# TAXES AND ECONOMIC GROWTH IN NIGERIA: THE TRENDS AND CAUSALITY PATTERNS

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### **Abstract**

This study investigated the trends and causality patterns between taxes and economic growth using OLS, Graphs, and Pairwise Granger Causality Test. The trend analysis showed that GDP, ET, and WHT exhibit seasonality in trend while PPT, CIT, and VAT exhibit the same trends of constancy, rise and fall, and constancy, and there was no causality between the taxes and GDP. Based on the results, the study recommends that government should use taxes to provide public goods which will give the taxpayers the impetus to pay rather than avoid or evade tax payment and hence have increased revenue generation via taxes.

Keywords: Taxes, Economic Growth, Trends, Causality Patterns, Nigeria.

### Introduction

Taxation is very essential for generating revenue and achieving economic growth. One of the major obligations of every articulated and responsible government is majorly and essentially to provide goods and services that will improve the wellbeing of its citizenry. The provision

of infrastructures, public goods and services such as electricity, pipe-borne water, hospital falls within the ambits of any good government's main functions. In 2014, the then Finance Minister stated that Nigeria requires 14.2Billion US Dollars per year to bridge the infrastructural gap. In other to fulfill this classic obligation, the state needs to generate revenue through various sources and one of such ways is through taxation. Stoilova&Patonov (2012) noted that taxation generates over 91% of the total revenues of European Union member States and also attributed the development of countries such as Canada, US, UK and Netherland to the revenue generated through taxation. (Ogwuhe, Abdullahi &Oyedokun 2019; Abomaye-Nimembo 2017; Nwosu, 2010; Stoilova&Patonov 2012; Oluba, 2008; Worlu&Nkoro, 2012). According to Ogba &Goewam (2018) about 70-80% of Nigeria's revenue comes from oil revenue. This implies that the country generates 20-30% of its revenue from taxation and other sources. The sharp continuous declined in oil prices and revenue from oil since has serious consequences on the growth and development of the Nigerian economy.

Oxfarm ranked Nigeria the poverty capital of the world with businesses folding up, job losses, revenue losses, poorly equipped schools and hospitals and weak infrastructures. The advent of covid 19 has also reduced the country's revenue from oil and calls for diversification of revenue sources. The payment of survival funds, grants and low interest loans to SMEs is geared towards sustaining and growing businesses in order to boost revenue generation through taxation. Reforms towards curbing tax avoidance and evasion is another development with the intent of increasing tax revenue. All these point to the fact that Nigeria is now aware of the need to generate more revenues through taxation than relying solely on oil which is no longer yielding revenue as before. There are a lot of studies on the relationship between taxes, revenues, and economic growth but there are no studies that investigated the trends or patterns or changes in tax revenues. Hence this study seeks to determine and analyze the trend /changes of taxes and economic growth from 1990-2020 and also provides tangible explanations for the changes or patterns. This study aims at answering the following questions: - What is the trend of tax revenues and GDP generated in Nigeria from 1990-2020? What is the direction of causality between taxation and Economic growth in Nigeria? The paper is organized into five parts: the introduction, literature review, methodology, results and discussions, conclusion and recommendations. The study will be useful to taxorganizations, policy makers and researchers among others.

# Literature Review

### **Conceptual Review**

The word 'tax' is derived from Latin word 'taxo' meaning to compute the value (Lewis, Short, Andrews, & Freund, 1975). Tax is defined as a regular, compulsory and obligatory contributions made by citizens, individuals and organization to the government in order for government to provide services which are consumed by them. The levying and payment of taxes are as old as the 'State' itself. Chigbu& Njoku (2015) emphasized that tax is a major source of revenue for every economy and it's usually an instrument used in reducing the gap between the rich and the poor.

Azubike (2009) also defined tax as a compulsory levy imposed on a subject or his/her property by the government to provide social amenities and create conditions for the economic prosperity of the society. Tax can further be defined as a compulsory levy enforced by tax authorities on income, expenditure, wealth or people, for which nothing is received by the taxpayers directly or specifically in return (Shang, 2016).

Examples of taxes include Petroleum Profit Tax (PPT), Company Income Tax (CIT), Withholding Tax (WHT), and Education Tax (ET), Value Added Tax (VAT) is a good example of an indirect tax (Kizito, 2014).

#### **Economic Growth**

A country's tax system is one of the major determinants of their macroeconomics indexes. According to Olopade and Olapade (2010), Growth simply means an increase in economic activities. Economic growth is conceptualized as the continuous increase in per capita national product or net national product over a long period of time (Dwivedi, 2004). This therefore suggests that the speed at which the total output increases must be greater than the speed at which population increases. Economic growth represents the expansion of a country's potential GDP or output.

# Theoretical Review The Lifeblood Theory

This study employs Lifeblood Theory. The "Lifeblood Theory" is often associated with economist Seligman, who argued that taxes are the lifeblood of government, providing the necessary financial resources for the functioning of the state. Seligman's ideas on taxation were expounded in various works, including his book "Essays in Taxation," first published in 1895. While Seligman did not explicitly coin the term "Lifeblood Theory," his writings and contributions to the field of taxation have been influential in shaping discussions about the role and importance of taxation in funding government activities.

The theory elaborates the idea that Taxation is the need of government as the blood is need of the body. The government cannot work without revenue similarly the body can't stay without blood. Another interpretation of the theory is that the system of taxation works as circulation of blood throughout the body like money circulates within the subjects. It is a Successful theory.

## **Empirical Review**

Several empirical studies have been carried out to examine the impact of taxes and economic growth both international and national levels. Ogechukwu (2019) in a work took a cursory look on effect of taxation on economicgrowth (2007-2017) using ARDL technique of analysis. The findings revealed that PPT has significant effect on GDP of Nigeria. CIT has significant effect on the GDP likewise customs and excise duties. The study recommends that government should embark on the strategic pursuit of broadening the economy to enhance economic growth and development.

Branimir& Vera (2018) examined the relationship between taxes and economic growth with evidences from Serbia and Croatia for the period 2007 – 2016. Panel regression was set up with GDP as the dependant variable and corporate income tax, value added tax, social security contributions and excise duties are independent variables. When the data was decomposed, the result from the random effect model revealed that corporate income tax, value added tax and social security contributions have a positive impact on the GDP while custom and excise duties affect the GDP negatively. The study recommends that government should proportionately administer VAT in order to promote economic growth in the two countries. Dladla&Khobai (2018) in a study, took a comprehensive assessment of the impact of taxation on economic growth in South Africa from 1981-2016, using auto regressive distribution lag (ARDL) approach and co-integration ECM. The empirical results confirm that there is a negative relationship between taxes and economic growth in South Africa. ECM growth trades openness, capital and taxes are co-integrated. The study suggests that fiscal policy is very important to force sustainable economic growth in South Africa.

Emmanuel (2018) used ordinary least square and Granger Causality test, Augmented Dickey-Fuller unit root test to examine the impact of value added tax on economic growth in Nigeria from 2003-2015. The results show that VAT and CED have no significant effect on economic growth. The study suggest that there is need for effective and efficient utilization of VAT revenue for rapid infrastructural development to improve productivity, fiscal discipline, strengthening anti-corruption agencies, ensuring rule of law and good governance and improving the capacity of tax officials through improvement in their working environment with training to improve their commitment to work and enhance their productivity.

Ali, Ali & Mohammed (2018) investigated the impact of tax revenue on economic growth of Kenya from (1980-2007) used OLS to evaluate the variables. The result revealed that tax revenue has positive significant impact on economic growth and other revenue has a negative result on economic growth. The study emphasized that tax revenue can have full potential on the economy if government can come up with fiscal laws that will support the existing ones in line with macroeconomic objectives which will checkmate tax offenders in order to minimize evasion, corruption and tax avoidance.

Uzoka (2018) in analyzing the effect of tax revenue on economic growth in Nigeria using unit root test, Johansen and Engel Granger tests, declared that CGT and EDT have no significant impact on economic growth while PPT, CIT, VAT and CED have significant effect on economic growth in Nigeria. The study recommends that to boost economic growth in Nigeria, government should ensure that tax revenue generated should be channeled towards building capital stock that can create more jobs which will generate more revenue to government through other forms of taxes.

Oyebisi, Oyedele, Oyeyemi, Ayodotun& Adebola (2017) employed descriptive research design and OLS to analyze the impact of direct & indirect tax on the Nigerian economic growth from 1994 – 2013. The result show that direct and indirect tax have positive impact on the Nigerian economy. The study recommends that government should take advantage of the various tax systems and promote growth through increased tax revenue.

Wisdom & Bernard (2015) discovered in a study of the links between economic growth and tax revenue using multivariate analysis, granger causality test, Augmented Dickey-Fuller Philips Perron, VAR, Toda Yamamato test that there exist strong evidence of unidirectional casuality flow from tax revenue to economic growth in Ghana. It also emphasizes that taxation can influence economic growth. The implication for policy makers is that the tax scope of the country should be expanded in order to increase the revenue from taxation. The policy makers must first embrace accountability of the revenue raised from taxation.

Nantob (2014) investigated the relationship between taxes and economic growth in forty developing countries 2000-2012. He used empirical, panel data. GMM estimator and Fisher test and Philip Perron test for the study. The research took interests on four types of taxes namely taxes on goods and services, taxes on income, profits and capital gains tax on international trade. The outcome of the result showed that despite much theoretical and empirical inquiry as well as political and policy controversy, no simple answer exists concerning the relationship of taxes on economic growth in developing countries. Mobilizing a dynamic panel data, and using the system GMM estimator to address the endogeneity issues, the econometric results show that there is a non linear relationship between tax revenue and economic growth. The study recommends that each government should adopt a tax system that suits it economically politically and socially.

Kyle (2014) analyzed the relationship between tax structure, economic growth and development in 100 countries 1980-2010 using panel data analysis and Peran methodology. The results from common correlation effects mean group (CMG) estimator find that increases in income tax offset by reductions in trade or consumption taxes have had a negative impact on GDP growth rates. Trade liberalization in the 100 countries analyzed had no discernible positive effects on economic growth. The study recommended that Governments should administer tax reforms and trade liberalization that will not be harmful to their GDP growth. Based on the reviewed literature, it is evident that none of the studies investigated the trends of taxes and GDP. On the issue of causality, Emmanuel (2018),Olabode (2020), Aderibigbe, Oke and Oyedokun (2017), Thomas (2005), Suna and Metehan (2019) and Wisdom and Bernard (2015) found a causality between taxes and economic growth but didn't state the nature and direction of causality only Takumah (2014), (1986-2010)indicated a unidirectional causality between tax revenue and economic growth and it flows from tax revenue to economic growth. This implies that most of the studies did not examine the nature and direction of causality; they only ascertain causality but not its nature and direction/pattern.Consequently, this study seeks to cover all the gaps observed in the reviewed literatures.

### **METHODOLOGY**

### **Methods of Estimation**

# Method of Estimating Objective one which is to determine the trend oftax revenues in Nigeria

The first specific objective was achieved through trend analysis and graphs. The trend analysis follows the specification shown below and was analyzed using the Ordinary Least Square Regression.

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$$Y_{it} = \alpha_0 + \alpha_1 T + \mu_t \qquad -- \qquad -- \qquad -- \qquad (3.4)$$

Where: Y<sub>i</sub> = is the vector of all variables of interest i.e (taxes, economic growth);

T = is the trend variables that takes the value 1, 2, 3... over the study period;  $\mu$  =is the error term. If the slope coefficient is positive, there is an upward trend in Y; on the other hand, a downward trend is indicated by a negative slope.

Method of Achieving Objective two which is to investigate the causality between Economic growth and taxes in Nigeria was achieved through pairwise granger causality test.

The third specific objective which is to investigate the causality between Economic growth and tax revenues in Nigeria was achieved using the Pairwise Granger Causality test. The usefulness of this approach is also given due recognition by Yohannes (1994). The causality commonly used in the literature is that of Granger (1969), thus, a variable  $X_t$  is said to Granger-cause  $Y_t$  if  $Y_t$  can be predicted with greater accuracy by using past values of the  $X_t$  variable rather than not using such past values, all other terms remaining unchanged. Intuitively, the standard Granger (1969) causality test examines whether past changes in one variable  $X_t$  help to explain current changes in another variable  $Y_t$ , over and above the explanation provided by past changes in  $Y_t$ . If otherwise, then one concludes that  $X_t$  does not granger cause  $Y_t$ . To determine whether causality runs in the other direction, that is, from  $Y_t$  to  $X_t$ , one simply repeats the experiment, but with  $X_t$  and  $Y_t$  interchanged. The Granger causality test deals with the estimation of the regression of the following models:

$$Y_{t} = \sum_{i=1}^{p} \alpha_{i} X_{t-i} + \sum_{j=1}^{p} \beta_{j} Y_{t-j} + \varepsilon_{1t} \qquad -- \qquad -- \qquad (3.6)$$

$$X_{t} = \sum_{i=1}^{p} \delta X_{t-1} + \sum_{j=i}^{p} \theta_{j} Y_{t-j} + \varepsilon_{2t} \qquad -- \qquad -- \qquad (3.7)$$

In this study,  $Y_t$  and  $X_t$ will assumed any of the variable as the study intend to test for the causality between Economic growth and tax revenues in Nigeria. Where the error terms ( $\varepsilon_1$ t and  $\varepsilon_2$ t) are assume to be uncorrelated. From equation (3.6), X is said to granger cause Y if the coefficient of the lagged values of X as a group is significantly different from zero, based on standard F-test or Wald test. The reverse will be the case if it is significantly different from zero in equation (3.7). Feedback relationship or bi-directional causality exists if  $X_t$  granger causes  $Y_t$  and  $Y_t$  granger causes  $X_t$ .

Interpreting the results: you would accept or reject the null hypothesis based on whether the p-value associated with the Granger causality test statistic is less than or greater than your chosen significance level. If the p-value is greater than the chosen significance level, accept the null hypothesis of no causality. If the p-value is less than the chosen significance level (e.g 0.05), you reject the null hypothesis and conclude that there is causality. This suggests evidence in favour of Granger causality, indicating that the potential cause series Granger-causes the target series.

# Discussions of Results Trend analysis of GDP in Nigeria (1990-2020)

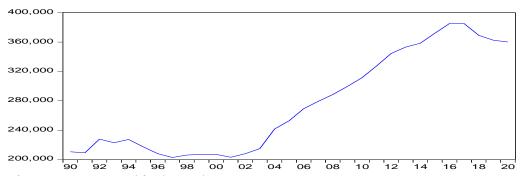


Figure 1 GDP graphical trend

Figure 1 is the trend of GDP in Nigeria from 1990-2020. The figure reveals that GDP has been rising and falling from 1990 to 2002 and then takes and upward trend till 2014. The trend remains constant from 2014 to 2017 before it starts falling. The trend of the GDP can be attributed to the fluctuations in the oil prices and taxes among other factors.

The trend analysis of GDP in Nigeria from 1990 to 2020, as described, reflects the economic dynamics of the country over the past three decades. Here's a breakdown of the observed trends and potential factors influencing them:

Rising and Falling (1990-2002): During this period, the GDP of Nigeria experienced fluctuations, characterized by periods of growth followed by declines. These fluctuations could be attributed to various factors such as changes in global economic conditions, domestic policy decisions, and external shocks. Nigeria's economy heavily relies on oil exports, so fluctuations in oil prices, as well as other global economic events, could have influenced this trend significantly.

Upward Trend (2002-2014): From 2002 to 2014, the GDP of Nigeria took an upward trajectory, indicating sustained economic growth over this period. Several factors could have contributed to this trend, including rising oil prices, increased oil production, infrastructure development, and government reforms aimed at improving the business environment and attracting investment. The period of economic growth might have also been influenced by favorable global economic conditions during this time.

Stagnation (2014-2017): The trend of GDP growth remained relatively constant from 2014 to 2017. This period coincides with significant challenges faced by Nigeria's economy, including the global decline in oil prices starting in mid-2014, which heavily impacted government revenues and foreign exchange earnings. Additionally, internal factors such as political instability, security challenges, and inefficiencies in governance might have contributed to the stagnation in GDP growth during this period.

Subsequent Decline (Post-2017): The trend of GDP started falling after 2017. This decline could be attributed to a combination of factors, including continued volatility in oil prices, limited

economic diversification, challenges in infrastructure development, and socio-political issues. Additionally, factors such as fluctuations in exchange rates, inflationary pressures, and policy uncertainties might have further exacerbated the decline in GDP growth.

Attributing Factors: The trend of GDP in Nigeria is influenced by various factors, as mentioned in the analysis, including fluctuations in oil prices, tax policies, infrastructure development, political stability, and global economic conditions. Nigeria's heavy reliance on oil exports makes its economy particularly vulnerable to changes in oil prices, highlighting the importance of diversification efforts and policy reforms to ensure sustainable economic growth.

### Trend Analysis of Taxes in Nigeria

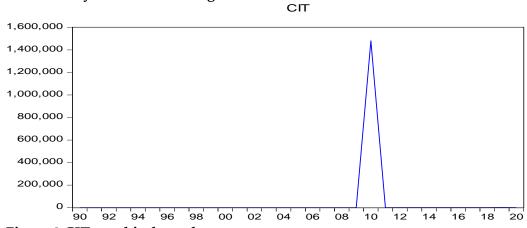


Figure 2 CIT graphical trends

Figure 2 is the trend of CIT. from the figure, it is clear that between 1990-2009, CIT is not different from zero. It then took and upward trend from 2009 to 2010 and afterwards falls to its normal trend as it was between 1990 -2010. Company income taxes were insignificant due to tax avoidance, evasion and over dependence on oil as source of revenue by the government.

1990-2009: Stability around zero: During this period, the CIT remained relatively constant and close to zero. This could imply either a low tax rate or minimal corporate profits subject to taxation. It suggests a stable economic environment where corporate income tax revenues were not a significant factor in the overall fiscal policy or economic activity.

2009-2010: Upward Trend: There's a noticeable increase in CIT from 2009 to 2010. This sudden rise could be attributed to several factors. Economic recovery after a recession, changes in tax policies, or a surge in corporate profits could all contribute to this upward trend. Governments might have implemented tax reforms or increased tax rates to generate revenue following economic downturns.

Post-2010: Decline to Previous Levels: Following the peak in 2010, the CIT trend falls back to levels similar to those observed between 1990 and 2009. This could suggest that the factors driving the increase in CIT were temporary or that subsequent policy changes reversed the

upward trend. It's also possible that corporate profits stabilized or decreased after the initial recovery period, leading to a reduction in tax revenues.

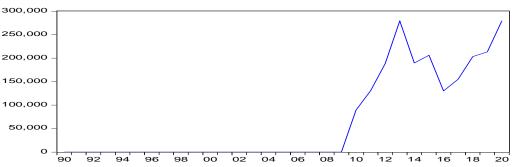


Figure 3 ET graphical trends

The trend of Education Tax is presented in figure 3 this shows a constant ET from 1990 till 2009. From 2009, ET increases uninterruptedly till 2013 when it took seasonal trend until 2016. Since 2016 till date ET has taken an upward trend.

Initial Period of Stability (1990-2009): Similar to the CIT trend described, the ET might have remained relatively stable during this period. Governments may have implemented consistent tax policies related to education funding, resulting in a steady stream of revenue. Alternatively, there might have been minimal emphasis on education taxes during this time, leading to a flat trend.

Upward Trend (2009-2010): A sudden increase in Education Tax revenue during this period could be due to various reasons. It might coincide with periods of economic hardship or increased awareness of the importance of education funding. Governments might have implemented new taxes or increased existing ones to allocate more resources to education sectors, especially in response to economic crises or educational reforms.

Subsequent Decline or Stabilization (Post-2010): After the peak in 2010, the trend might have either declined or stabilized. This could happen due to several factors. For instance, changes in government priorities, economic conditions, or tax policies may have led to fluctuations in education tax revenues. Additionally, once initial reforms or funding increases are implemented, subsequent years might see a return to a more stable level of revenue collection as the education system adjusts to the new funding levels.

**External Factors**: External factors such as demographic changes, shifts in educational expenditure patterns, or changes in public perception of education funding could also influence the trend of Education Tax. For example, an aging population might lead to increased demand for education funding to support lifelong learning programs, while changes in immigration patterns could impact the need for educational resources.

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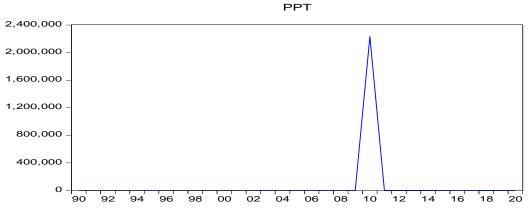


Figure 4 PPT graphical trends

PPT is captured by figure 4From the figure, it can be seen that PPT has been constant between 1990 and 2009 and also between 2011 and 2020. It had an upward trend between 2009 and 2010.and then took a downward trend between 2010 till 2011.

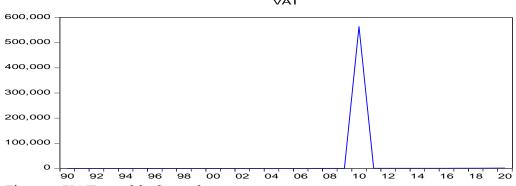


Figure 5 VAT graphical trends

VAT is captured by figure 5 From the figure, it can be seen that VAT has been constant between 1990 to 2009 and also between 2011 to 2020. It had an upward trend between 2009 and 2010 and then took a downward trend between 2010 till 2011. The trends observed in the VAT (Value Added Tax) graphical trends as described indicate fluctuations in VAT revenues over the specified periods. Here's an explanation of these trends:

Constant Periods (1990-2009, 2011-2020): VAT revenues remained relatively stable during two distinct periods, from 1990 to 2009 and from 2011 to 2020. This stability suggests consistency in VAT collection over these years, possibly reflecting steady economic activity, consistent tax policies, and effective enforcement mechanisms.

Upward Trend (2009-2010): VAT revenues experienced an upward trend between 2009 and 2010. Several factors could contribute to this increase, including economic growth, expansion of the tax base, improved compliance measures, or changes in VAT rates or regulations. It's possible that during this period, there was increased consumption or economic transactions subject to VAT, leading to higher revenue collection.

Downward Trend (2010-2011): Following the peak in 2010, VAT revenues declined between 2010 and 2011. This decline could be attributed to various factors such as economic slowdown, reduced consumer spending, changes in tax policies, or fluctuations in business activities. Economic downturns or policy changes that impact consumer behavior and business operations could lead to a decrease in VAT revenues during this period.

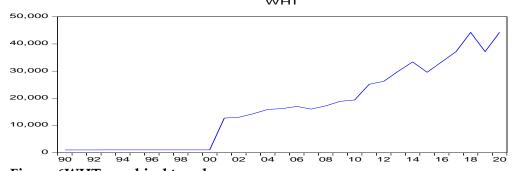


Figure 6WHT graphical trends

Figure 6 shows that WHT had a constant trend from 1990 to mid 2000. From 2000, WHT took a seasonal rising trend.

The trend observed in the Withholding Tax (WHT) graphical trends, as described, indicates changes in WHT revenues over the specified periods. Here's an explanation of these trends: Constant Trend (1990 to Mid-2000): During this period, WHT revenues remained relatively stable, showing a consistent trend. This stability suggests that the WHT collection process, tax rates, or enforcement mechanisms might have remained unchanged or experienced only minor fluctuations. Additionally, economic conditions during this time might have contributed to steady revenue generation through WHT.

Seasonal Rising Trend (From 2000): Starting from around the year 2000, WHT revenues began to exhibit a seasonal rising trend. Several factors could contribute to this pattern:

- Economic Growth: If the economy experienced sustained growth during this period, it
  could lead to increased business transactions subject to WHT, thereby driving up
  revenues.
- Increased Tax Compliance: There might have been improvements in tax compliance and enforcement measures, resulting in higher WHT collections over time.
- Policy Changes: Changes in tax laws or regulations related to withholding tax might have been implemented, leading to higher withholding tax rates or broader applicability, thereby increasing revenue collections.
- Business Cycles: Seasonal variations in business activities could also influence WHT
  revenues. For instance, certain industries or sectors might experience peak periods of
  activity during specific times of the year, leading to higher WHT collections during those
  periods.
- Market Dynamics: Changes in market conditions, fluctuations in interest rates, or shifts in investment patterns could impact the volume of transactions subject to withholding tax, contributing to the observed seasonal rising trend.

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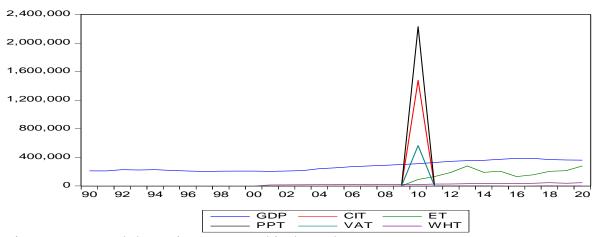


Figure 7 GDP and the entire taxes graphical trend Granger Causality Test

The study used Pairwise Granger Causality Test to check for the nature of causality between GDP and the various taxes and the result is presented in Table 4.6 below

**Table 6: Pairwise Granger Causality Tests** 

Pairwise Granger Causality Tests

Date: 11/10/21 Time: 23:12 Sample: 1990– 2020

Lags: 2

Null Hypo Dissertation:	Obs	F-Statistic	Prob.
CIT does not Granger Cause GDP	29	0.82684	0.4495
GDP does not Granger Cause CIT		0.25467	0.7772
ET does not Granger Cause GDP	29	0.06984	0.9327
GDP does not Granger Cause ET		3.12016	0.0624
PPT does not Granger Cause GDP	29	0.82983	0.4483
GDP does not Granger Cause PPT		0.25444	0.7774
VAT does not Granger Cause GDP	29	0.82672	0.4496
GDP does not Granger Cause VAT		0.25717	0.7753
WHT does not Granger Cause GDP	29	1.80126	0.1867
GDP does not Granger Cause WHT		0.50710	0.6085
ET does not Granger Cause CIT	29	0.18406	0.8330
CIT does not Granger Cause ET		1.59136	0.2244
PPT does not Granger Cause CIT	29	0.39407	0.6786
CIT does not Granger Cause PPT		0.39240	0.6797

VAT does not Granger Cause CIT	29	0.02449	0.9758
CIT does not Granger Cause VAT		0.02675	0.9736
WHT does not Granger Cause CIT	29	0.03639	0.9643
CIT does not Granger Cause WHT		0.74076	0.4873
PPT does not Granger Cause ET	29	1.59027	0.2246
ET does not Granger Cause PPT		0.18662	0.8309
VAT does not Granger Cause ET	29	1.59854	0.2230
ET does not Granger Cause VAT		0.17881	0.8374
WHT does not Granger Cause ET	29	1.98016	0.1600
ET does not Granger Cause WHT		0.72597	0.4942
VAT does not Granger Cause PPT	29	0.54842	0.5849
PPT does not Granger Cause VAT		0.55428	0.5817
WHT does not Granger Cause PPT	29	0.03570	0.9650
PPT does not Granger Cause WHT		0.73991	0.4877
WHT does not Granger Cause VAT	29	0.03814	0.9626
VAT does not Granger Cause WHT		0.74161	0.4869

Source: Author's Computation, 2024 using Eviews 9.

Interpreting the results: you would accept or reject the null hypothesis based on whether the p-value associated with the Granger causality test statistic is less than or greater than your chosen significance level and the P-value is 0.05. Thus If the p-value is greater than 0.05, accept the null hypothesis of no causality but if the p-value is less than 0.05, you reject the null hypothesis and conclude that there is causality.

From table 6, the null hypotheses of no Granger causality are accepted at 5 percent level of significance since the p-values are greater than 0.05. Therefore, there is no causality running from any of the taxes to GDP or from GDP to the taxes.

### **Discussion of Results**

The trend analysis showed that GDP ET and WHT exhibits seasonality in trend while PPT, CIT and VAT exhibits same trend of constancy, rise and fall and constancy. The rise and fall is between 2010 and 2012. The granger causality test revealed that there is no causality running from either GDP to the taxes or taxes to GDP or between the taxes. This finding is consistent with of Chigbu (2014) which found no causality between taxes and economic growth (GDP). This is contrary to Takumah (2014) and Thomas (2005) who found unidirectional causality between tax revenues and Economic growth (GDP)

### **Conclusion and Recommendations**

The overall analysis in figure 7 reveals that GDP has a rising trend till 2017 before it starts falling. CIT took and upward trend from 2009 - 2010 and afterwards falls to its normal trend as it was between 1990 and 2010. ET shows a constant trend from 1990 – 2009. ET increased uninterrupted till 2013 when it took seasonal trend in 2016. Since 2016 till date, ET has taken

an upward trend. PPT has been constant between 1990 and 2009 and also between 2011 and 2020. PPT had an upward trend between 2009 and 2010 and then took a downward trend between 2010 till 2011. VAT has been constant between 1990 and 2009 and also between 2011 and 2020. VAT had an upward trend between 2009 and 2010 and then took a downward trend between 2010 till 2011. WHT had a constant trend from 1990 to mid 2000. WHT took a seasonal trend which is mostly rising.

The study found no causality between some taxes and Economic growth or between the taxes.

### Recommendations

- i. Government should come up with taxes reforms that will encourage tax payers to pay their taxes so as to have a rising trend and increase revenue.
- ii. Companies and individuals should be sensitized on why they should pay taxes in order to boost revenue generation.
- iii. The government should use taxes to provide public goods which will give the tax payers the impetus to pay rather than avoid or evade tax payment

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