

## TAX REVENUE AND MACROECONOMIC PERFORMANCE IN NIGERIA

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### ABSTRACT

*This study examined tax revenue and macroeconomics performance in Nigeria. And the objectives were to examine the influence of value added tax (VAT), petroleum profit tax (PPT) and company income tax (CIT) on gross domestic product growth (GDP), employment generation (EMPR) and inflation (INF) in Nigeria. Tax rate was used as a moderator to determine its controlling influence on the relationship between tax revenue and Macroeconomic performance. The ex-post facto research design was employed and secondary data was sourced from the Nigerian economy for twenty-one years (2000-2020) from the reports of the Central Bank of Nigeria statistical bulletin, the National Bureau of Statistics and the Federal Inland Revenue Service. The Pearson correlation coefficient and multiple regressions analysis were utilized with the aid of Stata12 software. Also, the Tado-Yamamoto causality test was applied to determine the direction of influence among the variables in the model. The study revealed a significant relationship between values added tax, petroleum profit tax, company income tax and employment generation in Nigeria. Likewise, VAT and CIT have a significant relationship with GDP whereas PPT and GDP had an insignificant relationship. The study revealed an insignificant relationship between value added tax, company income tax, petroleum profit tax and inflation in Nigeria. The research work recommended that policymakers in Nigeria should widen the tax base to generate more revenue to provide funds for investment in critical socio-economic infrastructure and the diversification of the Nigerian economy. This will enhance the contributions of tax revenue to macroeconomic stability. The fiscal authorities should curb corrupt practices in the tax administration by automating the end-to-end processes from e-registration, e-assessment, e-collections and payment of tax obligations. The fiscal and monetary authorities should collaborate in the formulation and implementation of complementary policies to stimulate economic growth, generate massive employment and maintain price stability in Nigeria.*

**Keywords: Tax Revenue, Macroeconomic, Performance VAT, PPT, CIT. GDP, Employment Generation, Inflation.**

### INTRODUCTION

For many years, Nigeria have challenges in mobilizing revenue through taxes to fund its annual expenditure. The country is solely dependent on crude oil export proceeds for 90% of its revenue and the advent of Covid 19 and the global economic disruptions in recent times put the nation in a precarious financial conditions, because the government was unable to meet its various obligations and had to borrow heavily from the domestic and external sources to stay afloat. The lack of internally generated resources has weakened the country's financial sustainability plans and efforts to move the economy on a sustainable path with improved macroeconomic outcomes. Tax revenues has been largely unstable due to persistent political and economic instability. Hence, it is difficult to forecast future tax revenues and undermines the development of medium-term financial plans for improved economic outcomes. The system of tax administration in the country is inept due to the lack of the required institutional framework. Also, the institutions charged with policy formulation and effective administration of the tax system were ineffective and inefficient.

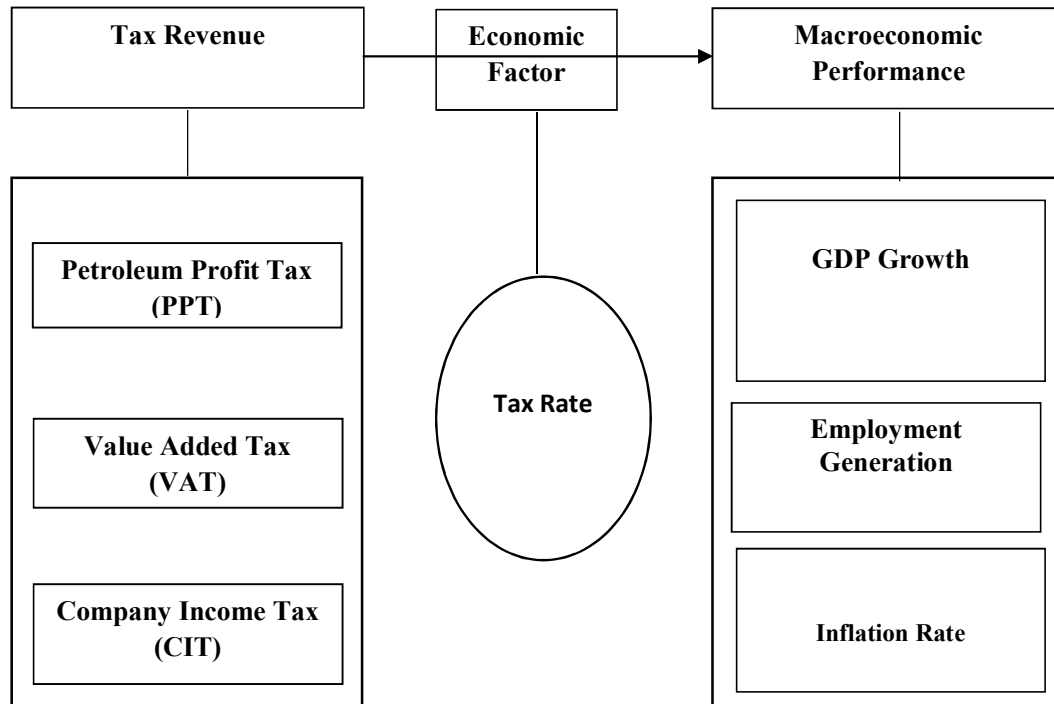
Another constraint to the administration of taxes in Nigeria is rampant corrupt practices. The country continued to struggle against on unwholesome practices, notwithstanding, the anti-graft agencies established by successive governments. With corruption, weak institutions, and an inefficient tax

system, the collection of tax revenues in Nigeria was largely impaired. There are doubts and questions on whether the country have optimized the full potentials of tax revenues collections to improve macroeconomic outcomes such as employment, sustainable growth, and price stability.

The World Bank Report in 2019 recorded an increase in external borrowings in Africa and other developing countries due to the demand for infrastructure and other essential goods and services. The unstable export earnings pose a threat to the management of monetary deficits. Moreover, the balance of payment difficulties has continued to prevail in the Nigeria following the increase in public debt burden, capital flight, and low levels of inward investments. These trends weaken the capacity of Nigeria to control inflation and ensure price stability, foster rapid and sustainable growth of their economies, ensure equitable income distribution and promote productive employment. Despite the increase in tax revenues over time, the macroeconomic outlook in Nigeria in terms of employment generation, income distribution, inflationary pressures, pro-poor economic growth, and BoP positions have been insignificant. Hence, there are concerns about the direct and indirect macroeconomic implications of tax revenues in Nigeria. Thus, there was a lack of consensus among the policymakers and academics on the effectiveness of taxes on economic activities in the country. Some argue that Nigeria through its policies should pursue tax reforms to boost earnings from tax to encourage financial stability, growth and development. Others say that the implications of the imposing more taxes on economy aggregates could lead to negative consequences.

As observed from the empirical literature, this study followed a wholistic approach in measuring macroeconomic performance by incorporating GDP growth, employment generation and price stability. This filled the existing gap in previous studies that limited their content scope to only GDP, unemployment or inflation. The work covers broader dimensions of macroeconomic performance and the period covered by this study (2000-2020) goes beyond the time frame used by previous studies. There was no heuristic model that holistically show the relationship between tax revenues and macroeconomic performance in Nigeria. There was no previous work that employ the use of Tado Yamamoto Casuality test to explain the direction of influence/change the dimensions of tax revenue has on macroeconomic performance variables individually , collectively and vice versa. This research study seeks to provide empirical solutions to the enumerated issues.

## Conceptual Framework



**Figure 1.1: Conceptual framework of the relationship between tax revenue and macroeconomic performance**

**Sources:** Anyanwu (1989); Adeniran & Uguru (2020); Ewa et al. (2020).

**Aims and Objectives of the Study**

The aim of this study is to examine the effect of tax revenues on macroeconomic performance in Nigeria. Specifically, this study seeks to:

1. ascertain the effect of value added tax on gross domestic product growth in Nigeria.
2. ascertain the influence of value added tax on employment generation in Nigeria.
3. ascertain the effect of value added tax on inflation rate in Nigeria.
4. ascertain the influence of petroleum profit tax on gross domestic product growth in Nigeria.
5. ascertain the effect of petroleum profit tax on employment generation in Nigeria.
6. ascertain the influence of petroleum profit tax on inflation rate in Nigeria.
7. ascertain the effect of company income tax on gross domestic product growth in Nigeria.
8. ascertain the influence of company income tax on employment generation in Nigeria.
9. ascertain the effect of company income tax on inflation rate in Nigeria.
10. Determine the controlling influence of tax rate on the relationship between tax revenues and macroeconomic performance in Nigeria.

**Research Questions**

This study addressed the following research questions:

1. What is the effect of value added tax on gross domestic product growth in Nigeria?
2. What is the influence of value added tax on employment generation in Nigeria?
3. What is the effect of value added tax on inflation rate in Nigeria?
4. What is the influence of petroleum profit tax on gross domestic product growth in Nigeria?
5. What is the effect of petroleum profit tax on employment generation in Nigeria?
6. What is the influence of petroleum profit tax and inflation rate in Nigeria?
7. What is the effect of company income tax on gross domestic product growth in Nigeria?
8. What is the influence of company income tax on employment generation in Nigeria?
9. What is the effect of company income tax on inflation rate in Nigeria?

10. What is the controlling influence of tax rate on the relationship between tax revenues and macroeconomic performance in Nigeria?

### **Research Hypotheses**

The hypotheses formulated for this study are outlined in their null forms as follows:

H<sub>01</sub>: The effect of value added tax on gross domestic product growth in Nigeria is not significant.

H<sub>02</sub>: The influence of value added tax on employment generation in Nigeria is not significant.

H<sub>03</sub>: The effect of value added tax on inflation rate in Nigeria is not significant.

H<sub>04</sub>: The influence of petroleum profit tax on gross domestic product growth in Nigeria is not significant.

H<sub>05</sub>: The effect of petroleum profit tax on employment generation in Nigeria is not significant.

H<sub>06</sub>: The influence of petroleum profit tax on inflation rate in Nigeria is not significant.

H<sub>07</sub>: The effect of company income tax on gross domestic product growth in Nigeria is not significant.

H<sub>08</sub>: The influence of company income tax on employment generation in Nigeria is not significant.

H<sub>09</sub>: The effect of company income tax on inflation rate in Nigeria is not significant..

H<sub>010</sub>: Tax rate does not significantly control the relationship between tax revenues and macroeconomic performance in Nigeria.

## **REVIEW OF RELATED LITERATURE**

### **Conceptual Review**

#### **Concept of Tax Revenue**

The concept of tax revenue has continued to draw the attention of various institutions and many scholars across the world. It 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. More broadly, tax revenue comprises revenue from direct and indirect tax which is one measure of the degree to which the government controls the economy's resources. On one hand, direct tax is the tax that is paid directly to the government by an individual or company on whom it is levied. This includes personal income tax, wealth tax, company income tax, petroleum profit and property amongst others. On the other hand, indirect tax defines tax collected by intermediaries from individuals and corporations who bear the burden of the tax and passed it on to the government. Tax levied on goods and services, especially value-added tax (VAT) is a notable example of an indirect tax.

Accordingly Aguolu (2014) describe tax as a compulsory levy by the government through its agencies on the income, consumption and capital of the governed. The composition of these compulsory levies are made on personal income, such as salaries, business profits, interests, dividends, discounts and royalties as well as the company's profits, petroleum profits, capital gains. Tax can further be defined as a compulsory levy enforced by tax authorities on income, expenditure, wealth or people, for which nothing is received by the taxpayers directly or specifically in return (Shang, 2016). At the same time, Frecknall-Hughes (2014) identifies tax revenue as the most important financial source for governmental public expenditures.

Yahaya and Yusuf (2020) classify tax revenue accruing to countries and governments across the world into broad groups comprising oil tax revenue and non-oil tax revenue. While oil tax revenue includes revenues from petroleum profit tax (PPT), royalty, and gas tax, non-oil tax revenue defines revenues from direct and indirect taxes paid by other sectors of the economy other than the oil sector. As an integral component of oil tax, the petroleum profit tax is imposed on all firms engaged in the extraction, refining, and distribution of petroleum products in the oil and gas sector and all its affiliates to pay tax. It has been remarked that oil-rich countries rely on oil tax to boost revenue and expenditure obligations of the public sector. The major compositions of non-oil tax include personal income tax (PIT), company income tax, capital gain tax, withholding tax and education tax, VAT and custom and excise duties. Izedonmi and Jonathan (2014) and Umeora (2013) are of

the view that VAT is a consumption tax introduced as a replacement to sales tax with the primary objective of boosting the public revenue base as well as making available funds for economic growth and development.

### **Dimension of Tax Revenue**

#### **Value Added Tax**

Value Added Tax (VAT) is multi-stage consumption tax that is applied to the sale of goods and services at all stages of production and distribution chain (Bird, 2015). Value-added tax (VAT) as an indirect tax that has the potential of diversifying the revenue portfolio for the country to promote fiscal sustainability and economic growth (Azaiki & Shagari, 2017). From the stand point of FIRS (2020), VAT is a tax on consumption paid when goods are purchase and services render.

Onowu, J.U (2025), Vat is unavoidable tax imposed on consumption of goods and services. Nowadays there is a global shift in paradigm, where focus point in moving from direct taxation policy towards indirect tax policy. The introduction of VAT has been globally associated with significant more tax revenue collected, even though the impact is modest in terms of size.

(Lockwood, 2017), relying more on VAT than income tax decreases real cost of evasion activities. This tax has been adopted in replacement of sales taxes and according to its definition; the key advantage is that revenue is secured by being collected through production decision unlike a turnover tax (Gordon & Nielsen, 2017). However, Aizenman (2018) emphasize that the VAT collection efficiency remains largely dependent on, the quality of enforcement and efficiency of monitoring which both increase with political stability and ease of political participation.

#### **Petroleum Profit Tax**

Petroleum taxation is a direct tax, levied annually on net profit of a petroleum tax payer, who is carrying on the business of petroleum exploration and production (Evans & Hunt, 2011). Basically, there are two ways of financing government expenditure in Nigeria; which are oil revenue and non-oil revenue sources, the Nigerian government derives a large proportion of its total revenue from oil (Bawa & Mohammed, 2007). According to Ogbonna and Ebimobowei (2012), from 1970–2009, the petroleum industry generated 82 per cent income for Federal Government of Nigeria, while only 18% came from non-oil revenue. Apparently, oil is the dominant source of government revenue, accounting for about 90 percent of total exports, and this approximates to 80% of total government revenue (Ogbonna & Ebimobowei, 2012).

#### **Company Income Tax**

Companies income tax as defined by Ogbonna and Appah (2016) is a tax imposed on the profit of companies (excluding profit from companies engaged in petroleum operations) accruing in, derived from, brought into or received in Nigeria in respect of any trade or business, rent, premium, dividends, interest, royalties and any other source of annual profit. In the view of Chigbu and Njoku (2015), company income tax is a tax on the profit made by companies. It was introduced in Nigeria in 1961 and administered by the Federal Internal Revenue Services. Since enactment, the law on CIT has passed through series of amendment. The rate of CIT varies according to operation and size of turnover per annum.

#### **Concept of Macroeconomic Performance**

The criterion variable for this study is the macroeconomic performance which defines how well a country is doing in reaching important objectives or key targets of public policy. The stability of a macroeconomic environment plays an important role for business and, therefore, has significance for the overall competitiveness of a country. Traditionally, macroeconomic performance indicators include GDP growth, full employment, price stability, the balance of payment (BoP) positions, and income distribution amongst others. According to Lovell et al. (2015) underscore that macroeconomic performance is defined in terms of a high level of real GDP per capita, a low rate of

inflation, a low rate of unemployment, and a favorable trade balance. The inflation rate defined as the annual percentage increase of the cost of living as measured by the consumer price index is one of the indicators monitored by the authorities to set monetary policy. High inflation is a sign of macroeconomic imbalances. It often reduces economic growth and future growth prospects, thereby reducing the means of implementation of core macroeconomic objectives.

The unemployment rate is another important macroeconomic performance indicator in many countries. As the best-known labour market measure, the unemployment rate reflects the inability of an economy to generate employment for those persons who want to work but are not doing so, even though they are available for employment and actively seeking work. It is arrived at by expressing the number of unemployed persons as a percentage of the total number of persons in the labour force (defined as the sum of the number of persons employed and the number of persons unemployed). Additionally, the exchange rate is another essential macroeconomic variable in the context of international economics for policy formulations, and a key price variable in which governments take a very active interest. The exchange rate is one of the most important fundamentals in an economy that trades goods and services internationally. As a price that measures the market value of common baskets of international and domestically produced goods, the level and stability of the real exchange rate are crucial elements in the process of macroeconomic adjustment and performance.

## **Measures of Macroeconomic Performance**

### **GDP Growth**

The annual percentage growth of the monetary values of goods and services is used as one of the criterion variables. The GDP growth rate is considered an important indicator of the macroeconomic performance in the country. It provides insights into the market value of all the goods and services produced within the borders of the country. The GDP growth enables policymakers and central banks to judge whether the economy is contracting or expanding. As described in the Bureau of Economic Analysis (2015), there are different approaches to measuring GDP. The "expenditure approach," in which GDP is measured as the sum of consumption, investment, government spending, and net exports, is the most familiar to many people.

### **Employment generation**

The employment generation is measured by the total employment to population ratio. This is defined by the proportion of the country's population that is employed. The total employment to population ratio is measured in percentage based on the International Labour Organization (ILO) estimate. Essentially, employment involves persons of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference or not at work due to temporary absence from a job, or to working-time arrangements. Economically, employment provides income to poor families, revives domestic demand for goods and services, and stimulates overall growth. Employment generation mainly aims at raising the productivity of the poorest workers and improving labour force participation.

### **Inflation Rate**

The inflation rate measures changes in the average price level based on the price index. The most commonly known index is the consumer price index (CPI) defined as the annual percent change in consumer prices compared with the previous year's consumer prices. A high or increasing CPI indicates the existence of inflation. Changes in inflation erode the value of money and hence unacceptable levels of inflation can distort economic behaviour and impose costs on economic agents and industries resulting in uncertainties and inadequate planning. In addition, persistently high inflation adversely affects the vulnerable groups in the society while it distorts the relationship between borrowers and lenders leading to reduced savings and investment.

Inflation has continued to pose severe challenges in Nigeria's economic growth and stakeholders have been on their toes to see that a stable economy is possible. High and sustained output growth in conjunction with low inflation is the common objective of macroeconomic policy all over the world. One of the main responsibilities assigned to monetary agencies is to maintain relative stability in the domestic price of goods and services. This emphasis is premised on the belief that monetary policy promotes sustainable growth and development by strengthening the value of money and prevents inflation and its associated uncertainties, thereby increasing the future growth prospects of the country. Thus, maintaining relative stability remains one of the vital goals of monetary authorities in a country (Anidiobu et al., 2018).

### **Moderating Variable-Tax Rates**

The moderating variable for this study is tax rates. A tax rate is the percentage at which an individual or corporation is taxed. All tiers of governments in Nigeria uses a progressive tax rate system, in which the percentage of tax charged increases as the amount of the person's or entity's taxable income increases. the relationship between tax rates and tax revenue is not a simple straight line, the theory suggests that the increasing tax rates beyond some point result in lower tax revenues(Kenneth, 2019). Laffer describes the situation as following: "At a tax rate of zero percent, the government would collect no tax revenues, no matter how large the tax base. Likewise, at a tax rate of 100 percent, the government would also collect no tax revenues because no one would be willing to work for an after-tax wage of zero (that is, there would be no tax base). Between these two extremes there are two tax rates that will collect the same amount of revenue: a high tax rate on a small tax base and a low tax rate on a large tax base" all things being equal (as cited in Kenneth, 2019).

### **Theoretical Review**

#### **Ability to Pay Theory**

A renowned proponent of the Ability to pay theory of taxation is Adams Smith in 1776. In his book titled 'the wealth of a nation' and further popularized and amplified by Author Cicil Pigou 1877 and the theory is adjudged one of the most renown and generally accepted theory of taxation is that which allows citizens to pay tax to the government in accordance to the ability of individual tax payers (Otu &Theophilus, 2012). According to Jones and Rhoades (2011), the theory is said to have originated by the Swiss philosopher Jean Jacques Rousseau between 1712 and 1778 in the 16th century and was scientifically extended by a number of scholars.

Since the introduction of the theory, it has dominated several literatures with a view to explaining basis upon which good tax system should operate (Lawrence, 2015). This theory holds that tax should be levied progressively to the income of taxpayers where those who earn more are made to pay more tax than those on lower income. Ability to pay theory of taxation is adjudged most reasonable and fair theory of taxation owing to the fact that it takes into account the disparities in come among various tax payers (Jones & Rhoades, 2011). Ability to pay theory has also been challenged by scholars on ground that it has no concrete approach for measuring the equity of sacrifice in absolute, proportional and marginal terms (Komal, 2013).

#### **Benefits Received Theory of Taxation**

Wicksell (1896) and Lindahl (1919) contributed to the development of the benefits received theory of taxation. This theory assumes that there is an exchange relationship between taxpayers and the state because the state provides certain goods and services to the members of the society. Thus, members of the society should contribute to the cost of these supplies in proportion to their share of the total benefits. This implies that the more benefits a person derive from the activities of the state, the more tax he/she should pay to the government. According to Anyanfo (1996), taxes should be allocated based on benefits received from government expenditure. Traditionally, the application of this theory has been observed in the aspects of progressive tax, corporation taxes,

and taxes on property or wealth. Under the regime of progressives, the government should levy tax on individuals based on the benefits accruable to the individuals following their access to public goods provided by the government. In other words, the theory is built on the assumption of an exchange relationship between the taxpayers and the government. The benefit theory violates the basic principle of tax. A tax is paid for the general purposes of the state and not in return for a specific service. Moreover, it is commonly believed that the poor benefit more from the State activities than the rich. If that is so, then the poor have to contribute more than the rich, this would be absurd.

### **Empirical Review**

Ewa et al. (2020) examined the impact of taxation proceeds on the development of the Nigerian economy. The study explored the impact of three tax income streams – Income tax from companies' profits, income tax from petroleum company profits and Value Added Tax on economic development represented by GDP growth for the period 1994 to 2018. The study applied the Ordinary Least Square statistical tool and found a positive relationship with a coefficient of determination of 99.2% of the variation in economic development attributable to the tax income streams studied. Also although the study revealed the existence of the significant effect of taxes from companies' profits and Value Added Tax on Gross Domestic Product Growth, there is little or no significant impact of taxes on profits of Petroleum companies of GDP growth in Nigeria due to restriction by Organization of Petroleum Exporting Countries (OPEC) production ceiling on Nigeria's production/sales and the global price shocks of crude oil over the decade. Again, the study revealed taxpayers' apathy to tax payment and the presence of tax leakages due to corruption and administrative inefficiencies by the tax authorities. Thus, the study recommended for greater transparency by the government on the management and utilization of tax resources so has to give taxpayers greater assurance of its application.

Using double least squares (2SLS) as an estimation technique, Mourfou and Ouedraogo (2021) explored the effect of different types of tax revenues on income inequality in the West African Economic and Monetary Union Countries (WAEMU) countries over the period 1996 to 2015. The different tax revenues introduced into the model include direct tax, domestic indirect tax revenues and commercial tax revenues. The results showed that an increase in direct tax revenues leads to a reduction in income inequality. In other words, progressive income taxation allows for an efficient redistribution of income from richer to poorer people, which contributes strongly to the reduction of income inequality. On the other hand, indirect domestic tax revenues and commercial tax revenues are found to be neutral in income distribution. These tax reforms thus explained the neutrality of the effects of indirect taxation in the WAEMU zone. In the light of these results, the study recommended that WAEMU countries should strengthen the progressivity of direct taxes and always maintain the neutrality of indirect taxes.

Okafor (2012) empirically examined the impact of tax revenue generation on Nigerian economic development. The objective of the study was to explore the impact of income tax revenue on the economic growth of Nigeria as proxied by the gross domestic product (GDP). The ordinary least square (OLS) regression analysis was adopted to explore the relationship between the GDP (the dependent variable) and a set of federal government income tax revenue heads over the period 1981-2007. A simple hypothesis was formulated in the null form which states that there is no significant relationship between federally collected tax revenue and the GDP in Nigeria. The regression result revealed a very positive and significant relationship. However actual tax revenue generated in most years fell below the level expected. The anomaly was attributed to dysfunctionalities in the income tax system, loopholes in tax laws and inefficient tax administration. Suggestions were made as to strategies to be adopted to improve the system of tax administration to increase tax revenue generation.

Using data from 1988 to 2017, Koatsaa et al. (2021) investigated the relationship between tax burden and economic growth in Lesotho by applying the log-linearized model of Scully's tax

optimization model transformed into an ARDL bounds testing framework. The study utilized the Granger causality test and error correction model to explore the long-run relationship between tax burden and economic growth in Lesotho. The findings of the study revealed a long-run relationship between economic growth rate and tax burden with a unidirectional causality running from economic growth to tax burden. Granger causality revealed no causal effect running from tax burden to economic growth in Lesotho despite the expectation of significant causal effect following both theoretical and empirical literature from various studies. Error correction results further supported a co-integrating relationship running from economic growth to tax burden with 100 percent speed of adjustment in the short-run towards a long-run equilibrium level. Based on the findings, the study recommended good domestic tax revenue mobilization to promote a resilient economy that is less dependent on external financing and grants for infrastructural development.

Acti and Abigail (2014) investigated the impact of taxation on economic growth of Nigeria using data from 1994 to 2012. The impact of total tax revenue on GDP was tested to ascertain if there is a relationship between growth in GDP and the growth in tax revenue over the years under review. Regression analysis was used with time series to ascertain the trend. The regression result shows a linear growth relationship between tax revenue and economic growth. To further test the impact of the individual independent variables on the dependent variable, a multiple regression was used. From the results there is no significant relationship between Company Income Tax, Value Added Tax and Gross Domestic Product. But there is a significant relationship between Petroleum Profit Tax, Custom, Excise Duties and Gross Domestic Product.

### **Gap in literature**

As observed from the empirical literature, this study adopted a holistic approach assess the the impact of tax revenue on three key macroeconomic performance indicators such as GDP growth, employment generation and price stability. This filled the existing gap in previous studies that limited their content scope to only GDP (Hongo et al., 2020; Folawewo & Adeboje, 2017), unemployment (Demire, 2020; Tsurai, 2020; Whajah et al., 2019) or inflation (Gbadebo & Mohammed; 2015, Attamah, 2019). In addition to a broader coverage of the dimensions of macroeconomic aggregates, the period covered by this study (2000-2020) goes beyond the time frame in previous studies. The research work provides improved empirical evidence on the relationship between tax revenue and economic aggregates during the review period. The contemporary work will help policy makers explore the linkages between and among the variables of tax revenue and macroeconomic performance to optimize revenue to promote sustainable economic growth, full employment and price stability. Therefore, this work is a value addition to the knowledge universe as it design a heuristic model showing the composite relationship between tax revenues and macroeconomic performance in Nigeria.

### **METHODOLOGY.**

#### **Philosophical Foundation**

Researcher's philosophy is founded on the universal views of the researcher which is shown on the method which he uses in the research. These are utilitarianism, empiricism and positivism. These philosophical ideologies clarify the research design and offers decent answers to straightforward questions studied in this research. In this study on tax revenue and macroeconomic performance in Nigeria, the philosophical thought guiding this research is the Utilitarianism. The reason is that utilitarianism is a moral philosophy that advocates that the suitability of an action, policy or institution can be proven by its propensity to encourage happiness (Heywood, 2000). This philosophy believes that action should be directed towards achieving the greatest happiness for the greatest number of people. Relating to tax revenue and macroeconomic performance, it is necessary for policy makers in Nigeria should enact suitable tax policy that will benefit citizens thus enhancing macroeconomics performance.

### Research Design

The study adopted ex-post facto research design.

### Population of the Study

The population of this study is the Nigerian economy from which data was gathered, hence it is best described to be macro in nature.

### Sample and Sampling Techniques

The whole Nigerian economy was used, therefore there was no need for a sample size and sampling technique as it was not applicable in this study. Macro data for twenty-one years (21) that is from (2000-2020) was used. The reason for this time frame is that within this period, there were a lot of tax reforms by the government. The macro data used were: Value Added Tax (VAT), Petroleum Profit Tax (PPT), and Company Income Tax (CIT), GDP Growth, employment generation and inflation rate.

### Source of Data collection

Data for this study was sourced through the CBN statistical bulletin, National Bureau of Statistics report and Federal Inland Revenue Service Statistical report.

### Instrument for Data Collection

The instrument of data collection for this study was extracted from the CBN statistical bulletin, National Bureau of Statistics report and Federal Inland Revenue Statistical report.

### Method of Data Analysis

The data gathered are analyze using the descriptive statistics (mean score and standard deviation) Pearson correlation coefficient and multiple regression analysis within aid of Stata12 software.

### Model Specification

To examine the implications of tax revenues on macroeconomics performance, this study follows the works of Ewa et al. (2020); Siyanbola et al. (2017) and Oboh et al. (2018), but with some improvements in terms of the measurement of tax and the adoption of a more encompassing measure of macroeconomics performance. The functional specifications of the models are provided as:

$$MEP = f(VAT + PPT + CIT)$$

Where:

MEP= Macroeconomic Performance (GDPR, EMPR and INFR)

VAT= Value Added Tax

CIT= Company Income Tax

PPT= Petroleum Profit Tax

Therefore, the model will be

$$GDPR_t = \beta_0 + \beta_1VAT_t + \beta_2PPT_t + \beta_3CIT_t + \epsilon_t \dots (1)$$

$$EMPR_t = \beta_0 + \beta_1VAT_t + \beta_2PPT_t + \beta_3CIT_t + \epsilon_t \dots (2)$$

$$INFR_t = \beta_0 + \beta_1VAT_t + \beta_2PPT_t + \beta_3CIT_t + \epsilon_t \dots (3)$$

$$MEP = \beta_0 + \beta_1TREV_t + \beta_2TXR_t + \beta_3(TREV_t * TXR_t) + \epsilon_t \dots (4)$$

Where:

GDPR= Gross Domestic Product Growth

EMPR = Employment generation

INFR= Inflation rate

VAT= Value Added Tax

PPT= Petroleum Profit Tax

CIT= Company Income Tax

TXR= Tax Rate  
 TREV= Tax Revenue  
 MEP= Macroeconomic Performance  
 TREV \* TXR= Interaction variable  
 $\alpha$  = Regression Constant  
 $\beta_0$  = Regression Coefficient  
 $\epsilon$  = Stochastic term

To make the data uniform to regress and analyses, Data were converted to natural logarithm (log) form as follows:

$$\ln GDP_t = \beta_0 + \beta_1 \ln VAT_t + \beta_2 \ln PPT_t + \beta_3 \ln CIT_t + \epsilon_t \dots (5)$$

$$\ln EMPR_t = \beta_0 + \beta_1 \ln VAT_t + \beta_2 \ln PPT_t + \beta_3 \ln CIT_t + \epsilon_t \dots (6)$$

$$\ln INFR_t = \beta_0 + \beta_1 \ln VAT_t + \beta_2 \ln PPT_t + \beta_3 \ln CIT_t + \epsilon_t \dots (7)$$

$$\ln MEP = \beta_0 + \beta_1 \ln TREV_t + \beta_2 \ln TXR_t + \beta_3 (\ln TREV_t * \ln TXR_t)_t + \epsilon_t \dots (8)$$

$\ln GDP$  = Natural log of Gross Domestic Product  
 $\ln EMPR$  = Natural log of Employment generation  
 $\ln INFR$  = Natural log of Inflation rate  
 $\ln VAT$  = Natural log of Value Added Tax  
 $\ln PPT$  = Natural log of Petroleum Profit Tax  
 $\ln CIT$  = Natural log of Company Income Tax  
 $\ln TXR$  = Natural log of Tax Rate  
 $\ln TREV$  = Natural log of Tax Revenue  
 $\ln MEP$  = Natural log of Macroeconomic Performance  
 $\ln TREV * \ln TXR$  = Natural log of Interaction Variable

**Decision Rule**

Accept  $H_0$ : if the p-value of the independent variable is greater than 0.05. It is not significant.

Reject  $H_0$ : if the p-value of the independent variable is less than 0.05. It is significant.

If the p-value of the independent variable is less than 0.05, then it means that the variable is significantly contributing to the variations in the dependent variable vice versa.

**DATA PRESENTATION, ANALYSES AND DISCUSSION OF FINDINGS**

**Table 4.18 Summary of statistical results on the relationship between tax revenue and macroeconomic performance.**

Hypotheses	Variables	Standardized Coefficient	T-Statistics	P-Value	Relationship	Decision
Ho1	VAT & GDP	69.48867	6.28	0.000	Significant	Rejected
Ho2	VAT & EMPR	.042602	4.90	0.000	Significant	Rejected
Ho3	VAT & INFR	.0076298	1.76	0.096	Insignificant	Accepted
Ho4	PPT & GDP	-2.349398	-1.89	0.076	Insignificant	Accepted
Ho5	PPT & EMPR	-.0036676	-5.28	0.000	Significant	Rejected
Ho6	PPT & INFR	-.0013027	-1.63	0.121	Insignificant	Accepted
Ho7	CIT & GDP	35.12419	3.98	0.001	Significant	Rejected
Ho8	CIT & EMPR	-.021412	-3.54	0.003	Significant	Rejected
Ho9	CIT & INFR	-.004978	-1.59	0.129	Insignificant	Accepted
Ho10	$\ln MEP$ & $\ln TREV \ln TXR$	110.63584	6.181274	0.002	Significant	Rejected

**Source:** Extract from STATA version 12.

**Discussion of Findings**

**Value Added Tax and Gross Domestic Product Growth in Nigeria.**

The study revealed the existence of a positive and significant effect of value added tax on gross domestic product growth in Nigeria (p-value= 0.000). This finding is in-line with the finding of Okoli et al. (2014) that revealed that a significant positive relationship exists between Taxation and economic growth in Nigeria. This finding may be as a result of the relevance value added tax as a vital source of government revenue that contributes immensely to economic growth...

This finding is in disagreement with the finding of Okafor (2012) that revealed no significant relationship between federally collected tax revenue and the GDP in Nigeria. This finding also disagrees with the finding of Acti and Abigail (2014) that revealed no significant relationship between Company Income Tax, Value Added Tax and Gross Domestic Product. Furthermore, Nkhalamo and Sheefeni (2017); and Lerato (2016) that concluded that there is no no long run relationship exists between tax and economic growth. This is supported by the finding of Nmesirionye et al. (2019) that concluded that value added tax has positive and insignificant impact on real gross domestic product of Nigeria.

### **Value Added Tax and Employment Generation in Nigeria**

The study revealed the existence of a positive and significant influence of value added tax on employment generation rate in Nigeria (p-value= 0.000). This finding is in line with the finding of Ogwuru and Agbaraevo (2017) that revealed that value added tax had a positive and significant relationship with economic growth. Furthermore, this study supported by the finding of Adegbite (2020) that concluded that value-added tax, education tax had a positive significant effect on the economic growth of West African countries. This finding is in contrast with the finding of Adeniran and Uguru (2020) that revealed that taxation had impacted positively on the growth of Nigerian economy. Also, this finding further disagrees with the finding of Egbuhuzor and Tomquin (2021) that revealed a negative and insignificant effect of value-added tax on economic performance.

### **Value Added Tax and Inflation Rate in Nigeria.**

The study revealed there is positive and insignificant effect of value added tax on inflation rate in Nigeria (p-value= 0.096). This finding is supported by the finding of Idris and Bakar (2017) that concluded that Nigeria's current inflationary trend negatively affects sustainable growth and development, meaning that one of the requirements for reaching the desired growth level in Nigeria is to control the excessive increase in the inflation rate. This finding disagrees with the finding of Amah (2021) that revealed that the relationship between Value Added Tax and Gross Domestic Product is negative.

### **Petroleum Profit Tax and Gross Domestic Product Growth in Nigeria.**

The study revealed a negative and insignificant influence of petroleum profit tax on gross domestic product growth in Nigeria (p-value= 0.076). This finding is in line with the finding of Igbiosa (2016) that revealed a negative relationship with Petroleum Profit Tax (PPT), Custom and Excise Taxes (CET), and the Company Income Tax (CIT) and Gross Domestic Product (GDP) growth for two consecutive quarters in 2016.

This finding is in contrast with the work of Dibia and Onwuchekwa (2019) revealed that petroleum profit tax (PPT) and company income tax (CIT) have a positive and significant effect on the Real Gross Domestic Product (RGDP) in Nigeria. Also, it contradicts the finding of Yahaya and Bakare (2018) that concluded that that petroleum profit tax (PPT) have positive significant impact on gross domestic product (GDP) in Nigeria. Furthermore, Ojong et al. (2016) concluded that PPT and CIT had positive impact on the economic performance.

### **Petroleum Profit Tax and Employment Generation in Nigeria.**

The study revealed a negative but significant effect of petroleum profit tax on employment generation in Nigeria (p-value= 0.000). This finding is in line with the finding of Olatunji and

Adegbite (2014) that revealed that petroleum profit tax had significant impact on Nigerian economy. Also, this finding is supported by the finding of Eyisi et al. (2015) that revealed that government revenue from taxation has negative significant influence on unemployment rate in Nigeria. This implies that revenue generation from taxation enhances economic growth and growth that changes in taxation, automatically will affect individual's real standard of living (GDP), employment rate and interest rate. This finding contradicts the conclusion of Folawewo and Adeboje (2017) that revealed that GDP growth has a negative but insignificant effect on the unemployment rate, which indicates low employment elasticity of growth in the region.

#### **Petroleum Profit Tax and Inflation Rate in Nigeria.**

The study revealed a negative and insignificant influence of petroleum profit tax on inflation rate in Nigeria (p-value= 0.121). This finding is supported by the finding of Egbulonu and Wobilor (2016) that revealed a statistically insignificant positive relationship between government expenditure; government tax revenue and inflation in Nigeria. This finding is also supported by the finding of Hongo et al. (2020) that revealed that unemployment negatively relates to fiscal policy in the long run as the tradeoff is supported. This finding is in disagreement with the finding of Dibia and Onwuchekwa (2019) revealed that petroleum profit tax (PPT) have a positive and significant effect on the macroeconomic performance in Nigeria. Also, it contradicts the finding of Yahaya and Bakare (2018) that concluded that that petroleum profit tax (PPT) have positive significant impact on gross domestic product (GDP) in Nigeria.

#### **Companies Income Tax and Gross Domestic Product Growth in Nigeria.**

The study revealed there is a positive and significant effect of companies income tax on gross domestic product growth in Nigeria (p-value= 0.001). This finding is supported by the finding of Bamidele and Olowookere (2019) that revealed that Company income tax have positive effects on economic growth and statistically significant. Also, the finding is corroborated by the finding of Margaret et al. (2014) that revealed a significant positive relationship between Company Income Tax and Gross Domestic Product (GDP) of Nigeria. Furthermore, the finding agreed with the finding of Adegbite (2020) revealed that corporate income tax, value-added tax, education tax and custom and excise duties had a positive significant effect on the economic performance. This finding disagrees with the findings of Amri et al. (2019) that revealed a negative relationship exists between local tax revenue and regional macroeconomic performance.

#### **Companies Income Tax and Employment Generation in Nigeria.**

The study revealed a negative and significant influence of companies income tax on employment generation in Nigeria (p-value= 0.003). This finding is in line with the finding of Mukisa et al. (2021) that revealed that unemployment is likely to decrease with sustained economic growth and increased supply and access to private sector credit while, on the other hand, increased trade openness and gross national expenditure are likely to exacerbate the unemployment problem. This finding is in contrast with the finding of Chigbu and Njoku (2015) that company income tax have not significantly contributed to the growth of the economy in terms of employment generation.

#### **Companies Income Tax and Inflation Rate in Nigeria.**

The study revealed a negative and insignificant effect of companies income tax on inflation rate in Nigeria (p-value= 0.129). This finding is in line with Cornelius et al. (2016) that revealed that no significant relationship was found between company income tax and the growth of the Nigeria economy. This finding is supported by the finding of Nwakobi, et al. (2018) that concluded that that fiscal deficit has no significant effect on the gross domestic product, money supply and inflation in Nigeria. This finding is in disagreement with the finding of Oboh et al. (2018) that revealed that total tax revenue has a positive and significant effect on economic growth. This finding also disagrees

with the finding of Dibia and Onwuchekwa (2019) revealed that company income tax (CIT) have a positive and significant effect on the macroeconomic performance in Nigeria.

### **Tax Rate as a moderator in the Relationship between Tax Revenues and Macroeconomic Performance in Nigeria.**

The study revealed that tax rate significantly control the relationship between tax revenues and macroeconomic performance in Nigeria ( $p$ -value= 0.002). This finding is in line with Cornelius et al. (2016) that revealed that significant relationship exist between company income tax and the growth of the Nigeria economy. The hypothesis were analysed using least square panel regression with the aid of E-view (10). This study found a positive and significance influence of Petroleum Profit Tax (PPT), Corporate Income Tax (CIT), Value Added Tax (VAT) on macroeconomic performance. The findings of the study here is in consonance with the works of Stioloa (2017) and Ironkwe & Ordu (2016).

## **SUMMARY, CONCLUSION, RECOMMENDATIONS AND CONTRIBUTION TO SCHOLARSHIP**

### **Summary**

This study examined the effect of tax revenue on macroeconomic performance in Nigeria. GDP growth, employment generation and inflation rate were used as indicators of macroeconomic performance. While the aim of this study highlights the broad objective set out to achieve by this study, the specific objectives outline the specific courses of action undertaken in this study. The testable hypotheses with the specific objectives were shown. The theoretical review offered insights into the underlying theories for this study whereas the empirical literature review was devoted to the review of the previous related studies to gain insights into the effects of tax revenue on macroeconomic outlook. The evaluation of the literature reviewed highlights the gaps this study seeks to fill.

### **Conclusion**

Achieving the macroeconomic objectives of rapid and sustainable growth, price stability and full employment through fiscal sustainability has continued to dominate policy goals in Nigeria. There is a need to establish an adequate and efficient tax system for improved revenue generation and a sustainable economic growth. Thus, this study deepens the understanding of the effects of tax revenue on macroeconomic performance with a focus on GDP growth, price stability and employment generation in the country. This affirms the stabilization role of tax revenue in boosting financial sustainability and creating a roadmap for sustainable growth and job creation. Frecknall-Hughes (2014) identifies tax revenue as the most important financial source for governmental public expenditures. Hence, large proportions of fiscal responsibilities of the government are met through revenues mobilized from various tax sources. Agunbiade and Idebi (2020) asserts that tax revenue represents an important tool of fiscal policy used by the government to manage the economy of the state.

Oyebanji and Oyebanji (2017) equally underscores the rationale for taxation to include raising money through public revenue generation and other legitimate functions of the government from taxes on incomes, goods, services, and properties of an individual and corporate body. The findings of this study also affirms the relevance of tax revenue as value added tax and company income tax have significant influence on gross domestic product growth and employment generation whereas, petroleum profit tax, value added tax, company income tax has an insignificant effect on inflation rate.

### **Recommendations**

The policy recommendations proffered for this study which are premised on the findings are as follows:

1. Policymakers in the Nigeria should broaden the tax base to attract more revenue to enhance the positive contributions of tax revenue to macroeconomic stability.
2. The government should utilize revenue generated from tax collection in the creation of business friendly environment that would attract direct foreign investments and resource mobilization for productive actives (establishment of industries and its value chain entities) to create employment opportunities for Nigerians.
3. Policy makers should promote an efficient and automated tax administration designed to prevent revenue leakages and improve tax buoyancy and overall macroeconomics performance.
4. Government should design a suitable framework (Tax incentives and allowances) that will encourage innovative economic activities for the manufacturing of goods/ commodities with international comparative advantage. This will increase employment generation and improve standard of living for Nigerians.
5. The Policy makers should sustain the digitalization of the tax administration processes to make it user friendly and to curb incidences of corrupt practices.
6. Fiscal and Monetary authorities should collaborate and synchronizing their policies with a view to broaden the revenue base through efficient tax administration, stimulation of public and private investments , to generate employment for the teeming population and promote inclusive growth for economic development.
7. The system for VAT exemptions and refunds and the indiscriminate issuance of tax holidays/ and other tax incentives to corporate bodies (particularly ill-designed tax exemptions that fail to attract the quantum of desired investments and attendant benefits to the State) should be reviewed to curb corrupt practices, improve revenue and employment generation in Nigeria.
8. Government should use tax policies and tax reforms with the ultimate objectives of generating employment, increase GDP growth rate and a veritable tool for price stability management in Nigeria.
9. Government should strengthen its revenue generation mechanism by raising the tax rates and reduce administrative bottlenecks by leveraging on technology to promote and efficient tax ecosystems.
10. Government could increase tax revenue by raising tax rates use the direction of causality between VAT, PPT and CIT to boost employment and ensure positive macroeconomic aggregates as the study shows significant joint influence and interconnectivity among all variables.

#### **Contributions to Scholarship**

1. The Study has enriched the body of literature by using the Tado Yammato causality test to explain the direction of influence individually and compositely among the components of tax revenue (VAT, PPT and CIT) and measures of macroeconomic performance(GDPR, Employment generation and Inflation rate) respectively in Nigeria.
2. The study measured the impact of tax revenue on GDP growth, employment generation and price stability from the year 2000 to 2020. This filled the existing gap in previous studies that limit their content scope to only GDP (Hongo et al (2020); Folawepo &Adeboje (2017), unemployment (Demire (2020); Tsaurai (2020); Whajah et al (2019) and Inflation (Gbadebo &Mohammed (2015), Attamah (2019). The Study covered a broader dimensions of macroeconomic in Nigeria.
3. The study period covered from 2000 to 2020 far exceed existing studies as it provides empirical evidence to assess the effect of tax revenue on GDP growth, employment and price stability in Nigeria.

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