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TAX REVENUE AND MACROECONOMIC PERFORMANCE IN NIGERIA

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ABSTRACT

This study examined the relationship between tax revenue and macroeconomic performance in Nigeria. The correlational research design was employed and secondary data was sourced from the Nigerian economy for twenty-one years (2002-2022) 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 regression analysis were utilized with the aid of Stata12 software. The study revealed that Value Added Tax and Companies Income Tax significantly related with employment generation. Also, VAT and CIT have a significant relationship with GDPG whereas tax rates had an insignificant relationship. Based on the findings, the study concluded that there is a significant relationship between Tax Revenue and Macroeconomic performance in Nigeria. It was recommended that policymakers in Nigeria should widen the tax base to generate more revenue to provide funds for investment in critical socioeconomic sectors, as this will enhance the contributions of tax revenue to macroeconomic performance in Nigeria.

KEYWORDS: Tax Revenue, Macroeconomic, Performance, GDP Growth, Employment Generation, Value Added Tax, Companies Income Tax.

INTRODUCTION

The stability of a macroeconomic environment plays an important role for businesses and the overall competitiveness of a country. Traditionally, macroeconomic performance indicators include Gross Domestic Product (GDP) growth, full employment, price stability, the balance of payment (BoP) positions, and income distribution among others. Kadenge (2021) argued that the performance of an economy is usually assessed in terms of achievement of economic objectives. These objectives can be long term, such as sustainable growth and development, or short term such as the stabilization of economy in response to sudden and unpredictable events called economic shocks. An economy is adjudged to be performing well when, there is high economic growth, high productivity of factors of production, and improved social welfare; Resources were allocated efficiently. Lovell et al. (2015) defined macroeconomic performance as a high level of real GDP per capita, a low rate of inflation, a low rate of unemployment, and a favorable trade balance.

The achievement of macroeconomic goals namely, full employment, stability of price level, high and sustainable economic growth and external balance, from time immemorial, has been a policy priority of every economy whether developed or developing, given the susceptibility of macroeconomic variables to fluctuations in the economy. The realization of these goals is not automatic but requires policy guidance. The policy guidance represents the objectives of economic policy (Olawunmi & Ayinla, 2007).

Mobilization of domestic resources to provide long-term and sustainable growth is an essential policy option available to developing countries (Mosomi 2015; Akwe, 2014). The most imperative instrument by which resources are mobilized and appropriately channeled to the government coffer is through the implementation of a feasible and effective tax revenue measures (Gale & Samwick, 2014; Eugene & Abigail, 2014; Fagbemu et al., 2010). Failure to do so will result in seeking for domestic borrowing and external assistance, hence, all these measures would increase the vulnerability of the economy in terms of macroeconomic disequilibrium. The use of borrowed funds from the multilateral institutions is challenging and precarious given the high interest rate and restrictive conditions from the donor agencies. Moreover, other sources of domestic borrowing are limited due to poor private sector development or participation in the economic activities. Therefore, tax revenue remains the viable and productive measure through which government raise money for statutory functions and to finance other developmental responsibilities (Adereti et al., 2011; Ihendinihu et al., 2014).

Taxation is a major source of public revenue for countries worldwide especially among developing economies. These countries have widespread fiscal pressure, whereby public expenditure exceeds the available incomes. The challenge had triggered a call for raising tax revenue to promote fiscal sustainability and keep the economy on the path of rapid and sustainable development. Udoh (2017) describes the implementation of fiscal policies of many countries in Sub-Saharan Africa (SSA) as sub-optimal. It posits that increases in tax revenues will boost economic growth. Tax revenue provides resources for investment in critical sectors of the economy to drive economic growth and development (Garba, 2014).

Nigeria generates revenue from several sources including the internal and external sources. The internal sources of revenue according to Worlu and Nkoro (2012) is classified into the oil revenue (including royalties, petroleum profit tax, gas tax) and the non-oil revenue (including direct and indirect tax, loans, grants, trades, aids), the Nigerian tax revenue comprised of the direct and indirect taxes. The direct tax is made up of personal, companies' income and petroleum profit taxes. Indirect tax which was formerly made up of import, export and excise-duties has undergone various reforms with the taxes under it joined together and called customs and excise duties. The tax system is a tripartite structure customs and excise duties. The tax system is a tripartite structure in Nigeria consisting of tax policy, tax laws and tax administration (Adejare, 2015). According to Okpe (2015), tax payment creates an opportunity to transfer resources and income from households and firms to the government to achieve strategic economic and social goals. Onoh (2013) asserts that these goals include job creation, price stability, rapid economic growth, income redistribution, and a favorable balance of payment (BoP). It is a reliable source of funds for long-term infrastructural development.

Tax policy can affect the overall economy in three main ways: by altering demand for goods and services; by changing incentives to work, save and invest; and by raising or lowering budget deficits. The macroeconomic effects of taxes are important because they can affect people's well-being and have

varied effect on measured economic output. Macroeconomic changes create dynamic effects that influence the amount of revenue a tax system can raise. However, evidence suggests that those dynamic effects are generally modest. Tax policy also affects the economy through its effect on the government's budget deficit. A reduction in tax revenues increases the deficit (all things been equal). A larger deficit implies increased government borrowing, which reduces the funds available for private investment because savings that would otherwise go to private investment are used to purchase government debt (Ben, 2017). The effect of taxation covers all the changes in the economy resulting from the imposition of a tax system. Experts opined that without taxation, a market economy would not attain certain levels of production, consumption, investment, employment and other similar patterns. The presence of taxation modifies these patterns and such modifications may collectively be called the effect of taxation (Olawumi & Adesanmi, 2020).

Statement of the Problem

For many years, Nigeria has 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 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 resource has weakened the country's financial sustainability plans and efforts to move the economy on a sustainable path with improve macroeconomic outcomes. Tax revenues have 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 was 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, 2020, 2021 and 2022 recorded as increase in external borrowings in Nigeria 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 tends weaken the capacity of Nigeria to control inflation and ensure price stability, foster rapid and sustainable growth of their economics, 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, proper 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 is 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 economic aggregates could lead to negative consequences. It is on the backdrop of these arguments that this study on tax revenue and macroeconomic performance becomes necessary to ascertain the relationship between the revenue and macroeconomic performance in Nigeria.

Purpose of the Study

The purpose of this study was to examine the relationship between tax revenues and macroeconomic performance in Nigeria. Specifically, this study sought to:

- i. Examine the extent of the relationship between Value Added Tax on macroeconomic performance in Nigeria;
- ii. Examine the extent of the relationship between Companies Income Tax on Macroeconomic Performance in Nigeria;

Research Questions

This study addressed the following research questions:

- i. To what extent does Value Added Tax relate with Macroeconomic performance in Nigeria?
- ii. To what extent does Companies Income Tax relate with Macroeconomic performance in Nigeria?

Hypotheses of the Study

Based on the purpose of the study and research questions, the following hypotheses were formulated for the study.

H₀₁: There is no significant relationship between Value Added Tax and GDP growth in Nigeria.

H₀₂: There is no significant relationship between Value Added Tax and employment generation in Nigeria.

H₀₃: There is no significant relationship between Companies Income Tax and GDP growth in Nigeria.

H₀₄: There is no significant relationship between Companies Income Tax and employment generation in Nigeria.

H₀₅: Tax rate does not significantly moderate the influence of the relationship between Tax Revenue and Macroeconomic performance in Nigeria.

LITERATURE REVIEW

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).

Conceptual Review

Concept of Tax Revenue

This concept of tax revenue has continued to draw the attention of various institutions and many scholars across the world. It is defined as the revenue collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on ownership and transfers 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 among 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) described 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 divided 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) identified tax revenue as the most important financial source for government public expenditures. This is because large proportions of fiscal responsibilities of the government are met through revenues mobilized from various tax sources. Furthermore, tax revenue represents an important tool of fiscal policy used by the government to manage the economy of the state, Agunbiade & Idebi, (2020). It equally supports the traditional function of the state such as the provision of public goods, maintenance of law and order, defence against external aggression, regulation of trade and business to ensure social-economic maintenance.

Yahaya & Yusuf (2020) described taxation as one of the diverse sources of revenue generation for the government. This is following the assertion of Asaolu et al. (2018) that taxation offers a viable source of revenue generation to the government to provide public goods to the population which depicts unique characteristics of non-rival consumption, in-exhaustion, joint consumption, and non-excludability. Oyebanji & Oyebanji (2017) equally underscores the rationale for taxation to include raising money for public revenue generation and other legitimate functions of the government from incomes, goods, services, and properties of an individual and corporate body.

Additionally, Yahaya & 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 revenues defines revenues from 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 & Jonathan (2014) & 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.

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 purchased and services rendered.

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 revenue 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.

In Nigeria, before the introduction of Value Added Tax, there was an existing tax known as the sales tax. The sale tax which came into effect in Nigeria in 1986 was administered jointly by both the various State Board of Internal Revenue of the various states and the Federal Inland Revenue Service in the year 1986 to 1993 before it was replaced by VAT, Ugwa & Embula (2012). Following the enactment of Value Added Tax Act (VATA) 1993, VAT was introduced in Nigeria as specified in No. 102 of the VATA 1993 to replace the sales tax that was then the consumption tax supported by the Federal Government Decree No. 7 of 1986. Since the introduction of VAT in 1993, the Nigerian VAT rate remained at 5% and is one of the lowest globally.

Companies 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.

The Company Income Tax Act (CITA), Cap C21, LFN 2004 is the principal law that governs the taxation

of companies in Nigeria. Section 1 of the Act provides for the establishment and constitution of the Board whose operational arm shall be called the Federal Inland Revenue Service, while Section 3 provides that the powers and duties of the board concerning companies include the collection of tax and accounting for all amounts collected. The company income tax is regulated by the Company Income Tax Act and managed by Federal Inland Revenue Service.

The law deals with the assessment and collection of taxes from all companies operating as limited liability companies with the exception of those operating in the petroleum sub sector. Section 40 (1) of Company Income Tax Act (CITA) specifies a tax rate of 30% of chargeable profit while Section 40(6) stipulates a tax rate of 20% for companies operating in either the manufacturing, agricultural, mining sectors or the company is completely into export trade and earns a total gross turnover of below one million naira for the first five (5) years of assessment. Section 11 (2) of the CITA was amended by replacing "agricultural trade or business" with "primary agricultural production." The amended term "primary agricultural production" defines what constitutes primary agricultural production as being production of crops, livestock, forestry and fishing, and excludes production at the intermediate/by-products or derivatives levels (Finance Act, 2020). Also, Section 11 (2) of the CITA was further amended by reducing the minimum moratorium period from 18 months to 12 months, with regards to the tax exemption on bank loans for companies involved in "primary agricultural production" and other local businesses. Section 55 of the CITA was further amended, providing that the Tax Authority (FIRS) may require small and medium companies to file income tax returns using a form of account that FIRS may specify, other than audited financial statements.

Macroeconomic Performance

The criterion variable for this study is the macroeconomic performance which defined 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.

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.

The expenditure side of the national accounts includes estimates of these pieces as well as their components. GDP can also be measured through the "income approach," which adds up all of the income earned through production, and the income side of the national accounts includes the various types of income that go into GDP. In broad terms, an increase in real GDP is interpreted as a sign that the economy is doing well. When real GDP is growing strongly, employment is likely to be increasing as companies will employ more workers for their factories and people have more money in their pockets. When GDP is shrinking, as it did in many countries during the global economic crisis and recent Covid-19 pandemic, employment often declines. In some cases, GDP may be growing, but not fast enough to create a sufficient number of employments for those seeking them. Overall, GDP is important because it gives information about the size of the economy and how an economy is performing. The growth rate GDP is often used as an indicator of the general well-being of the economy.

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.

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).

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 companies' 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 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-liberalized 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.

Nkhalamo and Sheefeni (2017) examined the connection between tax and economic growth in Namibia. The study used quarterly data sourced from the ministry of finance, Namibian statistical agency and Bank of Namibia publication focused on tax and economic activities for the period 2001-2005. The study revealed that no long run relationship exists between tax and economic growth in Namibia, further the results revealed an immediate negative effect of tax exists on economic growth resulting from shocks in tax and more importantly the forecast error variance decomposition revealed that tax is responsible for moderate fluctuation in economic growth in Namibia. Considering the findings, the study recommended that the government should adopt the progressive type of tax and increase tax administration to increase efficiency, and increase investment through reduction of taxes.

Lerato (2016) examined the relationship between tax and economic growth in South Africa. Specifically, the study assessed the impact of different types of tax (PIT, CIT and VAT) on economic growth in South Africa. The quantitative research design was employed as quarterly secondary data covering the period of 2003-2016. The autoregressive distributed lag (ARDL) co-integration framework was employed in analyzing data collated in the study. Results obtained in the study revealed that a positive relationship exists between taxes and growth, where increases in VAT lead to increases in growth and increases in PIT

and CIT are stimulated by economic growth. The study therefore suggested that there rather be an increase in VAT as opposed to the other tax types so as to bring about a more impactful, positive increase in economic growth.

METHODOLOGY

The whole Nigerian economy was used, therefore there was no need for a sample size and sampling technique as it is not applicable in this study. Macro data for twenty-one years (21) that is from 2002-2022 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 are value Added Tax (VAT), and Company Income Tax (CIT), GDP Growth and employment generation.

METHOD OF DATA ANALYSIS

The data that were gathered were analyzed using the descriptive statistics (mean score and standard deviation) Pearson correlation coefficient and multiple regression analysis with the aid of Stata 12 software.

DATA PRESENTATION AND ANALYSIS

Table 4.2: Bivariate correlation of the variables

	Cit	vat	gdpr	empr
CIT	1.0000			
VAT	0.9844*	1.0000		
GDPR	0.9922*	0.9961*	1.0000	
EMPR	0.5150*	0.5163*	0.5293*	1.0000

Source: Output from STATA version 12.

* Correlation is significant at the 0.5 level

Table 4.2 above showed that petroleum profit tax, company income tax and value added tax are positive and significantly correlated with gross domestic product growth (0.6896*, 0.9922* and 0.9961*).

Also, the correlation matrix revealed a positive but insignificant correlation between petroleum profit tax and employment generation (0.0130) while it showed that company income tax, value added tax and gross domestic product growth are positive and in significantly correlated with employment generation (0.5150*, 0.5 163*, and 0.5293*).

Analysis of Multi-Collinearity

Before conducting regression analysis, multi-collinearity needs to be patterned. Multicollinearity is a statistical concept where several independent variables in a model are correlated. Two variables are considered to be perfectly collinear if their correlation coefficient is +/- 1.0. Multicollinearity among independent variables will result in less reliable statistical inferences. This study employed the Variance Inflation Factor (VIF) method in order to determine the presence of multi-collinearity among independent variables. VIF value greater than 10 calls for concern while the normality is the assumption that the underlying residuals are normally distributed, or approximately so. The null hypothesis states that the residuals are normally distributed, against, the alternative hypothesis that they are not normally-distributed.

Table 4.3: Test of Multi-Collinearity

Variable	VIF	1/VIF
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VAT	13.30	0.075195
CIT	12.95	0.077203
Mean VIF	9.25	

Source: Output from STATA version 12

The test of multicollinearity among the independent variables in Table 4.4 above revealed a variance inflation factor value of 9.25 which is below 10. Therefore, independent variables used in this study do not suggest multicollinearity problem.

Regression Result

Table 4.4: Multiple regression results with GDPGR as dependent variable

$$\text{GDPGR}_t = \beta_0 + \beta_1 \text{VAT}_t + \beta_2 \text{PPT}_t + \beta_3 \text{CIT}_t + \varepsilon_t \dots (1)$$

Linear regression				number of obs =	21	
				F(3, 17) =	598.20	
				Prob > F =	0.0000	
				R-squared =	0.9886	
				Root MSE =	5411	
			Robust			
GDPGR	Coef.	Std. Err.	T	p>/t/	(95% Conf. Interval)	
CIT	35.12419	8.8287	3.98	0.001	16.49726	53.75112
VAT	69.48867	11.06868	6.28	0.000	46.13581	92.84154
CONS	1812.13	1848.998	0.98	0.341	-2088.915	5713.176

Source: Output from STATA version 12.

Table 4.4 above shows the regression model of gross domestic product growth (gdpgr) against petroleum profit tax (ppt), company income tax (cit) and value added tax (vat). The standard robust error in the regression addresses heteroskedasticity. The F statistics in Table 4.4 shows that at $F(3, 17) = 598.21$, $\text{Prob} > F = 0.0000$ and that the independent variables statistically and significantly predict the dependent variable. The independent variables in the model explain 99% of the variation in gross domestic product growth.

Table 4.5: Multiple regression results with EMPR as dependent variable

$$\text{EMPR}_t = \beta_0 + \beta_1 \text{VAT}_t + \beta_2 \text{PPT}_t + \beta_3 \text{CIT}_t + \varepsilon_t \dots (2)$$

Linear regression				number of obs =	21	
				F(3, 17) =	17.27	
				Prob > F =	0.0000	
				R-squared =	0.8924	
				Root MSE =	2.3059	
Robust						
EMPR	Coef.	Std. Err.	t	p>/t/	(95% Conf. Interval)	
CIT	-.021412	.0060562	-3.54	0.003	-.0341894	-.0086346
VAT	.042602	.0086922	4.90	0.000	.0242629	.060941
CONS	2.401198	.7225964	3.32	0.004	.8766526	3.925743

Source: Output from STATA version 12.

Table 4.5 above shows the regression model of employment generation (empr) against company income tax (cit) and value added tax (vat). The standard robust error in the regression addresses heteroskedasticity. The F statistics in Table 4.6 shows that at $F(3, 17) = 17.27$, $\text{Prob} > F = 0.0000$ and that the independent variables statistically and significantly, predict the dependent variable. The independent variables in the model explain 89% of the variation in employment generation.

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 influence of tax revenue on macroeconomic performance with a focus on GDP growth, 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) identified 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) asserted 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 affirmed the relevance of tax revenue as value added tax and company income tax have on gross domestic product growth and employment generation. The study therefore concluded that there is a significant relationship between tax revenue and macroeconomic performance in Nigeria.

RECOMMENDATIONS

The policy recommendations proffered for this study are as follows:

1. Government and its agencies should ensure reduction in value added tax to enhance increase in gross domestic product (GDP), growth and improve employment generation in the country.
2. Government should reduce taxes impose on companies income tax and even grant tax holidays to newly established companies as this will improve Gross Domestic Product (GDP) growth and employment generation.
3. Government should offer tax incentives to companies so as to boost their income generation for enhance generation of employment and Gross Domestic Product (GDP) growth.
4. Government should ensure reduction in tax rate so as to increase tax revenues for employment generation and Gross Domestic Product (GDP) growth.

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