
EFFECT OF DIRECT AND INDIRECT TAXES ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

Globally, the potency of direct tax And indirect tax revenues in making funds available for government at all levels to fund public infrastructure projects, education, healthcare, and social services cannot be overemphasized. However, fiscal imbalances triggered by excessive government spending on unproductive consumption at the expense of productive investment in Nigeria has led to low quality of life and stunted growth of the economy. This study investigates the effect of direct and indirect tax revenue on economic growth in Nigeria. The study used ex post facto research design. Secondary data were obtained from Federal Inland Revenue Statement, National Bureau of Statistics, and CBN statistics bulletin. The data were subjected to Ordinary Least Square (OLS) model as the estimating techniques. The result showed that direct taxes ($\beta = 0.2029$, p-value = 0.0074) has a significant positive impact on economic growth; indirect taxes ($\beta = 0.1229$, p-value = 0.0086) has a significant positive impact on economic growth. Also, macroeconomic factors ($\beta = 0.2002$, p-value = 0.0428) has a significant positive impact on economic growth. The study concluded that the direct and indirect taxes have significant positive impacts on economic growth in Nigeria. Therefore, the study recommended that governments should carefully consider the overall burden of indirect taxes on consumers and businesses to mitigate its regressive effects by implementing targeted exemptions or reduced tax rates for essential goods and services consumed predominantly by lower-income groups, while policymakers should conduct thorough assessments to determine the optimal tax rates that maximize revenue without hindering business operations.

Keywords: Direct Tax, Indirect Tax, Economic Growth

Introduction

Mobilizing revenue is crucial for governments at all levels as it enables them to render functions; such as, law and order, defense against external aggression, the provision of public goods, maintenance of regulation of trade and business to ensure economic and social support (Guzman, 2022; Kim and Park,

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2021; Kryeziu, 2021). The rationale for effective domestic revenue mobilization is premised on the need to minimize the high dependency on external financing, limit the quest for foreign borrowing, ensure prudent macroeconomic administration, and boost economic growth. Taxation is not only the key for promoting sustainable growth but also reducing poverty in developing countries based on its ability to provide stable and predictable much-needed fiscal environment to promote growth and finance social and physical infrastructure required for sustainable development (Eze, 2023).

Taxation helps the government in planning process, implementation of development agenda, promotion of private sector development, settlement of government obligations, and serves as a strong conduit that enhances effective distribution of resources (Tarawalie & Hemore, 2021). Gurdai *et al.* (2021) and Jaén-García (2019) opined that taxes are the key fiscal instrument to achieve economic growth directly or indirectly. Specifically, Muhammad (2020) argued that Nigerian regulators have primarily focused on generating revenue through direct taxes, while overlooking the potential of indirect taxes as a source of economic diversification revenue, which could, in turn, contribute to enhancing economic growth (Omodero, 2020; IMF, 2020).

However, most developing countries including Nigeria are besieged by large fiscal imbalances triggered by excessive spending on consumption at the expense of investment, knowing that excessive government expenditure albeit low domestic revenue mobilization deters growth and progress (Obura, 2022; Nguluu, 2017). In pursuit of mobilizing enough domestic revenue to fund developmental projects, Nigeria and other developing economies, are

beleaguered with structural bottlenecks relating to weak institutional capacities, low development, inefficient tax system, large underground economic activities, and chronic tax evasion and avoidance (Naape, 2021; Tarawalie & Hemore, 2021; Olawunmi & Ayinla, 2019).

Revenue Statistics of Africa report that 56% of West African countries are indebted to World international development banks on the account to finance government budget deficits with public borrowing instead of internal generated income tax revenue. In 2021, the total external public debt in West Africa amounted to around 164 billion U.S. dollars. Nigeria recorded the highest levels of debt with approximately \$79.54 billion, implying that Nigeria have not been able to generate sufficient tax revenue to finance its national budgets and this stands as impediment to actualize the desired and sustainable growth in the country (Gbatoi, 2017). Thus, insufficient levels of fiscal income can jeopardize the realization of the necessary governments' development functions such as providing adequate public services and meeting basic social amenities including health, education, and infrastructure (Sawhney, 2018).

Another major challenges facing tax administration in Nigeria and other developing economies include poor accountability, corruption of tax officials, tax evasion, high tax rate, and poor method of tax collection. For instance, Onakoya, Afintinni and Ogundajo (2022) asserted that about 75% of registered firms are not found in the tax net of the country and 65% of them had not filed their tax returns for over two years. There is also the problem of tax statistics inaccuracy. These challenges have persistently caused inefficiency and defects affecting negatively the income reached from taxes

during the past few years (Eze, 2023; Ezekwesili & Ezejiofor, 2022). Also, the amateurish character of the Federal Inland Revenue Service Board has not eased the problem as they have in their acts been unable to capture in their tax net all corporations operating in the country. In addition, evident in the administration of taxation in Nigeria are issues related to corrupt practices, unorganized monitoring and enforcement approach and dearth of data (Edewusi & Ajayi, 2019).

On the other hand, Nigeria has recently faced several macroeconomic challenges which adversely affect its growth. Like many countries around the world,

Nigeria's economy was affected by the COVID-19 pandemic. The lockdowns and disruptions to global trade had adverse effects on various sectors, including oil, which is a significant contributor to Nigeria's revenue. The sharp drop in global oil prices in early 2020 put significant pressure on the country's finances as oil revenues make up a substantial portion of the government's income (Maganya, 2020; Onoja & Ibrahim, 2020). As at 2021, the indirect taxes reduced by 38% in contrast to the previous year. Direct tax increased marginally by 4% compared to the previous year, all of these unpleasant reports placed Nigeria's economy in an unpleasant position. Considering these problems, this study addressed the effect of direct tax and indirect tax on economic growth in Nigeria.

Past studies either examined the individual impact of direct taxes or indirect taxes on economic growth neglecting the interactive effect of direct and indirect taxes on economic growth. Therefore, this study deployed the two dimensions of direct and indirect taxes in order to capture a broader spectrum of tax revenue generation in Nigeria with the aim of providing relevant recommendations for the

government, policymakers, as well as scholars and academics.

Literature Review

Taxation

According to the Institute of Chartered Accountants of Nigeria (2020), the Chartered Institute of Taxation of Nigeria (2019) and National Tax Policy (2017), tax is a compulsory charge imposed by a public authority on the income and properties of individuals, firms and institutions as stipulated by legislation. Taxes paid are not for the direct exchange of goods or services but a transfer of resources various economic agents to the government to achieve economic and social objectives. The primary taxes currently in operation in Nigeria comprise personal income tax, petroleum profit tax, companies income tax, value added tax, tertiary education tax, capital gains tax, customs and excise duties, and stamp duties. These taxes can be categorized into direct taxes and indirect taxes (Olawunmi & Ayinla, 2019). The distinction between direct and indirect taxes is based on whether their burden can be shifted from the initial taxpayer to others. According to Korkmaz, *et al.* (2019), taxes where the burden cannot be shifted to any other person are direct, and where the burden can be shifted to others is indirect. In other words, direct taxes are imposed directly on an individual's or a company's income and comprise taxes levied on revenues and wealth such as income and property which include company income tax and petroleum profit tax. While indirect taxes are applied to goods and services and comprise taxes levied on domestic goods and services and foreign trade and transactions (Okoye, *et al.*, 2021). Examples of indirect taxes include value-added taxes, customs and

excise duties, fees levied on negotiable instruments, and other fees and charges (Korkmaz, *et al.* 2019). To proxy direct and indirect tax, this study created a composite index from income tax and petroleum profit tax; and from value added tax and customs and excise duties.

2.1.2 Economic Growth

Economic growth can be taken as the continuous rise in national income or output per capita over a long period of time. It is an economic condition in which the rate of rise in national output must outpace the rate of population growth. Economic growth is the market worth of all products and services produced in a country during a given time period, known as real gross domestic product (GDP).

Real GDP is a measure of a society's wealth since it shows how quickly profits can expand and the expected return on investment (Okerekeoti, 2022). GDP is the economic statistic that gets the most attention because it is considered the best single measure of people's welfare (Mankiw, 2018). Thus, economic growth can be seen from increase in real GDP from year to year such that when GDP rises, the economy gets better and people's welfare improves. This study employed the natural logarithm of real GDP as a proxy for economic growth.

Theoretically, the ability-to-pay theory emphasized the idea of taxing individuals based on their ability to pay. This theory can be traced back to early economic thinkers like Adam Smith, who discussed the concept of progressive taxation in his work "*An Inquiry into the Nature and Causes of the Wealth of Nations*" published in 1776. Smith argued that those with higher incomes should pay a larger proportion of their income in taxes because they could afford to do so without sacrificing their basic needs. This theory

stressed the importance of progressive taxation, where individuals with higher incomes pay a larger percentage of their income in taxes compared to those with lower incomes, reflecting the idea that those who are more affluent have a greater capacity to bear the burden of taxation without significantly affecting their quality of life. As such, direct and indirect taxes are determined by the financial capacity of taxpayers, without an expectation of receiving something specific in return.

The primary rationale behind this theory is the idea of one party making a sacrifice for the benefit of another. Hence, it is grounded in the fundamental concept of fairness and equity within a taxation system. At its core, it revolves around the notion that individuals or entities should contribute to the funding of public goods and services in a manner that is proportionate to their financial capacity. This theory is relevant to this study as it could potentially serve as the foundation for Nigeria's progressive tax system, where individuals who earn more pay higher taxes whether directly or indirectly.

This theory acknowledges that direct and indirect taxation are not solely a revenue-raising tool but also a mechanism to address economic inequality. Therefore, finding the right balance in progressive taxation is essential. Most modern tax systems incorporate elements of the ability-to-pay theory to varying degrees. Progressive taxation is common in many countries, where tax rates increase as income level rises. Tax deductions, credits, and exemptions are also often used to consider individual circumstances and ability to pay. However, implementing the ability-to-pay principle can be challenging due to issues such as tax evasion and avoidance, as high-income individuals and corporations may employ various strategies to reduce

their tax liability. Additionally, defining and measuring the "ability to pay" can be complex, as it involves not only income but also wealth, assets, and living expenses. Studies such as Akinola and Akinrinola

(2023), Ujah, *et al.* (2023), and Joseph, *et al.* (2022) provided strong support for the relevance of this theory as a suitable theory for this study.

Empirical Review

Korkmaz and Korkmaz (2023) investigated the effect of direct and indirect taxes on economic growth in the Turkish economy from 2006 to 2022 using the ARDL Boundary Test Approach. The result showed direct taxes have a negative impact on economic growth, while indirect taxes have a positive impact on economic growth.

In addition, the result of Toda-Yamamoto causality test revealed a bidirectional causal relationship between indirect tax, direct tax and economic growth.

Akinola and Akinrinola (2023) examined the impact of tax revenue and infrastructural development on economic growth in Nigeria from 1996 to 2021 using ARDL model. The study found a significant long-run relationship among the variables. Specifically, petroleum profit tax was found to be a strong contributor to economic growth in Nigeria. Value added tax and company income tax was not significant in the study.

Abdulwahab and David (2023) examined the effects of tax revenue on the economic growth of Nigeria from 1998 to 2021 using fixed effects regression model. The findings revealed that petroleum profit tax, custom and excise duty, value added tax and education tax has a significant positive effect on economic growth in Nigeria. It also reveals that company income tax has a significant negative effect on economic growth in Nigeria.

Ujah, Onyekachi, Alpheaus and Nmesirionye (2023) evaluated the effect of tax revenue on economic growth of Nigeria from 1970 to 2020 using Autoregressive Distributed Lag Model (ARDL) Bounds testing and ordinary least square (OLS). The study revealed that there is significant impact of company income tax, personal income tax, petroleum profit tax, value added tax and custom and excise duty on economic growth during the period under review and there is presence of structural breaks change effect in the Nigerian economy as regards the undergoing structural and administrative changes in tax system.

Prasad, Sharma, Mittal, Reddy and Babu (2022) examined the impact of direct and indirect tax revenue on economic growth in India from 1990 to 2021 using ARDL inbound and outbound tests. The study outcome reveals that direct and indirect tax growth rates positively impact GDP growth. Hence, the study suggested that government should focus on corporate tax policies, and more incentives for upcoming and existing entrepreneurs must be provided.

Stermugu and Ballkoçi (2022) examined the impact of direct tax and indirect tax on economic growth in Albania from 2012 to 2021 using linear regression analysis. The study revealed that direct taxes have a positive effect on economic growth and indirect taxes have a positive effect on economic growth. Indirect taxes mainly consist of value-added tax and special consumption tax.

Joseph, Nwankwo, and Akujor (2022) examined the effect of tax revenue on economic growth in ten countries from West Africa, Southern Africa, North Africa, Eastern Africa and Central Africa from 1981 to 2018 using multiple OLS regression techniques. The study reveals CIT, PIT, CED and VAT do not significantly affect the GDP of

Botswana, Cameroun, Tunisia, DR Congo, Egypt, Ghana, Kenya, Nigeria, and Uganda. On the contrary, CIT, PIT, CED and VAT have significant effect on gross domestic product of South Africa.

Shanmugam and Arunima (2021) examined the impact of direct tax and indirect tax on the economic growth in Albania from 2007 to 2019 using structural equation modeling (SEM) techniques. The result showed that direct taxes have a negative and significant effect on economic growth while indirect taxes have a positive and significant effect on economic growth.

Rehman, Azam and Tariq (2021) investigated the effect of tax revenue composition on economic growth in seven South Asian Countries over the period 2001 to 2018 using pooled mean group method. The results showed that taxes on goods and services and income have an adverse effect, while custom duties and other taxes have positive and important consequence on GDP growth but only in the long-term. The tax on international trade has positive impact in long term, whereas it has a negative effect in short term.

Al-Qudah (2021) investigated the determinants of tax revenues in Jordan from 1990 to 2019 using ARDL Bound test. The results revealed that per capita GDP, fiscal deficit and government expenditure have a positive significant impact on tax revenues in the short run and long run. While, foreign aids has a negative significant impact on tax revenues. Industrial sector value added and economic openness have a positive significant impact in the short run while having a positive insignificant impact on tax revenues in the long run.

The results explored that per capita GDP, fiscal deficit, foreign aids and government expenditure are good determinants for tax revenues in the short run as well as in the long run, while industrial sector value added and economic openness are good determinants in the short run.

Onoja and Ibrahim (2020) examined the relationship between tax revenue and Nigeria's economic growth between 2003 and 2017 using multivariate regression analysis. The study revealed that petroleum profit tax has a positive but no significant relationship with economic growth, while value added tax and companies income tax have significant relationship with economic growth.

Awa and Ibeanu (2020) investigated the influence of tax revenue on economic development of Nigeria from 1997 to 2018 using regression analysis. The result shows that petroleum profit tax and company income tax have significant effect on economic development while value added tax does not significantly influence economic development. The implication of the finding is that the higher the amount of tax revenue generated, the higher the level of economic development experienced within the economy.

Uket, Wasiu and Etim (2020) investigated the impact of taxation revenue on the development of Nigerian economy from 1994 to 2018 using ordinary least square method. The study revealed the existence of 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 on gross domestic product growth in Nigeria due to restriction by Organization of Petroleum Exporting Countries production ceiling on production and sales and the global price shocks of crude oil over the decade.

Kalaš, Todorović and Đorđević (2020) examined the effects of macroeconomic determinants on total tax revenue among European Union countries from 2006 to 2018 using fixed effects model. Results show that increase

of GDP enhances total tax revenue. Government expenditure, total investment and population have positive effect on total tax revenue in these countries. Contrary, inflation, unemployment and gross national savings negatively affect the total tax revenue. Likewise, gross domestic product and total investment lead to greater change of direct tax revenue and indirect tax revenue.

Etim, Nwezeb and Umoffong (2020) investigated the long run relationship existing between petroleum profit and companies' income taxes with economic growth in Nigeria from 1980 to 2018 using error correction mechanism (ECM). The results revealed a positively significant associations among studied variables with (0.9844) and (0.9471) coefficients for petroleum profit tax and companies income tax respectively in relation independent variables integrate with the dependent variable at first order. This indicates long run relationship.

Also, the parsimonious result showed a positive coefficients of (3.6344) and (2.7644) and (2.7629) for t-values of CIT and PPT on economic growth.

Methodology

The methodology adopted in this study was the Ordinary Least Square (OLS) regression model. Studies such as Abdulwahab and David (2023), Stermugu and Ballkoçi (2022), and Kaewsopa *et al.* (2022) used this model in their various studies. However, this study deviated from aforementioned studies which specifically employ single measures such as petroleum profit tax, company income tax, custom and excise duty, and value added tax. Thus, this study categorized tax revenue into direct tax and indirect tax. Consequently, modifications were made to the model to accommodate direct tax and indirect tax, and the interaction of both. The importance of the interaction variable is to observe at once whether the joint effect of direct taxes and indirect taxes on Nigeria's economy is different from their individual effects. The functional model is stated as follows:

$$\ln(EGR)_t = f(\text{DIRECT}, \text{INDIRECT}, \text{MACRO}, \text{DIR} * \text{IND}) \quad (3.2)$$

Where $\ln(EGR)_t$ is the natural logarithm of economic growth, DIRECT represents the index of direct taxes, INDIRECT represents the index of indirect taxes, MACRO represents the index of macroeconomic factors, α is the constant term and ε_{it} is the error term. Thus, the general regression equation is stated in econometric form as:

$$\ln(EGR)_t = \alpha + \beta_1 \text{DIRECT}_t + \beta_2 \text{INDIRECT}_{it} + \beta_3 \text{MACRO}_t + \beta_4 \text{DIR} * \text{IND}_t + \varepsilon_{it} \quad (3.3)$$

This study constructed two composite indexes with the aid of principal component analysis (PCA) using two indicators of direct taxes (income tax and petroleum profit tax) and two indicators of indirect taxes (value added tax and customs and excise duties). This study utilized quarterly time series data from first quarter 2011 to the fourth quarter 2022.

Data Presentations and Discussion of Findings**Table 1***Summary Statistics and Correlation Matrix*

Descriptive statistics			lnEGR	DIRECT	INDIRECT	MACRO
lnEGR	6.6884	0.3756	1.0000			
DIRECT	-0.1927	0.7755	0.5260	1.0000		
INDIRECT	-0.0574	0.9941	0.3844	0.0964	1.0000	
MACRO	-1.59E-08	-0.8832	0.4038	0.2941	0.0722	1.0000

Source: Author's Computation, (2023)

From Table 4.1, the result shows that economic growth has a positive mean value, while direct taxes, indirect taxes and macroeconomic factors have negative mean values implying that, on average, economic growth is increasing over the period being studied. On the other hand, the negative mean value of direct tax suggests that, on average, the tax burden is higher than the income earned. Also, the negative mean value for indirect tax implies that, on average, the tax on the cost of goods and services are not contributing positively to economic growth. The negative mean value for macroeconomic factors suggests that, on average, these factors are having a negative impact on the overall economic situation, when taxation is in consideration. Whereas, the result of correlation matrix indicates that direct taxes, indirect taxes and macroeconomic factors have moderate positive correlations with economic growth. This is in tandem with *a priori* expectations.

Regression Results and Hypothesis Testing**Table 2 Ordinary Least Square Regression Analysis**

Variables	Economic Growth		
	Coefficient	t-Stat	Prob.
C	6.7346***	147.08	0.0000
DIRECT	0.2029***	2.8246	0.0074
INDIRECT	0.1229***	2.7673	0.0086
MACRO	0.2002**	2.0879	0.0428
DIR*IND	0.0974	0.5014	0.6189
	$R^2 = 75.29\%$		
	F-stat = 8.0721		
	Prob (F-stat) = 0.0000		
	D-W stat = 2.0217		

Source: Author's Computation (2023)

The results obtained from the OLS regression analysis revealed the relationship between the dependent variable and each of the explanatory variables. Evidence from the model shows that direct tax comprising petroleum profit tax and company income tax has a significant positive effect on economic growth at 1% level of significance which indicates that when direct taxes increase, the economy tends to grow more. Also, the 1% level of significance means

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that the positive impact of direct taxes on economic growth is unlikely to be a random occurrence and is considered robust and reliable. This is consistent with *a priori* expectation which states that direct taxes positively affect economic growth.

This finding is consistent with the study outcomes of Abdulwahab and David (2023), Prasad, *et al.*, (2022), Stermugu and Ballkoçi (2022), Etim, *et al.*, (2020), Awa and Ibeanu (2020) who found that direct taxes comprising petroleum profit tax and company income tax have a positive effect on economic growth in their various studies.

The implication of this finding is that when direct taxes increase, the government collects more money, which can be used for various purposes, including funding public infrastructure projects, education, healthcare, and social services, thereby making the economic environment more conducive for growth. As wealthier individuals and corporations pay higher taxes, the government can implement policies to redistribute that wealth to benefit a broader segment of society, leading to increased consumer spending among lower and middle-income groups, which, in turn, stimulates economic growth by driving demand for goods and services and improves quality of life. This is consistent with the proposition of the ability-to-pay theory.

Similarly, higher direct tax revenues can be used to reduce government debt which and free up resources that would otherwise be used for debt servicing, allowing the government to allocate funds to more productive uses, such as infrastructure development and social programs that can foster economic growth. This is consistent with the suggestion of ability-to-pay theory that governments should carefully consider how changes in tax affect economic behavior; and strive to find the right balance between taxation and revenue generation.

However, this finding contradicts the study outcomes of Korkmaz and Korkmaz (2023), Shanmugam and Arunima (2021) and Uket, *et al.*, (2020) who reported that direct taxes negatively affect economic growth in Turkey, sub-Saharan Africa, Albania and Nigeria respectively. This contradiction may be due to choice of data estimation techniques, domiciled country, or data frequency employed.

Similarly, the results showed that indirect tax comprising VAT and excise duty is positive and statistically significant at 1% level which indicates that an increase in indirect taxes is associated with a measurable and positive influence on economic growth, such that when indirect taxes rise, the economy tends to experience more growth. Also, the 1% level of significance means that the positive impact of indirect taxes on economic growth is unlikely to be a random occurrence and is considered robust and reliable. This is consistent with *a priori* expectation which states that indirect taxes positively affect economic growth.

This finding is in tandem with the study outcomes of Korkmaz and Korkmaz (2023), Abdulwahab and David (2023), Stermugu and Ballkoçi (2022), Shanmugam and Arunima (2021), Prasad, *et al.*, (2022) who found indirect taxes to exert a positive influence on economic growth. Generally, when taxes are levied on goods and services, they can act as a buffer against inflationary pressures. By moderating price increases, indirect taxes create a more stable environment for businesses and consumers, which can foster economic growth. In addition, the increased revenue generated from indirect taxes can be used to support economic diversification efforts by investing in sectors that have the potential for growth, innovation, and job creation, thus reducing dependency on a single industry and promoting long-term economic sustainability. This is consistent with the position of ability-to-pay theory that governments should evaluate the structure

of their tax systems, including not only direct taxes but also indirect taxes like VAT and excise duty to ensure that it is well-balanced to capture their growth effect on the economy.

However, this finding contradicts the study outcomes of Joseph, *et al.* (2022), Rehman, *et al.* (2021) and Awa and Ibeanu (2020) who found that indirect taxes or taxes on goods and services have negative effects and do not significantly affect economic growth in some parts of West Africa, Southern Africa, North Africa, Eastern Africa, Central Africa, South Asian countries and Nigeria. This contradiction may be due to choice of data estimation techniques, domiciled country, or data frequency employed.

Furthermore, index of macroeconomic indicators comprising total government expenditures and total government debt has a significant positive effect on economic at 5% level of significance, indicating that the combination of government expenditures and debt is associated with a measurable and positive influence on economic growth. Also, the 5% level of significance implies that the observed relationship is statistically significant at a moderate level of confidence, meaning that there is a relatively low probability that the observed relationship is a random occurrence.

This finding is consistent with the study outcomes of Al-Qudah (2021) and Kalaš, *et al.* (2020) who found the selected macroeconomic indicators to positively influence economic growth in Jordan and European Union countries. The implication of this finding is that increased spending of government on infrastructure projects, education, healthcare, and social programs, can directly boost aggregate demand in the economy. When the government directs its expenditures towards investments in education, research, and technology, which are essential for enhancing productivity, it fosters a more skilled and innovative workforce. This, in turn, leads to higher output per worker, which is a key driver of sustainable economic growth. Also, government debt can have indirect positive effects on economic growth, particularly when central banks employ accommodative monetary policies. When governments issue debt, they typically sell bonds to investors. If central banks keep interest rates low, it makes government borrowing more affordable. Lower interest rates can stimulate private sector investment and spending, contributing to economic growth.

Lastly, the study revealed that the interactive effect of direct and indirect taxes is positive but not significant. The positive sign suggests that when direct and indirect taxes occur simultaneously, it has the potential to act as a boost to the growth of the economy as indicated by the positive coefficient of the interaction term. However, this positive impact is not strong enough to be confidently attributed to the variables themselves, as it does not meet the threshold of statistical significance. Invariably, this finding suggests that the interaction of direct and indirect taxes, while having a positive sign, may not be the sole or dominant driver of economic growth. Other factors not captured by the model, likely play significant roles as well.

Therefore, the OLS result shows that the coefficient of determination (R^2) is 75.29%. This implies that 75.29% of the variance in economic growth can be attributed to the fluctuations in explanatory variables. Similarly, overall model is statistically significant at 1% level as indicated by the probability value of 0.0000. Lastly, the Durbin-Watson statistic value of 2.0217 indicates the absence of serial correlation.

Conclusions and Recommendations

In conclusion, direct taxes, indirect taxes and macroeconomic factors have significant positive impact on economic growth in Nigeria. Therefore, the study recommended that:

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Government should consider maintaining or even increasing the rates of direct taxes, such as petroleum profit tax and company income tax, in cases where economic conditions allow for such adjustments. This may be beneficial during periods of economic expansion when businesses are thriving and can absorb higher tax burdens. However, it's necessary to approach tax policy carefully, balancing the need for revenue generation with the desire to foster a conducive business environment. Hence, policymakers should conduct thorough assessments to determine the optimal tax rates that maximize revenue without hindering business operations.

Policymakers must carefully consider the overall burden that indirect taxes place on consumers and businesses. Indirect taxes are typically regressive, meaning that they take a larger proportion of income from lower-income individuals compared to higher-income individuals. To mitigate the regressive effects of indirect taxes, policymakers should implement targeted exemptions or reduced tax rates for essential goods and services consumed predominantly by lower-income groups. This can include exemptions on basic food items, healthcare services, and education-related expenses, thereby ensuring that the tax burden falls more heavily on non-essential or luxury items.

Government should direct its spending towards areas like infrastructure, education, healthcare, and social programs, can be an effective way to boost economic growth. However, spending should be efficient and well-targeted to maximize its impact. Also, moderate levels of government debt can be positive for economic growth when interest rates are low. Policymakers should manage debt levels prudently, keeping an eye on interest rates and ensuring that borrowed funds are invested in productive sectors.

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