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Effect of Tax System on Productivity in Nigeria

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ABSTRACT: This study investigated the effect of tax system on productivity in Nigeria for the period 1994-2023. The specific objectives are to: determine, examine and explore the effects of direct tax system, indirect and total tax revenue respectively, on productivity in Nigeria. Ordinary Least Square (OLS) method of data analysis was adopted because of its Best Linear Unbiased Estimators (BLUE) properties. The independent variable is proxied by direct tax, indirect tax and total revenue, while productivity is the dependent variable and all data were sourced from the Central Bank of Nigeria Statistical Bulletin. The study adopted the descriptive statistics approach, as well as Error Correction Mechanism to analyses the corrected data. The study concluded that the tax system had significant and positive effect on productivity in Nigeria. Precisely, direct tax and total tax revenue had positive and significant effect on productivity in Nigeria while Indirect tax had non significant effect on productivity in Nigeria; The study recommends that: Government should boost direct tax revenue by identifying and eradicating all administrative loopholes for direct tax revenue in order to contribute meaningfully to the improvement of the quality of life in Nigeria. The value added tax (VAT), should be imposed on ostentatious consumption to make it progressive instead of overly taxing goods that are consumed by the poor and middle class.

Keywords: Direct tax, indirect tax, total revenue, productivity, tax system

INTRODUCTION

Economic growth of any nation is grossly affected by macroeconomic policies including taxation, investment, government expenditure, exchange rate, interest rate and consumption. A tax system serve as a key resource allocator between the public and private sectors in a country. It is usually imposed on individuals and business entities in a country. Tax revenues are used by the states to support certain state obligations. A nation's tax system is often a reflection of its communal values or the values of those in power. To create a system of taxation, a nation must make choices regarding the distribution of the tax burden - who will pay taxes and how much they will pay, and how the taxes collected will be spent. Where taxation is not a mandatory civic responsibility, there would be little or no incentive for economic entities (individuals and businesses) to voluntarily part with a portion of their incomes to the state (Nwaorgu, Herbert & Onyilo, 2019; Ekwunife, Nduka & Ogini, 2022).

Individuals, businesses and governments that lacks resourceful policy cannot achieve much economically. The same way with a country without practical policy cannot thrive economically or politically. Policies are a stream of guiding principles that assist an individual, businessman or government to make economic decisions (Fasua, 2021). There are a lot of systems/policies on tax that aid government to make economic decision. These policies provide guides on indirect taxes or direct taxes, their exclusion or inclusion and expected impact on the economy. Tax policy aids the government to arrive at an imperative decision and form the basis of evaluating economic growth and development of a country (Adu, 2021; Fasua, 2021; Okeke, Bebedeth & Okoro, 2025; Anusi & Nduka, 2022).

According to Brautigam (2017), the tax system of Nigeria can be traced back to 1904 when the personal income tax (PIT) ordinance was established in the northern division of Nigeria prior to the amalgamation of the country's divisions by the colonialists. This was then carried out via the native revenue ordinance to the western and eastern divisions in 1917 and 1928, respectively together with the rest amendments in the 1930s; this was afterward integrated into direct taxation Ordinance No.4 of 1940 (Arowomole & Oluwakayode, 2016). The Nigerian tax system has passed through numerous transformations directed at improving tax collection and supervision with minimum administrative expenses. One of the main challenges confronted by the Nigerian economy is the poor tax system that resulted to non-voluntary compliance of the taxpayers, leading to a wide involvement in tax evasion and avoidance. It has been a key setback to economic growth, which makes tax evasion as well as avoidance are now practices of the day (Ezeoha & Ogamba, 2010; Ugwu, Eboatu, Okoro & Okeke, 2022; Aniefor, Nduka, Ananwude, & Ezeaku, 2021).

It is a well-known fact that taxes provides most of the government's revenue. But surprisingly, the income realized by the federal government of Nigeria from taxation has over time fallen drastically rendering the government irresponsive to increasing social and public expenditure necessary for the growth and development of the economy. The prominent issue of creative accounting, tax evasion and avoidance has been accommodated due to the inefficiency of Nigerian tax system (Ayua, 2016). This has persistently caused a total inefficiency and defects affecting negatively the income reached from taxes during the past few years and consequently, an unpleasant economic growth. The inefficiencies of the Federal Inland Revenue Service in Nigeria 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.

Also evident in the structure of tax in Nigeria are issues related to dearth of data, corrupt practices and an unorganized monitoring and enforcement approach (Leyira, Chukwuma, & Asian, 2012). As a result of these, the economic state of the nation has remained discouraging. Nigeria tax system is confronted with many issues and challenges such as multiplicity of taxes, bad administration, non-availability of database, tax touting, complex nature of the Nigerian tax laws, minimum tax, commencement, change of accounting date and cessation, narrow tax base and non-payment of tax refunds. Despite the number of changes Nigeria has made to its tax system in the past, there is still a very long way to go warranting the evolving tax reforms. Taxes should be collected effectively and fairly, both in equitable and monetary terms, for our benefit,

so as to ensure our desired growth and development.

The objective of the study is to examine the effect of tax system on productivity in Nigeria. Specifically, the study is set to determine the effect of direct tax system, indirect tax and total tax revenue on productivity in Nigeria. Hypothetically, direct tax system has no significant effect on productivity in Nigeria; Indirect tax has no significant effect on productivity in Nigeria; Total tax revenue has no significant effect on productivity in Nigeria.

LITERATURE REVIEW

Tax System

Tax is a non-punishing but compulsory transfer of resources from the public sector to the private sector imposed on individual's personal income, corporations and institutions without recourse for immediate benefits for the tax paid (Ofishe, 2015). The concept is also referred to as a compulsory transfer of resources to the government from other systems (World Bank, 2020). Adeyeye (2014) maintained that tax is a liability on account of taxpayer as a reasonable contribution to the available fund required for use by government in providing necessary infrastructure for her citizens. Meanwhile, Miller and Oats (2016) described tax as the statutorily compulsory determinable amount required by a legal authority from the productive activities of a person or corporate body for the provision of public goods and services.

Taxation is a compulsory levy imposed on the citizens of a country by the government, in order to generate revenue that will be used in general administration (Okeke, Mbonu & Amahalu, 2018). According to Anyanwu (2021), taxation can be defined as the compulsory transfer or payment (or occasionally of goods and services) from private individuals or groups to the government. Agyei (1983) as cited in Ekine (2022), defined it as the transfer of resources from the private sector to the public sector in order to accomplish some of a nation's economic and social goals. The purpose and importance of taxation is to raise funds with which to promote the general welfare and protection of a nation's citizens, and to enable it to finance its multifarious activities and to redistribute wealth and management of the economy (Jhingan 2014, Bhartia, 2019; Ola, (2021) cited in Ogbonna and Ebimobowei, 2022).

Tax System can be defined as the composite parts involved in the tax processes, from the legislature of the tax laws or issuance of the tax policies, to the administration of the levy, collection, monitoring and enforcement and up to compliance for payment by the tax payers. Ogbonna and Ebimobowei (2011), asserted that the tax system therefore consists of: tax policy, tax laws, tax administration and tax payers. The fiscal operations in Nigeria is structured into three tiers, the Federal, State and Local governments with each tier of government having control over separate tax jurisdiction. Tax Policy is the framework by which a government determines what taxes to levy, in what amounts, and on whom. This establishes a sustainable system that would ensure reliable sources of revenue to government and support the economic growth and development of the nation, (FIRS, 2017). It provides a guideline for the administration of the tax laws in the country.

Direct Taxes

Direct tax is referred to as the charge placed directly on the taxpayer. (Afuberoh & Okoye, 2014). In contrast to indirect tax, which is perceived as regressive, direct tax is progressive since it applies the same

percentage or rate of tax on consumption to all individuals, regardless of their socioeconomic standing. The wellbeing of society and the gap in income are negatively impacted by the poor's higher wage. Even though some of its components are said to have a negative impact on entrepreneurial activity, a direct tax is thought to be more equal because it is progressive (taxes grow as income rises) (Ilaboya & Ohonba, 2013; Okoro, 2016). Then, this revenue may be used to fund projects and activities like social welfare, infrastructural development, healthcare, and education that promote inclusive growth. Governments can minimize income inequality by redistributing wealth through direct taxes, allowing excluded populations to participate in and profit from economic progress, ultimately leading to a more inclusive and sustainable society (Nguyen, 2019; Abd Hakim, 2020; Libabatu, 2014; Egbon & Bazgan, 2020; Okoro & Anichebe, 2019; Monogbe, Omotayo, Achugbu & Nduka, 2016).

Petroleum Profit Tax

A tax known as the petroleum profit tax (PPT) is imposed on the earnings of companies that extract gas and oil. For nations like Nigeria and Angola that have an abundance of natural resources, it is a significant source of income (Appah, 2010). PPT and inclusive growth have a complex relationship, with proponents and opponents of the program's efficacy. Higher PPT rates have the potential to limit investment in the oil and gas industry, which might have a negative effect on economic growth by lowering output and income (Odusola, 2006; Ubahi, Patience & Okoro, 2025). This is due to the fact that increased taxes lessen the incentives for businesses to make investments and look for new oil sources. Higher PPT rates, according to proponents, guarantee that all residents partake in the advantages of the extraction of natural resources (Etim et al., 2020; Bazgan, 2018; Abd Hakim, 2019; Ezenwaka & Okoro, 2020; Nduka, Atueyi, Osakwe & Mbanefo, 2021). This is accomplished through the direct distribution of PPT money to citizens or through government investment in social welfare programs and infrastructure

Indirect Taxation

Indirect taxes are imposed on one person but paid either partly or wholly by another. The person who pays the tax in the first instance, transfers its burden to another person. In other words, the impact and incidence of indirect tax fall on different persons. Examples of indirect taxes are sales tax, excise duty, value added tax (VAT) etc. Custom duties (export duties and import duties) are imposed on imported goods. It is a very good source of income for the government. Excise duties are imposed on domestically produced goods. They are highly discriminating because it can be imposed on certain good and not on other goods. Excise duties are not important source of government revenue in developing countries because the manufacturing sectors are still minute (Nduka, Ananwude & Osakwe, 2019). Another type of indirect tax is sumptuary tax. Sumptuary tax is not for raising revenue but to discourage people from consuming particular goods. Sale tax is another type of indirect tax. Two types can be identified vis: single stage tax and multi stage tax. Single stage tax takes p lace between the producer and the consumer while multistage tax is imposed anytime the good changes from one individual to another. VAT is a tax imposed at every stage of production. It is usually imposed on the net value added. To this extent, VAT can be regarded as an example of multistage tax.

Value Added Tax: According to Ashabi (2014), value added tax is a tax on the supply of goods and services that is ultimately paid

by the end user but is gathered at each level of the production and distribution chain. Value added tax, according to Jones,Nmesirionye, and Onuche (2019), is a consumption tax (payment) imposed on the rise in value of products and services during their production or supply. Additionally,it is an indirect tax based on the overall consumption patterns of the populace. It is a spending tax that the final consumer of the products and services is required to pay.This form of tax has a multi-stage collection mechanism, indicating that VAT is typically paid and collected by the buyer and seller (supply) at each stage of production or operation processing. All distributors, producers, importers, and suppliers of goods and services must register for VAT in Nigeria because the Federal Inland Revenue Service (FIRS) is responsible for administering the tax. Since it was raised from 5% to 7.5%, the standard VAT rate is currently 7.5% (Okoro & Offor, 2019; Obidike, Onyeka & Nduka, 2022).

Productivity

Aftalion (2012), defined productivity as the relationship between the outcome and the factors used to produce this output. Fabricant (2012), presented a new definition of productivity. He stated that productivity is always the relationship between input and output. Stiegel (2016), defined efficiency as the relationship between the efficiency of a specific production operation and consumed resources as input

Productivity is an average measure of the efficiency of production. It can be expressed as the ratio of output to inputs used in the production process, i.e. output per unit of input. When all outputs and inputs are included in the productivity measure it is called total productivity. Outputs and inputs are defined in the total productivity measure as their economic values. The value of outputs minus the value of inputs is a measure of the income generated in a production process. It is a measure of total efficiency of a production process and as such the objective to be maximized in production process (Smith & Beeching 2018; Okoro & Ekwunife, 2022).

Productivity refers to the overall measure of the ability to produce a good or service. More specifically, productivity is the measure of how specified resources are managed to accomplish timely objectives as stated in terms of quantity and quality. Productivity may also be defined as an index that measures output (goods and services) relative to the input (labor, materials, energy, etc., used to produce the output) (Currie, 2012; Ogunewe, Ananwude, & Nduka, 2020).

2.2 Theoretical Review

Traditional Tax Handle Theory

The traditional tax handle was postulated by Solow (1956) and Swan (1956). They posited that the level of fiscal need is nearly related to the level of economic development (Musgrave, 1989). According to this theory, to reach a certain level of growth of per capita income, there is need to create a given level of national income through taxes. Taxes are obligatory contribution for which no certain benefit is received in return to the tax paper. Taxes are arranged to compulsorily make the household to transfer purchasing power to the government.

The process also affects significantly the allocation of resources, recognizes social costs which are not evident in the market prices and affect the allocation of income and wealth since they reduce the disposable income and wealth to those who bear them (Goode, 1984). Mansfield (1998), is one of the leading proponents of the tax handle

theory as being the most important theory that describes the approach of tax structure in the developed and developing countries. The theory suggests that as a country's per capita income and level of monetization increases, indirect taxes becomes more noticeable more than direct taxes. Therefore, while direct taxes contribute significantly to the fiscal revenues of developed countries, the indirect taxes contribute much more to the growth of the developing countries (Karumba, 2016).

2.3 Empirical Review

Olayeye (2025), explored the top management's perception of the tax system on the profitability of their businesses. The study is based on a survey of ten (10) selected SMEs in the South Local Government Area of Akure, Ondo state. The survey was administered using questionnaires with the selected respondents. Data was analyzed by descriptive analysis method, correlation and regression analysis and findings were presented in terms of frequencies and percentage analysis. The findings of this study indicated that majority of the respondents perceived and agreed with the less effective impact of existing tax policies as regards profitability, productivity, ease of tax administration and tax utilization, on the performance of SMEs and suggest for constructive review and reforming of the tax policies in the country at large.

Alfusainey and Ndey (2024), investigated the nexus between tax revenue and economic growth in The Gambia from 2004Q1 to 2020Q4. The study employed the Autoregressive Distributed Lag (ARDL) model and bound test to analyze the dynamic relationship between tax revenue and economic growth. The bound test of co-integration confirms that tax revenue has a significant impact on both short-term and long-term economic growth in The Gambia. Furthermore, the findings reveal that tax revenue has both positive and negative effects on economic growth in the short run. Initially, tax revenue has an immediate negative impact on economic growth, but over time, within the short run, this impact becomes positive. This suggested the presence of a non-linear effect of tax revenue on economic growth in the short term. However, in the long run, tax revenue has a detrimental effect on economic growth. From a policy standpoint, these results emphasize the need for cautious utilization of tax revenue to avoid hindering long-term economic growth in The Gambia.

Etoama, Akani and Ogbonna (2023), investigated the impact of tax revenue on the economic development in Nigeria with reference to time frame that spanned from 1994 to 2021. The study employed gross domestic product per capita as measures of economic development and considered petroleum profit tax, value-added tax and custom and excise duty as tax revenue sources. also using inflation as the mediating variable Secondary data was employed from the annual report and repository of the Central Bank of Nigeria, the federal inland revenue services online report. The employed data analysis techniques in the study are the Stationarity, Autoregressive Distributive Lag, the stepwise, and the Granger Causality tests. The study observed mixed stationarity at level and first difference. In the long run, it was observed that only the immediate past value of petroleum profit tax revenue per capita, had a valuable influence on the economic development. Inflation rate was observed to positively and significantly moderate the relationship between tax revenue and economic development in Nigeria. The study therefore concluded that that tax revenue had selective effect on economic development in Nigeria. Based on these findings, the study

recommended, among others that tax authorities should encourage individuals to pay tax so as to improve the growth of the economy which the companies would benefit from, Tax holidays or incentives should be given to companies and institutions and individuals who have been compliant to tax payment.

Fasua, Mayaki and Adebayo (2023), examined taxation policy and public economic growth and development in Nigeria. Data were obtained from the yearly financial reports of the Central Bank of Nigeria on the Real Gross Domestic Product, Petroleum Profit Tax, Value Added Tax and Company Income Tax covering a period of 10 year, from 2011-2020 to test for relationship that exists between taxation policy and economic growth and development. A regressions analysis was used for the analysis of the data and pre-estimation tests were carried out. The findings of this study showed that all the explanatory variables (PPT, VAT and CIT) have significant positive relationships with dependent variable (RGDP) The study concludes that there is significant positive relationship between taxation policy and economic growth and development and recommends that every sector should comply with tax policy and standards established in order to reduce tax avoidance and evasion as well as increase government total revenue.

Kaneva et al., (2022), examined the effects of tax policy on economic development and evaluate the role of appropriate tax instruments in speeding up recovery. The results showed that tax level harms the GDP per capita growth rate in Central Europe and Baltic states over the 2000-2021 period. Another vital finding is the increase in both overall employment and investment to GDP ratio positively affected the real GDP per capita growth rates. In order to foster economic growth government might use tax cuts and other stimuli both for distortionary and non-distortionary taxes. The tax policy's institutional potential should be improved to neutralize the adverse effects of COVID-19 impact and enhance macroeconomic sustainability.

Akinrinola and Oreoluwa (2021), examined the effect of the tax system on the economic development of the nation, using the human development index as the parameter for measuring economic development while assessing the tax system by the tax to GDP ratio. A qualitative research method was adopted by reviewing empirical studies and analyzing secondary data gathered from relevant sources. From the reviews, discussions and analysis, there abounds compelling data to show that there is significant positive relationship between the tax system and the economic development of a nation. However, in the case of Nigeria, there appears to be uncoordinated and ineffective tax system that has inadequately impacted on her economic development. Taking a lead from other developing countries like Rwanda, recommendations were made for restructuring and synergizing the tax system while utilizing information technology and ensuring accountability and transparency.

3.METHODOLOGY

Ex-post facto research with an emphasis on secondary data was used in this study. *Ex-post* facto research designs are consequently preferred because they use secondary data that doesn't require manipulation. This study makes use of annual or time series data (secondary data), which spans through the period 1994-2023 (30years) (1994-2023), and include real gross domestic product, direct tax, indirect tax and total tax revenue. These data were culled from the Central Bank of Nigeria

statistical bulletin vol 24, 2023, and World Bank data. It is important to note that real gross domestic product is the dependent variables, while direct tax, indirect tax and total tax revenue are the independent variables.

Model Specification

The specification of the model adopted for this investigation is implicitly stated as follows:

RGDP = F (DIT, INDT, TTR).

Where

RGDP	-	Real gross domestic product
DIT	-	Direct tax proxy by value added tax
INDT	-	Indirect tax proxy by petroleum profit tax
TTR	-	Total tax revenue
F	-	Functional notation

The above equation can be put in an econometric form as;

$RGDP = b_0 + b_1 DIT + b_2 INDT + b_3 TTR + U$

Where

B0	=	Autonomous or intercept
B1	=	Coefficient of parameter DIT
B2	=	Coefficient of parameter INDT
B3	=	Coefficient of parameter TTR
U	=	Stochastic variable or error term

Our model can be also be stated in a logged form as

$LRGDP = C + LB_1 DIT + B_2 LINDT + B_3 LTTR + \mu$

RESULT AND DISCUSSION OF FINDINGS

Descriptive Statistics Analysis

Table 1 which displays the number of observations, mean, standard deviation, minimum and maximum values of the explained variable, and each of the explanatory variables, provides the descriptive statistics for all the variables in the model. The descriptive data of the chosen service sector that comprise our sample are displayed in the table below.

Table 1: Descriptive Statistics

	LRGDP	LDIT	LINDT	LTTR
Mean	10.66678	4.844591	8.219661	7.838809
Median	10.77678	5.361869	8.673358	8.362342
Maximum	11.19376	6.556309	9.316213	9.091444
Minimum	9.902443	1.615420	5.307773	5.076423
Std. Dev.	0.483380	1.525759	1.174629	1.115661
Skewness	-0.363767	-0.670699	-1.061299	-1.093580
Kurtosis	1.543599	2.209036	2.822165	2.943503
Jarque-Bera	3.313013	3.031214	5.671310	5.983572

Probability	0.190804	0.219675	0.058680	0.050198
Sum	320.0034	145.3377	246.5898	235.1643
Sum Sq. Dev.	6.776021	67.51024	40.01287	36.09627
Observations	30	30	30	30

The table above indicates that the mean of Real Gross Domestic Product (RGDP) is 10.6% with standard deviation of 48% the minimum and maximum values of 9% and 11% respectively. The mean value of Direct tax (DT) is 4.8% with standard deviation of 1.5% the minimum and maximum values of 1.6% and 6.5% respectively. The mean value of Indirect tax (INDT) is 8.2% with standard deviation of 1.17%, the minimum and maximum values of 5.3% and 9.3% respectively. Total tax revenue mean value is 7.8% with standard deviation of 1.1%, the minimum and maximum values of 5.0% and 9.0% respectively.

These results suggest that the data are not widely dispersed from the mean because the standard deviations of all the variables are less than the mean values. Also, the skewness value of all the variables is close to zero except total tax revenue, it means that the distribution of the variables is symmetric in nature,. The Kurtosis values of all the variables is also closer to 3, it indicates that the shape is a normal distribution,. The P-value of Jarque-Bera test of all the variables is more than 5%, except digital vat, However, Shao (2003) submits that normality of data does not in any way affect the inferential statistics estimate to the BLUE properties. (Best, Linear, Unbiased, Estimate)

Unit Root Test

The presence of unit root implies that the time series under investigation is non-stationary, the absence of a unit roots shows that stochastic process is stationary. The augmented dickey-fuller (ADF) test would be employed in this test

Tables 2 Unit Root Result

Variable	ADF	Integration	Significance
RGDP	-4.222875	I (2)	1%
DIT	-4.459021	I (1)	1%
INDT	-5.106100	1 (1)	1%
TTR	-5.478883	I (1)	1%

Source: Author's computation using E-view version 11

Following the result of ADF test above it is observed that none of the variables are stationary at level, but the entire variables become stationary at 1st difference, except real gross domestic product who became stationary at 2nd differences. This also follows the simple rule of thumb that once a unit root is conforms, co-integration is necessary to established.

Co-integration Analysis

In this study we used the Johansen co-integration approach to examine the existence of long-run relationship between the variables of interest. Below is the summary of co integration result

Table 3 Co-integration Result Test

Unrestricted Co-integration Rank Test (Trace)

Hypothesized No of CE(s)	Eigen value	Trace static	0.05 critical value	Prob**
None *	0.715007	58.22224	47.85613	0.0040
At most 1	0.372387	24.32936	29.79707	0.1869
At most 2	0.301397	11.75189	15.49471	0.1692
At most 3	0.073724	2.067742	3.841466	0.1504

Source: Author's computation using e-view version 11

Trace test indicates 1 co-integrating equ(s) as the 0.05 level* denotes rejection of the hypothesis at the 0.05 level ** mackinnon-Haug-Michelis (1999) P – values
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Unrestricted co-integration Rank Test (Maximum Eigen value)

Hypothesized No of CE(s)	Eigen value	Trace static	0.05 critical value	Prob
None *	0.715007	33.89288	27.58434	0.0068
At most 1	0.372387	12.57747	21.13162	0.4918
At most 2	0.301397	9.684148	14.26460	0.2335
At most 3	0.073724	2.067742	3.841466	0.1504

Source: Author's computation using e-view version 11

Max-Eigen value test indicates 1 co-integrating equations at the 0.5 level* denotes rejection of the hypothesis at the 0.05 level **mackinnon-Haug-michelis (1999) P-values.

Trace test value and Max-Eigen indicates 1 co-integrating equations at the 0.05 level. This suggests a long run equilibrium relationship among the variables.

Co-integration is a pre-requisite for error correction mechanism following the result of co-integration, there is a long-run equilibrium relationship among the variable, hence, we can move over to error correction mechanism.

Correlation Analysis

A correlation matrix displays the correlation coefficients between two variables. The strength and direction of a linear relationship between the variables are measured by correlation coefficients. A relationship is strong if the relationship value is 1, neutral if the relationship value is 0, and weak or

negative if the value is -1. Therefore, in examining the association among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the results are presented in the table 4. below.

Table 4 Correlation Analysis

	LRGDP	LDIT	LINDT	LTTR
LRGDP	1.000000	0.579747	0.418303	0.454155
LDIT	0.579747	1.000000	0.358923	0.306612
LINDT	0.418303	0.358923	1.000000	0.487507
LTTR	0.454155	0.306612	0.487507	1.000000

Real gross domestic product is positively connected with three factors, direct tax, indirect tax and total tax revenue. None of the factors, nevertheless, was discovered to be greater than 0.80. That is, no two exploratory variables had a perfect correlation. The highest correlation is between two variables which are highly correlated with (LRGDP/LDIT =0.57) which indicate that multi co linearity is not a serious problem that would distort the regression result in the model used for analysis. A close look at the value of the Pearson correlation coefficient results revealed that all the variables are strongly associated with return on assets.

Presentation of Regression Result

Table 5 Error Correction Model Result

Dependent Variable: LRGDP
Method: Least Squares
Date: 04/22/25 Time: 04:14
Sample (adjusted): 1995 2023
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.949989	0.231598	3.864453	0.0000
LDIT	0.286878	0.041803	6.862566	0.0000
LINDT	0.224461	0.147136	1.525537	0.1402
LTTR	0.195031	0.102797	2.897249	0.0009
ECM(-1)	-0.778051	0.084948	-9.159116	0.0000

R-squared	0.694560	Mean dependent var	10.69314
Adjusted R-squared	0.683653	S.D. dependent var	0.469485
S.E. of regression	0.037403	Akaike info criterion	-3.578552
Sum squared resid	0.033575	Schwarz criterion	-3.342811
Log likelihood	56.88900	Hannan-Quinn criter.	-3.504721
F-statistic	10.96889	Durbin-Watson stat	2.165059
Prob(F-statistic)	0.000000		

Source: Researcher's summary of correlation analysis (2025).

Hypotheses Testing

To test for hypothesis, if the probability value is less than 0.05%, alternative hypothesis is accepted, but when it is greater than 5% null hypothesis is accepted

H_{O1}: Direct tax system has no significant effect on productivity in Nigeria: From the result report of our t-test in table 4.3 above, it was observed from the Direct tax system value of 6.862566 with the probability of 0.0000 which is within the desired level of significant (0.05), we therefore reject null hypothesis and accept the alternative hypotheses and conclude that Direct tax system has significant effect on productivity in Nigeria

H_{O2}: Indirect tax has no significant effect on productivity in Nigeria: From the forgoing result we find out that computed value for Indirect tax is 1.525537 while it's probability is 0.1402 this show that the Indirect tax is statistically insignificant. Based on this analysis we reject (Hi) and accept (H0), which implies that Indirect tax has no significant effect on productivity in Nigeria.

H_{O2}: Total tax revenue has no significant effect on productivity in Nigeria: Drawing inference from our regression result in table 4.3, we found that the value of Total tax revenue is 2.897249 while its probability is 0.0009 this shows that Total tax revenue has significant effect on the productivity in Nigeria. We therefore accept the null hypothesis which states that Total tax revenue has significant effect on productivity in Nigeria.

Discussion of the Findings

According to the findings of our study, tax system is positively and significantly impacted by Petroleum profit tax (PPT). This finding is in line with those of Oladipupo and Ibadin (2015), Onwuchekwa and Aruwa (2014), Emmanuel (2013), Ikeokwu and Leyira (2021), Andersson and Lazuka (2019), Oladipupo and Ibadin (2015), Onwuchekwa and Aruwa (2014), and others who have found a positive and significant correlation between Petroleum profit tax (PPT) and economic progress in Nigeria. The findings of Owino (2019), Olatunji and Faith (2018), and Ihendinihu et al. (2014), whose study suggested a negligible association between Petroleum profit tax (PPT) and economic progress in Nigeria, are refuted by this one. VAT have been discovered to have a detrimental and negligible effect on Nigeria's economic growth, nonetheless. This finding supports that of Nimenibo et al. (2018), which found that the economic growth of Nigeria is not significantly impacted by value added tax. The findings of Salami et al. (2015), Ebiringa and Emeh (2012), and Illaboya and Mgbame (2012), which similarly found a link between value added tax and economic progress in Nigeria, are disproved by this one.

CONCLUSION

The results point to the importance of direct tax and indirect tax, in promoting productivity in Nigeria. These taxes help the government raise money, which is then used to fund infrastructure and other social and economic development initiatives like education, which eventually promote inclusive economic growth. However, the detrimental impact of value added tax and the petroleum profit tax on inclusive growth emphasizes the necessity of efficient tax laws that strike a balance between generating revenue and promoting productivity in Nigeria. It was conclude that direct tax system has significant and positive effect on productivity in Nigeria. In line with these findings the researcher made the following recommendations:

Government should boost direct tax revenue. To achieve this, the government should identify and eradicate all administrative

loopholes for direct tax revenue to contribute meaningfully to the improvement of the quality of life of the inhabitants of Nigeria.

Value added tax should be reduce given that it affects the human development index adversely. More of the VAT should be imposed on ostentatious consumption to make it progressive instead of overly taxing goods that are consumed by the poor and middle class..

Government should make efficient use of tax revenue. Tax revenue collected should be efficiently used and not wasted or channeled into private pocket..

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