize the world economy, except for the purposes of comparison. The study deployed secondary sources of data in its findings and facts, such as journals, books, and websites. Some restrictions were observed during data collections stage on these sites, that painstakingly required the researcher to used reliable sources to validate collection of information for the study. Other limitations experienced is the broad nature of the research topic and the limited time span constraint on the researcher by its collection of data and timely delivery of final report. The vast and long title of the research topic also provides arrays of complexity and problems of maintenance of data collected.

Also, financial constrain has been a major impediment and huddle to the researcher in view of the high volume of data and online materials required to be uploaded and downloaded for this wide range of research topic.

5.5. Contribution to Knowledge and Further Research Gap

The study will significantly educate the public on the fundamental importance of taxation revenue to economic growth and development through provision of desired social infrastructures. Also, the needs for the 3 tiers of government in Nigeria to judiciously harness proceeds of tax revenue for the equitable provision of social infrastructures to justifying the need for effective and efficient tax drive. The study also created the insight for government to embrace the culture of good governance, so as to secure the confidence and loyalty of the populace to good tax culture, which would maximize and sustain the country's economic growth potential through taxation revenue.

Also, the research is believed to be well timed as its recommendations are germane to tackling the current dilemma of Nigeria government on its multiple taxation on company's income and operations, resulting to good number of the latter leaving the country's investment space. The recommendations in this study if implemented would generate revenue that will stimulate economic growth. Also, would help to gradually phase out the petroleum subsidy cost regime bedeviling and taking a huge tole on the economy.

5.6. Further Research Opportunity and Implications

Further research opportunity in this study is to carry out research on taxation revenue administration and its implications on accounting reporting standards of government entities in Nigeria.

Another potential need for further research is to compare the tax system administration in Nigeria with developed countries such as the UK, France, US, and other countries in the European Union, to create the desired insight and build on its economic blueprints on taxation revenue, and to gain economies of scale.

Other area for further research is the economic implications of Nigeria's dwindling tax revenue and government huge burden on provision of subsidy on petroleum and natural gas products.

References

[1] Federal Government of Nigeria, 2011. Constitution of the Federal Republic of Nigeria (Third Alteration). The National Industrial Court.

[2] Onakoya, A., and Afintinni, O. (2016). Taxation and Economic Growth in Nigeria. *Asian Journal of Economic Modelling, 4 (4), 199-210*.

[3] Ogbonna, G.N., and Appah, E. (2016). Effect of Tax Administration and Revenue on Economic Growth in Nigeria. *Universal Journal on Sustainable Developmental Research (USDR).*

[4] Akwe, J.A. (2014). Impact of Non-oil Tax Revenue on Economic Growth: The Nigerian Perspective. *International Journal of Finance and Accounting, 3(5): 303-309.*

[5] Ihendinihu, J.U., Ebieri, J., and Ibanichuka, E.A.L. (2014). Assessment of the Long-Run Equilibrium Relationship between Tax Revenue and Economic Growth in Nigeria: 1986 to 2012. The SIJ Transactions on Industrial, Financial & Business Management (IFBM) 2(2) 39-47.

[6] Lyndon, M.E., and Paymaster, F.B. (2016). The Impact of Company Income Tax and Value Added Tax on Economic Growth: *Evidence from Nigeria. European Journal of Accounting, Auditing and Finance Research* 4, (7) 106-112.

[7] Okafor, R.G. (2012). Tax Revenue Generation and Nigerian Economic Development. *European Journal of Business and Management, 4, (19).*

[8] Abata, M.A. (2104). The Impact of Tax Revenue on Nigeria Economy (A Case Study of FBIR). *Journal of Policy and Development Studies 9. (1) 109-121.*

[9] Ayuba, A.J. (2014). Impact of Non-oil Revenue on Economic Growth: The Nigerian Perspective. *International Journal of Finance and Accounting. 3(5), 303-309*.

[10] Macek, R. (2014). The Impact of Taxation on Economic Growth: Case study of OECD Countries. *Review of Economic Perspectives, 14(4), 309 – 328.*

[11] Ude, D.K., and Agodi, J.E. (2014). Investigation of the Impact of Non-Oil Revenue on Economic Growth in Nigeria. *International Journal of Science and Research (IJSR). 3 (11) 2319- 7064.*

[12] Out, H.B., and Theophilus, O.A. (2013). The Effects of Tax Revenue on Economic Growth in Nigeria. *International Journal of Humanities and Social Science Invention ISSN (Online): 2319-7722.*

[13] Gacanja, E.W. (2012). Tax Revenue and Economic Growth: An Empirical Case Study of Kenya. *Unpublished MBA Project, University of Nairobi.*

[14] Muriithi, C.M. (2013). The Relationship Between Government Revenue and Economic Growth in Kenya. *International Journal of Social Sciences and Project Planning Management. Vol 1, Issue 1.*

[15] Abiola, J. and Asiweh, M. (2012). Impact of Tax administration on government revenue in a developing economy-a case study of Nigeria. *International journal of business and social science vol. 3 No. (8).*

[16] Ijieh, S.O. (2014). Promoting Sustainable Development in Nigeria through the Non-Oil Sector Export. *Research Journal on Humanities and Social Sciences, Vol.4 (8).*

[17] Abomaye-Nimenibo, A.S. (2017 b). The Concept and Practice of Taxation in Nigeria. Port Harcourt, Nimehas Publishers.

[18] Ofoegbu, G.N., Akwu, D.O., and Olive, O. (2016). Empirical Analysis of Effect of Tax Revenue on Economic Development of Nigeria. *International Journal of Asian Social Science, 6(10): 604-613.*

[19] Anyaduba, J.O. (2004). Partnership Taxation in Nigeria. *ICAN Student Journal, 9(2): 15-17.*

[20] Brautigam, D. (2008). Taxation and Governance in Africa. AEI online. Available from: *http://www.aei.org/publication/taxation-andgovernance-in-africa [Accessed 27th September 2015]*

[21] Jhingan, M.L. (2011). "Money, Banking, International Trade and Public Finance". 8th Edition, Urind Publication Ltd, Mayur Vihar Phase 1 Delhi.

[22] Musgrave, R.A., and Musgrave, P.B. (2004). Public Finance in Theory and Practice. *5th Edition. New Delhi: Tata McGraw.*

[23] Ekeoha, P.C., Ekeoha, C.S., Malaolu, V., and Onyema, M. (2012). "Revenue Implications of Nigeria's Tax System". *Journal of Economic and Sustainable Development, Vol. 3, No. 8.*

[24] Nwezeaku, N.C. (2005). Taxation in Nigeria: Principles and Practice, *Owerri Springfield Publishers.*

[25] Cutt, J. (1969). Taxation and Economic Development in India. New York: Fredrick A. Praeger Inc.

[26] Umoru, D., and Anyiwe, M.A. (2013). "Tax Structures and Economic Growth in Nigeria: Disaggregated Empirical Evidence". *Research Journal of Finance and Accounting, 4(2), 65-79.*

[27] Ariyo, A. (1998). Productivity of the Nigerian Tax System: 1970 to 1990. African Economic Research Consortium, Nairobi Kenya.

[28] Odusola, A. (2006). Tax Policy Reforms in Nigeria. Research Paper No. 2006/03 United Nations University. World Institute for Development Economics Research. OECD (1995), Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations, OECD, Paris.

[29] Osiegbu, P.I., and Nnamdi, I. (2009). Public Finance: Theories and Practices. Asaba: C.M. Global Company Ltd., Asabi.

[30] Ogbonna, G. N., and Ebimobowei, A. (2011). Impact of Tax Reforms and Economic Growth in Nigeria. *Maxwell Scientific Organization.*

[31] Bhartia, H.L. (2009). Public Finance. 14th Edition. *Vikas Publishing House PVT Ltd, New Delhi.*

[32] Anyanfo, A.M.O. (1996). "Public Finance in a Developing Economy: The Nigerian Case", Department of Banking and Finance, University of Nigeria, Enugu Campus. Enugu.

[33] Saima, S., Tariq, A., Muhammad, F.R., Sofia, A., and Amir, A. (2014). Taxation Effects on Economic Activity in Pakistan. *Journal of Finance and Economics, 6 (2): 215-219.*

[34] Ravindra, T., Ambalika, S. and Sweta, A. (2011). The Effect of Value Added Taxes on the Indian society. *Journal of Accounting and Taxation, 2 (3): 32-39.*

[35] Chibu E.E., and Njoku, C.O. (2015). Annual Report 2015. Corporate Activities of Standard Alliances Insurance Plc. *Economic Review, vol. 40, pp 1521–40.*

[36] Dritsaki, C. and Katrina, G. (2005). Taxes and Economic Indicators: an empirical investigation for Greece. *Greek Journal of public economics Vol.55 pp 34-54.*

[37] Success, M.J., Success, E.B., and Ifurueze, M.S.K. (2012). "Impact of Petroleum Profits Tax on Economic Development of Nigeria". *British Journal of Economic Finance and Management Sciences, Vol. 5, No. 2, Pp. 60-70.*

[38] Chigbu. E.E, Linus, E.A., and Appah, E. (2012). "An Empirical Study on the Causality Between Economic Growth and Taxation in Nigeria". *Current Research Journal of Economic Theory 4(2), pg. 29-38.*

[39] Fasoranti, M.M. (2013). Tax Productivity and Economic Growth. *Lorem Journal of Business and Economics.* 1 (1), 1-10.

[40] Adegbie, E., and Fakile, A. (2011). The Relationship between Company Income Tax and Nigeria's Economic Development for the period 1981-2007. *Global Journal of Management and Business Research. 11 (96), 1-5.*

[41] Koehler, A.B., and Murphree, E.S. (1988). A comparison of the Akaike and Schwarz Criteria for selecting model order. *Journal of the Royal Statistical Society, Series C (Applied Statistics), 37 (2): 187-195.*

[42] Iworiso, J. (2020). Multivariate Time Series Analysis to Impact Assessment of Nominal Economic Indicators on Federal Government Revenue and Economic Growth in Nigeria. American Journal of Applied Mathematics and Statistics, 8(3), 69-89.

[43] Iworiso, J. (2021). Post Hoc Analysis of Life Expectancy in West Africa. American Journal of Applied Mathematics and Statistics, 9(2), 57-65.