



## Impact of Non-Oil Tax Revenue on Economic Growth in Nigeria

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### Abstract

*This study examines the impact of non-oil tax revenue on economic growth in Nigeria. The main objective of the study is to examine the relationship between non-oil tax revenue (CIT, EDT and VAT) and economic growth in Nigeria for the period 1990 - 2022. Using annual time series data, the study adopted the Johansen cointegration model and the Error Correction Model (ECM) to investigate for the existence or otherwise of long run and short run relationships between the explanatory variables (CIT, EDT and VAT) and economic growth. The result of the study showed that non-oil tax revenue have impact on economic growth in Nigeria in the review period even though the impact is not the same for all categories of non-oil tax revenue. Specifically, the results indicate that there is a long run positive and significant relationship between the independent variable (LCIT, LEDT and LVAT) and the dependent variable (LGDP). However, the study revealed that there is a negative and significant relationship between LCIT, LEDT and LGDP in the short run. The study suggests that the Government should improve the general business environment by formulating and implementing policies that foster the growth and development of the private sector of the economy. This will broaden the industrial base of the economy, widen the tax base and improve non-oil tax revenue that is needed for economic growth. Additionally, the legislature should exercise their oversight functions effectively and ensure that taxes collected are used judiciously. The judicial use of tax revenues will engender accountability, confidence in the tax system and enhance voluntary compliance.*

### Keywords:

Non-oil Tax Revenue  
Economic Growth  
Gross Domestic Product  
Macroeconomic Stability  
Voluntary Compliance

**JEL Classification:** H25

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### 1. Introduction

The growth and development of any nation depends to a large extent on the level of domestic revenue mobilization and its utilisation. Governments in developing and developed countries recognising the importance of revenues in the growth process

have continued to intensify efforts towards harnessing domestic revenue mobilisation. These revenues which are mostly generated from oil and non-oil taxes are regarded as sustainable source of revenues and are collected by Tax Administrations at all tiers of government. It is however becoming obvious

that the collection of these tax revenues are associated with a lot of challenges and Governments are losing billions of dollars due to frauds, evasion and non-compliance.

Tax according to Sunday, Emmanuel and Ose Dominic (2020) is a compulsory levy imposed on income, profit and capital gains of individuals, companies, or other legal entities by the government to raise revenues. It is a mandatory charge levied on a tax payer or upon his estate by the sovereign institution to generate needed revenue required for providing social amenities, security, and make available favourable conditions for the economic welfare of the people (Appah and Ayandonghan, 2011). For Worlu and Emeka (2012), a tax may be defined as a fee charged or levied on a product, income, or activity by a government and can be categorised as either being a direct or indirect tax. Direct taxes are taxes levied directly on an individual or corporate entity's income, while an indirect tax is a tax levied on goods and services and are reflected in the prices of the goods and services. Direct taxes include Personal Income Tax (PIT), Companies Income Tax (CIT) and Petroleum Profits Tax (PPT), while a good example of an indirect tax is Value Added Tax (VAT).

Tax revenue is also categorized into oil and non-oil tax revenues. Oil tax revenues are revenues generated from oil-producing activities, such as petroleum revenues from upstream activities and other oil-related operations. Non-oil tax revenues, on the other hand, relate to revenues generated from companies operating in the non-oil sector that are not engaged in oil and gas exploration activities. Examples of non-oil tax revenue include Companies Income Tax (CIT), Value Added Tax (VAT), Personal Income Tax (PIT), Capital Gains Tax (CGT), and Stamp Duties.

The main purpose of tax according to Bhartia (2009) and Ola (2001) is to raise revenues to meet government expenditures, to redistribute income and also to manage the economy. Anyanfo (1996) also believes that Government imposed taxes on its citizens for the purposes of revenue generation to finance its expenditures, redistribution of income and

wealth to reduce income inequalities, protection of weak or infant industries, achieve macroeconomic stability, and curb inflation. The effective utilisation of tax revenues according to Bhartia (1996), Jhingan (2004), and Ola (2001) cited by Worlu and Emeka (2012), contribute to the economic growth and development of a country. Ayeni and Omodero (2022) agreed that the greater proportion of a nation's responsibilities are funded with tax revenues.

The Nigerian law clearly delineates the tax jurisdiction of each tier of government in the country: the Federal, States, and Local Government Areas. At the federal level, the Federal Inland Revenue Service (FIRS) is charged with the responsibility of collecting Company Income Tax (CIT), Value Added Tax (VAT), Petroleum Profits Tax (PPT), Education Tax (ET), Capital Gains Tax (residents of the Federal Capital Territory, bodies corporate and non-resident individuals), Withholding tax (companies, residents of the Federal Capital Territory and non-resident individuals), NITDA Levy, and Stamp duties (bodies corporate and residents of the Federal Capital Territory). The State Governments collect Personal Income Tax (PIT) in respect of Pay-As-You-Earn (PAYE) and Direct Assessment (Self-Assessment), Capital Gains Tax (individuals only), Stamp Duties (individuals only), Withholding Tax (Individuals only), Road taxes, Pools betting and lotteries, gaming and casino taxes, and Business premises registration fees, while the Local Governments collect tenement rates, shops and kiosks rates, motor parks fees, Marriage, Birth and Death Registration fees, Slaughter Slab fees, and domestic animal licenses among others.

Prior to the discovery of oil in Nigeria, the non-oil sector was the main source of revenue in Nigeria. The non-oil sector including agriculture and mineral resources like coal, tin, columbite, iron ore, etc., contributed the bulk of the country's revenues before 1970. According to Uwatt (2016), the non-oil sector is the hub of economic activities in modern economies and Nigeria is not an exception. The

agricultural sector for instance before the discovery of oil according to the World Bank (2013) contributed about 95% of Nigeria's foreign exchange earnings, generated over 60% of her employment capacity and approximately 56% to her gross domestic earnings. However, the discovery of crude petroleum in commercial quantity in the mid-1970s changed the structure of the Nigerian economy. The oil sector became the dominant sector in the economy providing approximately 90% of foreign exchange earnings and about 80% of Federal revenues (Salami, et al. (2018).

The broad objective of this paper is to examine the impact of non-oil tax revenues on economic growth in Nigeria for the period 1990 - 2022. The specific objectives are to examine the trend and pattern of non-oil tax revenue and economic growth; to analyse the impact of non-oil tax revenues on economic growth in Nigeria; and to test for the causal relationship between non-oil tax revenues and economic growth in Nigeria.

Specifically, the research questions that this paper attempts to address are: Does non-oil tax revenues have any significant impact on economic growth in Nigeria? What is the nature of the relationship between non-oil tax revenues and economic growth in Nigeria? In the light of the research questions, the following hypotheses will be of relevance.

*H0<sub>1</sub>: Non-oil tax revenue does not contribute to economic growth in Nigeria.*

*H0<sub>2</sub>: There is no significant relationship between non-oil tax revenue and economic growth in Nigeria.*

Following this introduction section, the rest of the paper is organised as follows. Section 2 presents the literature review and theoretical framework. Section 3 discusses the methodology of the analysis, the data used, their sources, model specification and the method of data analysis. Section 4 presents the results and key findings of the research, while the conclusion and recommendations of the paper are presented in section 5.

## **2. Literature review**

### *2.1.1 Tax Revenue and Economic Growth*

The literature on the dynamics between tax revenue and economic growth is vast. Several studies carried out on the impact of tax revenue on economic growth in Nigeria revealed mixed results owing to the differences in methodologies, scope as well as variables used in their estimation models. However, the existence of a rich and robust body of literature on the subject matter has led to various definitions and conceptualization of tax revenue and its impact on economic growth. Tax revenue according to the OECD (2023) is defined as the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes. Total tax revenue as a percentage of GDP (Tax - to - GDP ratio) indicate the share of a country's output that is collected by the government through taxes. It can be regarded as one measure of the degree to which the government controls the economy's resources. Developed countries that have efficient tax administrations have higher tax - to - GDP ratios than developing countries. The IMF (2021) reported that while developed countries like Austria, Belgium, Canada and Germany have higher tax - to - GDP ratio of 50.05%, 49.39%, 40.96% and 47.53% respectively in 2021, developing countries like Haiti, Nigeria, Sudan and Sri Lanka had a low tax - to - GDP ratio of 8.31%, 7.25%, 9.36% and 8.28% respectively for the same period. It is also argued that a country's ability to finance socioeconomic development programmes, infrastructural projects, military and defence expenditure and other capital projects depends on its tax - to - GDP ratio. Thus, a low tax - to - GDP ratio in a country indicates that a large proportion of economic activities are not captured in the tax net with fewer economic agents contributing to the country's tax revenue. As shown in Figure 1, Nigeria's tax - to - GDP ratio which hovered between 5% to 6% in the period 2010 to 2011 rose to 10.86% in 2021 (NBS, 2023). This is lower than the African average of 16.5%; Asia

and Pacific (19.1%), Latin America and the Caribbean (21.9%) and OECD countries (33.5%). There is therefore the need for Nigeria to intensify efforts at widening the tax base and

generate more non-oil tax revenues as there exists a strong link between a nation's tax system and its economic growth (Ihenyen and Ogbise, 2022).

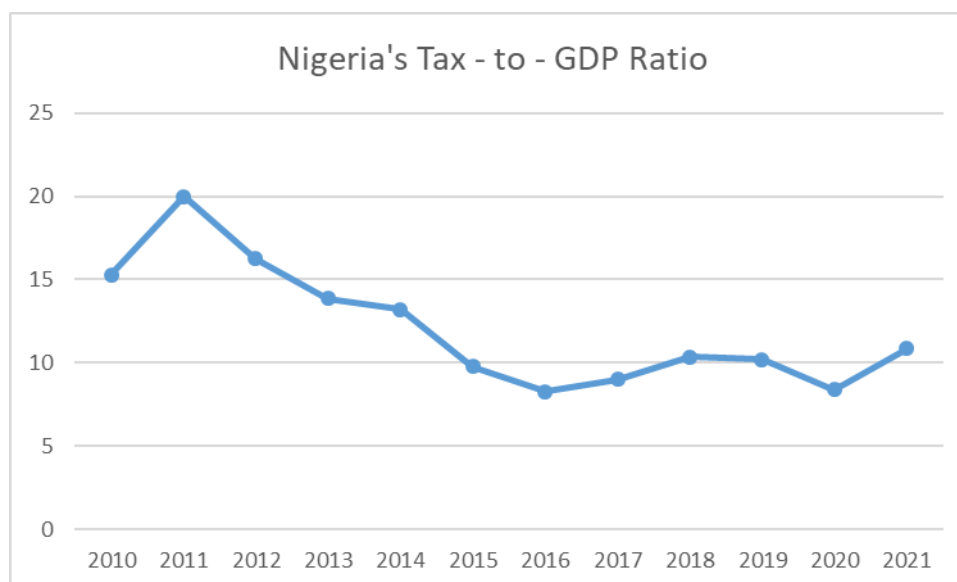


Figure 1: Trend in Nigeria's Tax - to - GDP Ratio

Source: NBS, 2023.

Relatedly, Osamor, et al. (2023), submitted that tax policies of government impact a country's economic capacity at both micro and macro levels. Tax policies thus affect disposable incomes and has impact on consumption behaviour of economic agents thereby impacting economic growth. In fact, Gale (2014) argued that a nation's tax system to a large extent determines its level of economic growth.

The tax system in Nigeria has undergone series of reforms of recent culminating in the approval of the revised National Tax Policy (NTP) by the Federal Executive Council on 1<sup>st</sup> February, 2017. The NTP establishes fundamental principles to guide an orderly development of the Nigeria tax system and reinforces the need for tax laws and administrative practices to promote economic development. In line with the NTP, the tax laws were amended to make the laws more

responsive to the developmental aspirations of the government. In this regard, the Federal Inland Revenue Service (FIRS) undertook several robust engagements with stakeholders in the tax ecosystem. The Service also undertook a nationwide tax registration drive focusing mainly on Value-Added-Tax (VAT) to bring in all unregistered taxpayers into the tax net. Similarly, the core tax administration processes of the FIRS were automated with the introduction of the six e-solutions: e-registration; e-filing; e-payment; e-receipt; e-Stamp Duty and e-Tax Clearance Certificate.

The initiatives by the FIRS led to continuous improvements in revenue collection over the years. Tax revenue collected by the FIRS increased from ₦2.19 trillion in 2019 to ₦10.17 trillion in 2022. The collection of ₦10.17 trillion by the Service in 2022 is the highest tax revenue collection in the history of the FIRS.

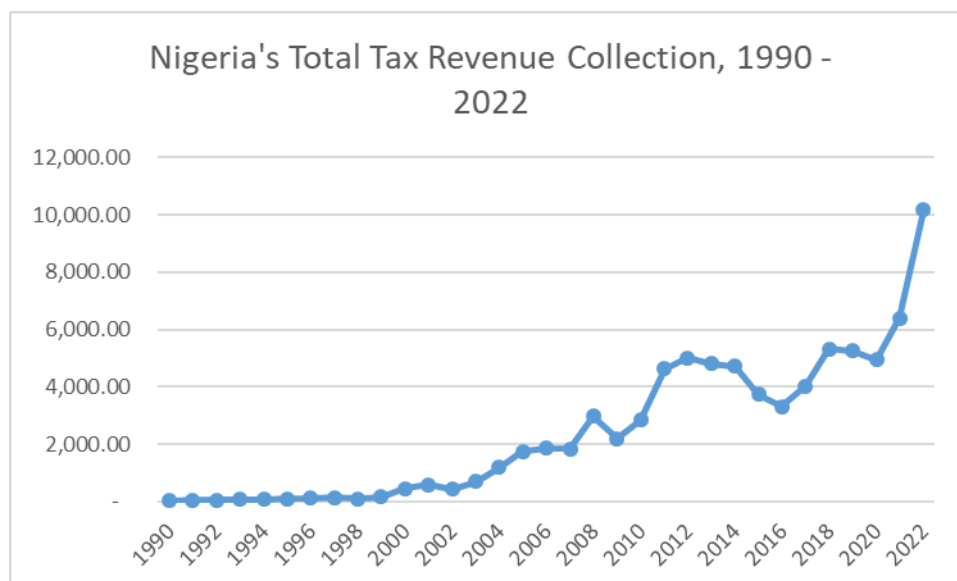


Figure 2: Nigeria's Total Tax Revenue Collection, 1990 - 2022  
Source: FIRS, 2023.

### 2.1.2 Non-Oil Tax Revenue

Non-oil tax revenue are the different revenues collected by the government from economic agents operating in the non-oil sector. According to Ihendinihu, Ebieri and Ibanichuku (2014), they include revenues that are not derived from or associated with the oil sector. Yahaya and Yusuf (2019) added that non-oil tax revenues are direct and indirect taxes paid by sectors of the economy other than the oil sector. These taxes include Personal Income Tax (PIT), Value Added Tax (VAT), Company Income Tax (CIT), Education Tax (EDT), Capital Gains Tax (GGT) and Custom and Excise Duties.

### 2.1.3 Company Income Tax (CIT)

Every company according to Adegbe, Nwaobia, and Osinowo (2020), is registered to engage in business activities with a view to making profit and CIT is payable upon the profit of all resident companies on their worldwide income while non-resident companies are subject to CIT on their Nigeria-sourced income. CIT is administered based on the provisions of the Companies Income Tax Act (CITA), Cap C21, LFN 2004 (as amended) and the Finance Act, 2019. The tax is assessed on a preceding year basis and is administered

and collected by the Federal Inland Revenue Service (FIRS). CIT according to Yahaya and Yusuf (2019) have been contributing significantly to the revenue profile of the government. FIRS (2022) revealed that N1.2 trillion, N1.7 trillion and N2.6 trillion were collected at CIT for the period 2020, 2021 and 2022 contributing more than 24% of total tax revenues respectively.

### 2.1.4 Value Added Tax (VAT)

Value Added Tax is a consumption tax introduced in Nigeria in 1993 through the VAT Decree No 102 which has undergone several amendments the latest being the VAT (Amendment) Act of 2017. It is an indirect tax payable on goods and services consumed by any person, whether government agencies, business organisations, or individuals. The VAT system in Nigeria is a multi - stage tax system in which VAT is collected at every stage of the production chain from the manufacturer to the consumer (Abata, 2014). It is imposed on all goods and services except the goods and services listed in the 1<sup>st</sup> Schedule to the VAT Act. The exempted goods and services include basic food items, books and academic materials, medical and pharmaceutical products, community services,

medical services, etc. VAT is currently charged at 7.5% based on the provisions of the Finance Act 2020 compared to 15% in Ethiopia and Ghana, 14% in South Africa, 20% in Morocco and 18% in Tunisia. Although based on the current arrangement VAT is administered by the FIRS, its benefits has largely been accruing to the States and Local Governments as it is shared in the following proportion; Federal Government 15%; States 50% and Local Governments 35% (Ayedun, Durodola, Oloyede, and Oni, 2018). The contributions of VAT to total tax revenues has been on the increase according to the FIRS (2023). VAT collections increased from N1.5 trillion in 2020 to N2.0 trillion in 2021 and subsequently to N2.5 trillion in 2022.

#### 2.1.5 Education Tax (EDT)

The Tertiary Education tax which is formally called Education Tax is a tax imposed on all companies registered in Nigeria in line with the Tertiary Education Trust Fund (TETFUND) Establishment Act, No. 16, 2011. EDT is charged at the rate of 3% (as amended in the 2023 Finance Act) on the assessable profit for each year of assessment. The revenues collected from EDT are used to finance the construction, rehabilitation and restoration of education infrastructure in Nigerian public Universities, Polytechnics, and Colleges of Education. The tax according to Odusola (2006) is administered by the FIRS and viewed as a social obligation of companies operating in Nigeria towards the development of education infrastructure in the country.

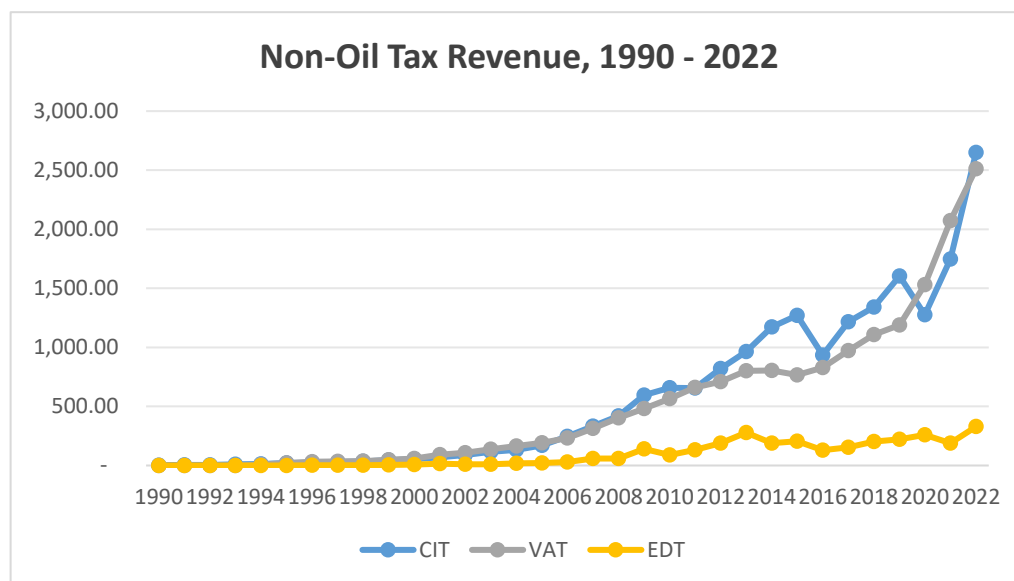


Figure 3: Nigeria's Non-Oil Tax Revenue Collection, 1990 - 2022

Source: FIRS, 2023.

#### 2.1.6 Economic Growth

Economic growth refers to the increase in value of goods and services produced in a country over a given period of time usually one year. It is defined as the long-term increase in Gross Domestic Product (GDP) per capita (McConnel and Brue, 2002). Kuznets (1971) defined a country's economic growth as "a long-term rise in capacity to supply increasingly diverse economic goods to its

population". Similarly, Ewa et al. (2020) referred to economic growth as a rise in the value of a country's goods and services over a period of time. GDP is used as a proxy for economic growth. GDP is the monetary value of all goods and services produced in a country by all economic agents irrespective of nationality of the residents during a particular period of time (Yahaya and Yusuf, 2019).

Economic growth according to the IMF (2021) has been high on the agenda of developing countries for at least four decades, and on the agenda of economics for centuries. It is regarded as the most powerful instrument for reducing poverty and improving the quality of life in developing countries (DFID, nd). Both cross-country research and country case studies provide overwhelming evidence that rapid and sustained growth is critical to making faster progress towards the Millennium Development Goals - and not just the first goal of halving the global proportion of people living on less than \$1 a day.

Growth can generate virtuous circles of prosperity and opportunity. Strong growth and employment opportunities improve incentives for parents to invest in their children's education by sending them to school. This may lead to the emergence of a strong and growing group of entrepreneurs, which should generate pressure for improved governance. Strong economic growth therefore advances human development, which, in turn, promotes economic growth and generate more revenues for the government in the long-run.

## 2.2 Theoretical Framework

The importance of revenues in the growth process of a nation has been clearly illustrated in the early works of classical and neoclassical economists. These works which are relevant are represented in various theories that are used to explain the dynamic relationship between tax revenues and economic growth. According to Myles (2009), taxation is linked to growth through the decisions of individual economic agents. A change in a tax modifies optimal choices and thus affecting returns to investment. Public expenditure such as infrastructure, public health care and public education financed through taxation can contribute to the rate of economic growth in a country. This study which is grounded in the optimal taxation theory attempts to discuss the impact of non-oil tax revenue on economic growth in Nigeria. It also discuss two relevant growth theories that tends to provide a theoretical grounding on the practice of

taxation and its contribution to the growth process.

### 2.2.1 Optimal Taxation Theory

The fundamental theory of optimal taxation posits that a tax system should be chosen to maximise a social welfare function subject to a set of constraints, taking into account that individuals respond to taxes and transfers (Mankiw, Weinzierl and Yagan, 2009; and Sael and Diamond, 2011). The optimal taxation theory has its basis on the foundational work of Ramsey (1927) and Mirrlees (1971). The tax system according to this theory should therefore be designed and implemented in such a way that it maximises social welfare of the citizenry. Tax revenue is required to fund the provision of public goods and services, as well as for redistribution from rich to less privilege individuals in the society. Social welfare is larger when resources are more equally distributed, but redistributive taxes and transfers can negatively affect incentives to work, save, and earn income in the first place. This creates the classical trade-off between equity and efficiency which is at the core of the optimal income tax problem (Sael and Diamond, 2011). Optimal taxation theory therefore according to Maganya (2020) involves designing and undertaking a tax system that lowers distortion and inefficiency in the market equilibrium under certain economic conditions. In addition, if the first best outcome is not feasible and you have to seek for the second best then the design and implementation of the optimal tax requires knowing how to increase the number of outcome from a heterogeneous population using socially optimal way (Mankiw, Weinzierl, and Yagan, 2009).

### 2.2.2 Exogenous Growth Theory

The theoretical studies on economic growth in the literature emphasised understanding why some countries experience persistent growth in per capita while others have not (Lucas, 1993). Domer (1946) postulated that an economy will be in a state of equilibrium when its productive capacity is equal its national income. This is in

line with the classical doctrine where the labour force and its productivity were key to the economic growth paradigm. In fact, Domar (1946) concluded that the rate of growth of national income was a combined effect of the growth of labour and its productivity disregarding the effects of any external economies or diseconomies.

Further developments which attributes productivity growth to direct investment, population growth and technical progress were largely pioneered by Solow (1956). Thus, according to this theory, fiscal policy action by the government will not have any effect on the long-term growth of the economy, but it implies that any changes in economic growth will be caused by the key factors of production such as labour, capital and technological progress that are being determined outside of the model (Solow, 1956). However, in the neoclassical framework, taxes imposed by the government can have an impact on growth in the transition to a new steady state if they affect the rate of savings and consequently investment level.

### 2.2.3 Endogenous Growth Theory

Endogenous growth theory was developed as a reaction to omissions and deficiencies in the Solow (neoclassical) growth model. It is a theory which explains the long run growth rate of an economy on the basis of endogenous factors as against exogenous factors of the neoclassical growth theory.

Endogenous Growth Models (EGMs) consist of a diverse body of theories that model economic growth through the medium of four main sources of increasing returns to capital namely; innovative capital (Cass, 1965; and Frankel, 1962), intellectual capital (Aghion and Howitt, 1992; Grossman and Helpman, 1991 and Romer, 1986), and human capital (Lucas, 1988). In contrast to the Exogenous growth model championed by Harrod - Domar which viewed growth as exogenous, or coming from outside variables, the endogenous theory emphasises growth from within the system (Nigam, nd). The concept of economic growth

in this model emphasises the importance of the internal economy.

In the EGM, technology progress is seen as the key determinant of long-term economic growth which the neoclassical growth model could not account for. Hence, technological progress becomes endogenous in endogenous growth models. As the matter of fact, it is the effect of diminishing returns in the neoclassical growth model that limits the expansion of output and economic growth. To overcome this limitation to economic growth, EGM inculcates increasing returns to scale (Barro, 1990). The classical Cobb Douglas production function exhibits constant returns to scale to the factor inputs say labor and capital. This leaves no reward or incentive for individuals to engage in economic activities that encourage technological innovations. Therefore, any theory that endogenises technological progress cannot be based on a competitive equilibrium where factors of production are being rewarded according to their marginal products. As far as the role of fiscal policy is concerned, this theory speculated that the state spending and taxation should have both a temporary and permanent effect on the growth of the economy. Tax will cause inefficiency and distortion in the product and labour markets, and the productive expenditure will affect the growth rate in the long-term (Barro, 1990).

In developing economies, the government has to play an active role in achieving sustainable economic growth. Therefore, fiscal policy is a very crucial instrument of government in promoting economic growth (Babatunde et al., 2017). An important part of the fiscal policy is taxation apart from government expenditure. Many economists believe that tax revenue is one of the most significant factors that contribute to a country's growth. For years, it has provided developing countries with a stable and predictable fiscal environment to promote growth and to finance the needed social and physical infrastructures. In Tanzania, for instance, the economy is highly dependent on tax revenue as a source of government expenditure for developmental purposes (Kweka and Morrissey, 2000).



Combined with economic growth, tax revenue reduces long-term reliance on aid and ensures good governance by promoting openness and accountability of governments to their citizens (Romer and Romer, 2010).

### 2.3 Empirical Review

Several studies have examined the impact of taxation on economic growth and development in different countries with diverse techniques. The outcome of the investigations however, shows little degree of relatedness in the results. However, despite these multitude of empirical studies on the impact of taxes on economic growth (OECD 2008), only a few small mice of agreement have yet emerged from the mountain, largely because the effects of taxes in particular country settings often depend both on very detailed characteristics of tax design and implementation and market structure that are not easily captured in econometric models. For instance Osamor, Omoregbee, Ajasa-Adeoye, and Olumuyiwa-Loko (2023) empirically examined the effects of Tax Revenue and Economic Growth in Nigeria. The study used quarterly secondary data obtained from the CBN, FIRS and the NBS for the period 2021 to 2020 and adopted panel Autoregressive Distributed Lag (ARDL) to examine the short run and long run relationship between the independent variables (PPT, CIT, VAT and CTD) and the dependent variable (GDP). The study found that PPT, CIT, VAT and CTD have a positive insignificant effect on economic growth in Nigeria and it therefore recommended a cocktail of institutional, monetary and fiscal reforms aimed at boosting tax revenues needed for growth and development in Nigeria.

A study on non-oil revenue and economic development in Nigeria (Omes, Ngoke and Ordu, 2020) indicated that non-oil revenues have positive relationship with GDP. The study was based on a set of data extracted for the period 1989 to 2018 from the CBN Statistica Bulletin, while the Spearman's Rate Correlation Co-efficient was utilised in analysing the data obtained for the study. The study concluded by recommending a gradual

shift away from oil revenue sources to non-oil revenue sources in line with the provisions of the National Tax Policy.

Likita, Idisi and Nakah (2018), evaluated the impact of non-oil revenue on economic growth in Nigeria covering the period 1981 to 2016 with agricultural revenue, company income tax, manufacturing revenue, solid minerals revenue, custom and excise duties and revenues from the services sector used as proxy for non-oil revenue (independent variables). The GDP was used as proxy for economic growth (dependent variable). The study used Unit Root test to determine the stationarity of the variables of the study while the cointegration test was undertaken to determine the existence of long run relationship among the different variables. Ordinary Least Square (OLS) and Error Correlation Mechanism (ECM) techniques were utilised to further interrogate the data collected for the study. The findings from the study revealed that agricultural revenue, services revenue and manufacturing revenue have positive and significant impact on economic growth while company income tax have a negative and significant impact on economic growth in Nigeria. The analysis of the findings of the study also revealed that solid minerals revenue have negative and insignificant impact on economic growth while custom and excise duties have positive but insignificant relationship with economic growth in Nigeria.

Okezie and Azubuike (2016), studied the contributions of non-oil revenue to economic growth in Nigeria for the period 1980 to 2014. The study used GDP and total revenue as dependent variables while oil revenue and non-oil revenue were used as independent variables. In analysing the data obtained for the study, Ordinary Least Squares (OLS) multiple regression was utilised. The findings from the study indicate that oil revenue contributed positively to economic growth in Nigeria. Relatedly, the study revealed that non-oil revenue also contributed positively but insignificantly to economic growth in Nigeria. Furthermore, the findings showed that both oil revenue and non-oil revenue impact positively

and significantly to total government revenue. The study therefore recommended that government should implement effective strategies aimed at harnessing the revenue potentials of the oil and non-oil sectors.

Okoyeuzu (2013) as cited in Sebastian, Nwaeze and Charity (2020) evaluated the impact of Value Added Tax Remittance with observations from Developing Countries. The study obtained data from the FIRS covering the period 2005 - 2011 and a survey research design was utilised. Findings from the study revealed that VAT revenue has been on the decrease in the study period and therefore recommended for an efficient machinery for assessing and collection of VAT from taxpayers.

Etale and Bingilar (2016) investigated the effects of firms' income tax on GDP growth in Nigeria. The study used multiple regression analysis technique with three variables of interest, namely VAT, CIT and GDP. The study reveal that CIT is positively and significantly related with GDP growth in Nigeria. The study recommended that tax administrations should improve on the tax system by broadening the tax base, reducing compliance cost and enhancing accountability and transparency. In a similarly study by Dehghan and Nonejad (2015) on the effect of tax rates on GDP growth in the Iranian context covering several macroeconomic variables such as GST, population growth, trade openness, corporate income tax, inflation rate, business tax revenue, and GDP, it was found that Goods and Services Tax (GST), Corporate Income Tax (CIT), and Business Revenue Tax had negative and statistically significant effect on GDP growth of Iran.

Most of the studies reviewed are on government revenue (oil and non-oil) and in most cases those on non-oil are not generally related to non-oil tax revenue and therefore not exhaustive with recommendations offered constituting a cocktail of institutional, monetary and fiscal reforms aimed at enhancing revenue collections that are needed for economic growth. This study will complement existing studies by focusing on

non-oil tax revenues and also reviewing recent literature and data. Thus, helping to bridge the gaps in the study area and contribute to literature in the area.

### 3. Research Methodology

This study adopted the *ex-post* facto research design in gathering, analysing and interpreting the data obtained for the study. The *ex-post* facto research design was chosen because the data needed for the study is a published data that can hardly be manipulated. This research design is appropriate and preferred in a cause-effect relationship where there is already an existing data which could not be manipulated by the researcher at the point of research (Uremadu, Chinweoke and Duru-Uremadu, 2020).

#### 3.1 Sources of Data

This study utilised secondary sources of data mostly time series data obtained from the Central Bank of Nigeria (CBN), the Federal Inland Revenue Service (FIRS) and the National Bureau of Statistics (NBS). Tax revenue data was obtained from the FIRS, while GDP figures were collected from the CBN and the NBS.

#### 3.2 Method of Data Analysis

In an attempt to examine the impact of non-oil tax revenue on economic growth, this study adopts the cointegration and the Error Correction Model (ECM) framework. Cointegration analysis according to Sanni (2012) refers to the process of getting equilibrium or long-run relationships among non-stationary variables. The idea is that although the variables are non-stationary, a linear combination of them may be stationary, given that all variables are integrated of the same order (Engle and Granger, 1987).

The study also employs the Augmented Dickey-Fuller unit root test which tested the stationary or non-stationarity for the variables. The result of the test indicate a mixed order of integration which allows for the use of Auto-Regressive Distributed Lag (ARDL) bound test. According to Ang and McKibbin (2007) cited

by Adenuga and Evbuomwan (2012), once the variables are cointegrated, it becomes easy to distinguish between the short run dynamics and long run relationships.

### 3.3 Model Specification

In line with the objectives of the study, the model specification examines the impact of non-oil tax revenue on economic growth in Nigeria. Using a linear regression of Gross Domestic Product on the exogenous variable of the study, the model is expressed functionally as:

$$RGDP = f(CIT, EDT, VAT) \quad 1$$

In an explicit form, the econometric relationship is specified as:

$$RGDP_t = \beta_0 + \beta_1 CIT_t + \beta_2 EDT_t + \beta_3 VAT_t + U_t \quad 2$$

Where RGDP = Real Gross Domestic Product; CIT = Company Income Tax; EDT = Education Tax  
VAT = Value Added Tax;  $\beta_0$  = Constant;  $\beta_1, \beta_2, \beta_3$  = Coefficients;  $U_t$  = Error Term.

The log linear form of the model can be specified as:

$$\ln GDP_t = \beta_0 + \beta_1 \ln CIT_t + \beta_2 \ln EDT_t + \beta_3 \ln VAT_t + U_t \quad 3$$

Where  $\ln$  = Logarithmic,  $\beta_0$  = Constant terms/ Intercept, also,  $\beta_1, \beta_2, \beta_3$ , are the coefficient of the parameters to be estimated, and  $U_t$  = The error term for the time period (t).

In a priori terms, all the explanatory variables (CIT, EDT and VAT) are expected to have positive impact on economic growth in Nigeria. This is based on the theoretical proposition that revenues are catalyst to economic growth (Sunday, et al. 2020).

## 4. Results and Discussions

### 4.1 Descriptive Statistics

In analysing the impact of non-oil revenue on economic growth in Nigeria, the study considered three independent variables (CIT, EDT and VAT) and a dependent variable (economic growth as proxied with Real Gross Domestic Product (RGDP). The study made use of annual time series data spanning from 1990 - 2022 which were obtained from the Federal Inland Revenue Service (FIRS), and the Central Bank of Nigeria (CBN). The data set was analysed using E-views 10.0.

**Table 1. Summary Statistics**

	LGDP	LCIT	LEDT	LVAT
Mean	10.22780	5.807335	3.891075	5.790670
Median	10.13603	6.388864	4.490657	6.176719
Maximum	12.20275	7.882009	5.795054	7.828643
Minimum	7.937030	3.139833	1.064711	3.481240
Std. Dev.	1.463742	1.457427	1.580391	1.318696
Skewness	-0.278740	-0.453614	-0.507626	-0.389522
Kurtosis	1.628353	1.822220	1.781899	1.939325
Jarque-Bera	2.466226	2.486509	2.828820	1.948432
Prob	0.291384	0.288444	0.243069	0.377488
Sum	276.1506	156.7980	105.0590	156.3481
Sum Sq. Dev.	55.70609	55.22644	64.93850	45.21292
Observations	27	27	27	27

Source: Author's E-Views 10 computations

Table 1 shows the descriptive statistics of the study. The table reveal that a mean value of 10.22780 and a standard deviation (SD) of 1.463742 was recorded for RGDP. The maximum and minimum values of the RGDP indicate that the economic growth in the economy have been diverse since 1990, with a minimum of 7.937030 and a maximum of 12.20275. The low periods of growth (1990s, 2007, 2016 and 2021) were associated with declining per capita Real Gross National Product leading to the World Bank declining Nigeria poor enough to be eligible for concessional aid from the International Development Association (IDA). In terms of

the non-oil tax variables, CIT made the highest average contribution of 5.807335. This was followed by VAT which contributed 5.790670 and EDT made the least average contribution of 3.891075. The fact that all the variables' standard deviations are lower than the corresponding means demonstrates that the data set are not wildly skewed (well-distributed) and the Jarque-Bera statistics also reveals that the values for each of the variable in the models are low and insignificant. Similarly, the Kurtosis values indicated that all of the variables are platykurtic, suggesting flatter distributions, since the values are all less than 3.

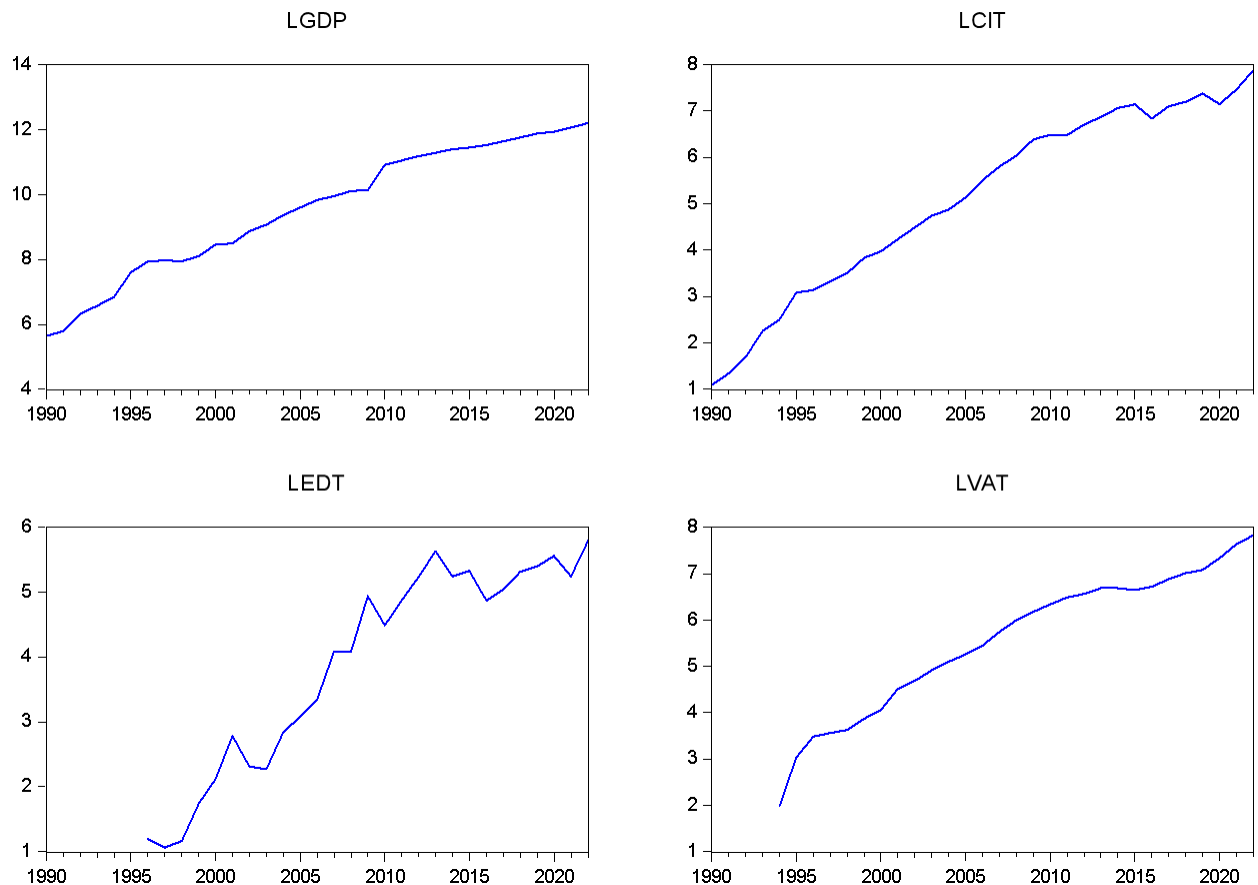


Figure 1. Trends of the Variables from 1990-2022

Source: Author's E-Views 10 computations

Figure 1 above shows the trend graphs for the four economic variables in Nigeria over the period, 1990 – 2022. The variables considered

in the study showed an upward movement in the variables with slight fluctuations overtime. The movement trajectory highlights the

economic instability and responsiveness of these variables to global and local economic events.

#### 4.2 Unit Root Test

In order to ensure that the data set for the study is free from unit root, Augmented Dickey-Fuller (ADF) was used. Table 4.2 shows the results of the unit root test using the Augmented Dickey-Fuller test. The test indicates that all the

variables are stationary at order 1. The decision rule is that we reject the null of non-stationarity when probability is less than alpha at a 5% level of significance. At the level, the probability for all the variables are greater than the alpha at a 5% significance level (0.05). Consequently, the null hypothesis of non-stationarity cannot be rejected, indicating that these variables are non-stationary at their level.

**Table 2. Result of the Augmented Dickey-Fuller Unit Root Test**

Variables	Probability (Level)	1st Difference	Order Of Integration
LGDP	0.7791	0.0001**	1(1)
LCIT	0.7485	0.0002**	1(1)
LEDT	0.7172	0.0001**	1(1)
LVAT	0.8551	0.0000**	1(1)

Source: Author's E-Views 10 computation

**Note:** \*, \*\*, \*\*\* indicate significant at 1%, 5% and 10% levels, respectively.

However, after first differencing, the probability for all of the variables became less than the alpha at 5% level of significance and hence become stationary. This resulted in rejecting the null hypothesis, indicating that the variables are stationary after differencing. Therefore, the unit root test reveals that the

variables are in order one (1) of integration which justifies the need for the use of Johansen Cointegration test and the Vector Error Correction Model in estimating the long run and short run relationship between the variables under consideration.

**Table 3. Result of Johansen Cointegration Test**

Normalized cointegrating coefficients

Variable	Coefficient	Std. Error	t-Statistic
LGDP	1.000000	0.20701	4.83068
LCIT	-0.108394	0.09371	1.15669
LEDT	-0.051027	0.18270	0.27929
LVAT	-0.395186	0.01464	26.9935

	Eigenvalue	Trace-Statistics	Prob.
None	0.648706	63.87610	0.2243**

Source: Author's E-Views 10 computation

#### 4.3 Result of Johansen Cointegration Test

Table 4.3 presents the result of the Johansen Cointegration test. The Normalized cointegrating Coefficients reveals if there is a long run relationship or not between the variables of the study. From the result, the probability of the None in both Trace test and Maximum Eigenvalue is greater than alpha at 5% level of significance (0.05). It implied that there is no cointegration between the variables in the series. Furthermore, the result of the Normalized cointegrating Coefficients indicated a positive and a insignificant relationship between LCIT and LGDP. A percentage increase in LCIT will increase LGDP by 0.11%. This result is consistent with the empirical findings of Adegbe, Nwaobia & Osinowo (2020) who found a significant positive relationship between CIT and economic growth. Considering the important contribution of CIT to the non-oil tax revenue pool, its impact on economic growth will be enormous. The result also indicated a positive relationship between both LEDT and LVAT on LGDP. It means that a percentage increase in

LEDT and LVAT will increase LGDP by 0.05% and 0.39% respectively. Overall, the study provide evidence that non-oil tax revenue have impact on economic growth in Nigeria and therefore reject the null hypothesis which states that non-oil tax revenue have no significant impact on economic growth in Nigeria. However, the impact is not the same for all categories of non-oil tax revenue as confirmed in earlier studies by Awe (2014), Immanuella (2016), Likita et al. (2018), Ogba et al. (2018), Adegbe et al. (2020), Adeusi et al. (2020), and Omes et al. (2020).

#### 4.4 Result of Vector Error Correction Model (VECM)

The Vector Error Correction Model result is presented in Table 4.4. It must be negative and statistically significant for a short run convergence to occur. The result of the CointEq1 is negative and statistically significant which means there is a short run convergence among the variables under study. The result of the LCIT showed a negative and significant relationship with LGDP.

**Table 4. Vector Error Correction Estimates**

Dependent Variable: LGDP

Variable	Coefficient	Std. Error	t-Statistic
D(LGDP(-1))	0.069953	0.24386	0.28685
D(LCIT(-1))	-0.215613	0.29054	-2.74159
D(LEDT(-1))	-0.258641	0.12722	2.03298
D(LVAT(-2))	0.012556	0.48210	0.02640
C	0.264363	0.12985	2.03593
CointEq1	-0.434622	0.23963	-2.81370
R-squared	0.502681		
Adj. R-squared	0.582976		
Sum sq. resids	0.277631		
S.E. equation	0.140822		
F-statistic	1.572326		
Log likelihood	19.45967		
Akaike AIC	-0.788306		
Schwarz SC	-0.297450		
Mean dependent	0.177480		
S.D. dependent	0.155795		

Source: Author's E-Views 10 computation

It implied a short run relationship between them and a one percent decrease in LCIT will decrease LGDP by 0.22% percent in the short run. The result also showed a negative and significant relationship between LEDT and LGDP. A percentage decrease in LEDT will decrease LGDP by 0.26% in the short run. Invariably, the result of the LVAT showed a positive but an insignificant relationship between LVAT and LGDP. This implies that a one percent increase in LVAT will increase LGDP by 0.01%. The result of the constant term revealed a positive and significant relationship with LGDP. It implied that when all variables are held constant, LGDP will increase by 0.26% caused by other variables not included in the model.

## 5. Conclusion and Recommendations

This study examined the impact of non-oil tax revenue on economic growth in Nigeria using secondary time series data covering the period 1990 - 2020. It utilised econometric techniques such as descriptive analysis, unit root test, cointegration test and ARDL in the estimation of the model for the study. The findings from the study revealed that non-oil tax revenue have impact on economic growth in Nigeria in the review period even though the impact is not the same for all categories of non-oil tax revenue. Specifically, the results indicate that there is a long run positive and significant relationship between the independent variable (LCIT, LEDT and LVAT) and the dependent variable (LGDP). It shows that there is a long run positive and significant relationship between LCIT and LGDP. This implies that a 1 percent increase in LCIT will increase LGDP by 0.11 percent. Similarly, it shows a positive relationship between LEDT and LVAT with LGDP in the long run demonstrating that a 1 percent increase in LEDT and LVAT will increase LGDP by 0.05 percent and 0.11 percent respectively. Furthermore, findings from the short run analysis of the results of the study however presents a contrary scenario. The result reveals that there is a negative and significant relationship between LCIT, LEDT

and LGDP. A 1 percent decrease in LCIT and LEDT will decrease LGDP by 0.22 percent and 0.26 percent respectively. However, the result of the regression analysis in the short run reveals that LVAT exerts insignificant positive impact on LGDP. This finding is not in agreement with the findings of Umeora (2013), Onaolapo, et al. (2013), and Lyndon and Paymaster (2017) who all found a significant positive relationship between CIT and economic growth.

The major conclusion from these findings is that non-oil tax revenue is vital to economic growth in Nigeria and the government needs to strengthen revenue collection from the non-oil sector of the economy. Specifically, the study recommends that the Federal Inland Revenue Service (FIRS) should improve its non-oil tax collection processes by reducing the cost of compliance. In this regard, the FIRS should simplify the filing processes and ensure the complete automation of the processes. This will enhance revenue generation from non-oil taxes and further contribute to economic growth.

It is also recommended that the Government should improve the general business environment by formulating and implementing policies that foster the growth and development of the private sector of the economy. This will broaden the industrial base of the economy, widen the tax base and improve non-oil tax revenue that is needed for economic growth. Additionally, the legislature should exercise their oversight functions effectively and ensure that taxes collected are used judiciously. The judicious use of tax revenues will engender accountability, confidence in the tax system and enhance voluntary compliance.

## References

- Abata, M. A. (2014). The Impact of Tax Revenue on Nigerian Economy. *Journal of Policy and Development Studies*, 9(1), pp. 109 - 123.
- Adegbe, F. F., Nwaobia, N. A., & Osinowo, O. (2020). The Effect of Non-oil Revenue on

- Economic Growth and Development in Nigeria. *European Journal of Business and Management Research*, EJBMR, 5(3).
- Akwe, J. A. (2014). Impact of Non-oil Tax Revenue on Economic Growth. The Nigerian Perspective. *International Journal of Finance and Accounting*, 3(5), pp. 303 -309.
- Ang, J. B., & McKibbin, W. J. (2007). Financial liberalisation, financial sector development and growth. Evidence from Malaysia. *Journal of Development Economics*, 84, pp. 215-233.
- Anyanfo, A. M. (1996). Public Finance in Developing Economy: The Nigerian Case. Department of Banking and Finance. University of Nigeria.
- Appah, E. & Oyandonghan, J. (2011). The Challenges of Tax Mobilisation and Management in the Nigerian Economy. *Journal of Business Administration Management*. 6(2), pp. 128 - 136.
- Ayedun, A. C., Durodola, O. D., Oloyede, A. S. & Oni, S. A. (2018): The Value Added Tax (VAT) Administration in Nigeria and the Practice of Estate Surveying and Valuation, *Covenant Journal of Business and Social Sciences (CJBSS)* 9(1).
- Bhartia, H. L. (2009). *Public Finance*. New Delhi: Vikas Publishing House PVT Ltd.
- DFID (nd): Growth: Building Jobs and Prosperity in Developing Countries
- Engle, R. F. & Granger, C. W. J. (1987). Cointegration and Error Correction: Representative, Estimation and Testing. *Econometrica*, 55: pp. 391 - 407.
- Ewa, U.E., Adesola, W.A., & Essien, E.N. (2020), Impact of Tax Revenue on Economic Development in Nigeria. *International Business Research*, 13(6), pp. 1-12.
- Ihendinihu, J. U., Eberi, J. & Ibanichuka, E. A. (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*, 2(2) pp. 1 -15.
- <https://doi.org/10.9756/SIJASREE/V215/0202120102>.
- Jhingan, M. L. (2004). *Money, Banking, International Trade and Public Finance*. 7<sup>th</sup> Edition. Vrinda Publication (P) Ltd, New Delhi
- Kuznets, S. (1971): Modern Economic Growth: Findings and Reflections. *American Economic Review*, 63, pp. 247 - 237.
- Likita, J. O., Idisi, P., & Nakah, M. B. (2018). The Impact of non-oil Revenue on Economic Growth in Nigeria. *International Journal of Advanced Research in Accounting, Economics and Business Perspective*, 2(1), pp. 1 -14.
- Lyndon, M. & Paymaster, B. (2017). 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), pp. 106 - 112.
- Maganya, M.H. (2020): Tax Revenue and Economic Growth in Developing Country: An Autoregressive Distribution Lags Approach. *Central European Economic Journal*, 7(54), pp. 205-217.
- McConnel, R. C. and Brue, L. S. (2002): *Economics*. New York: McGraw-Hill Companies.
- Myles, D. G. (2009): Economic Growth and the Role of Taxation - Theory, OECD Economics Department Working Papers No. 713, <https://dx.doi.org/10.1787/222800633678>
- Odusola, A. (2006): Tax Policy Reforms in Nigeria, UNI-WIDER, Research Paper No. 2006/3, Helsinki, Finland.
- OECD (2008) "Tax and Economic Growth," Economic Department Working Paper No. 620, July.
- Okezie, S. O. & Azubike, J. U. (2016). Evaluation of the contribution of Non-oil Revenue to Government Revenue and Economic Growth: Evidence from Nigeria. *Journal of Accounting and Financial Management*, 2(5), pp. 41 -51.



- Okeyeuzu, C. (2013). Value Added Tax Remittance Observation from Developing Countries. *Global Journal of Management and Business Research Finance*, 13(9), pp. 62 - 71.
- Ola, C. S. (2001). *Income Tax Law and Practice in Nigeria*. 5<sup>th</sup> Edition: Ibadan, Dalag Prints and Park.
- Omesi, I., Ngoke, O. S., & Ordu, P. A. (2020). Non-oil Revenue and Economic Development of Nigeria. *International Journal of Innovative Development & Policy Studies*, 8(1), pp. 91 - 99.
- Richard M. B. (2012): Taxation and Development: What Have We Learned from Fifty Years of Research? International Center for Public Policy Working Paper 12-02, Georgia State University.
- Salami, G. O., Amusa, B. O., & Ojoye, O. F., (2018): Empirical Analysis of the Impact of Non-Oil Revenue on Economic Growth: Nigerian Experience, *International Journal of Economics, Commerce and Management*, VI(6), (<http://ijecm.co.uk/>)
- Osamor, P. I., Omoregbee, G., Ajasa-Adeoye, Z. F. & Olumuyiwa-Loko, M. J. (2023): Tax Revenue and Economic Growth: Empirical Evidence from Nigeria, *Journal of Economics and Behavioral Studies* 15(1), pp. 15-26.
- Solow, R. M. (1956). A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics* (Oxford Journals), 70(1), pp. 65-94.
- Stiglitz, J. (2010) "Development-Oriented Tax Policy," in R. Gordon, ed., *Taxation in Developing Countries* (New York: Columbia University Press).
- Sunday, A. A., Emmanuel, U. & Ose Dominic, E. (2020): Non-Oil Revenue and Economic Growth in Nigeria, *Research Journal of Finance and Accounting*, 2(8), pp. 95 - 106.
- Umeora, C. (2013). The Impact of Value Added Tax (VAT) on the economic Development of Nigeria. *Journal of Economics and Sustainable Development*, 4(6), pp. 190 - 201.
- Uremadu, O. S., Chinweoke, N. & Duru-Uremadu, E. C. (2020). Impact of Non-oil Revenue on Economic Growth of Nigeria (1994 - 2017): An Empirical Analysis. *International Journal of Research and Innovation in Applied Science*, V(VI).
- Worlu, C. N., & Emeka, N. (2012). Tax revenue and Economic Development in Nigeria: A Macroeconometric Approach. *Academic Journal of Interdisciplinary Studies*, 1(2), pp. 211 - 223.
- Yahaya, A. K. & Yusuf, K. (2019): Impact of Non-Oil Tax Revenue on Economic Growth in Nigeria, *Journal of Accounting and Management*. 9(2), pp. 56 - 69.