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WHAT DERIVES ECONOMIC GROWTH AT STATE LEVEL? THE ROLE OF PERSONAL INCOME TAX, VAT, FEDERAL ALLOCATION AND DEBT

Emmanuel John Kaka
Accounting Department, Faculty Of Management and Sciences Federal University Gashua

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ABSTRACT

The main aim of the study is to assess the impact of personal income tax, Value Added Tax, debt and federal allocation on economic growth at state level in Nigeria. Expo factor research design was used. Secondary data were collected from Central Bank of Nigeria statistical bulletin and Debt Management office and Bureau of statistics from 1960 to 2019. Ordinary Least Square multiple regression method was used in data analysis. The results of the study showed that domestic debt and total expenditure where discovered to be positive and to have a significant influence on Gross Domestic Product. Similarly, foreign debt was also discovered to be positive and statistically significant on Gross Domestic Product. While, Value Added Tax was discovered to be positive and have insignificant effect on Gross Domestic Product. While, Personal Income Tax, federation account is discovered to be negative and the relationship between them are also not statistically significant and so the impact of Personal Income Tax and federation account are weak. The study concluded that most of the developmental activities that leads to the growth of Gross Domestic Product are being funded through debt (both domestic debt and foreign debt).

1. INTRODUCTION

The economic growth of a nation is dependent on a stable means and sources of revenue. For the government to carry out its duties, revenue has to be generated (Ikeokwu & Micah, 2019). Thus, the purpose of charging Personal Income Tax and Value Added Tax is to generate enough revenue to cover government expenditure needs, to stimulate economic growth and development (Omodera & Dandago, 2019). Personal Income Tax, Value Added Tax and other non-tax revenue are important tools in transforming any economy in the world. This is because they are the means government utilizes to meet up expenditure demands to achieve economic growth and development of a nation (Kaka, 2020).

Corresponding Author.
*Email: *youngkaka2002@yahoo.co.uk*

Ironically, the constant fluctuation in oil prices in the international market for the past decades has causes profound slowdown in economic growth. For instance, Nigeria suffered from this due to the 1980s oil glut where her per capita GDP fell from $1100 to $340 and also when international crude oil price was sold for about $40 per barrel in first quarter of 2016 as against $120 per barrel in the third quarter of 2014, since revenue generated from taxes is not much (Omojolaibi, Okenesi & Mesagan, 2016). Presently, the impact of covid-19 induces shocks in 2020 has further reduced oil price to $26 dollar, affected movement, generation of Personal Income Tax, Value Added Tax that are meant for the enhancement of economic growth and development of nations and Nigeria as a whole (Kaka & Ado, 2020). No wonder Adegbie, Nwaobia and Osinowo (2020) recommended that government must strive to sustain the current unflinching commitment towards improving non-oil tax revenue like Personal Income Tax, Value Added Tax, Capital Gain Tax, and also ensure efficient utilization of tax payers' money to boost non-oil tax revenue collection which will then lead to economic growth and development. This is because, studies have shown that the recent sharp reduction in the revenue was as a result of decline in crude oil prices which inversely affected the financial ability of government towards enhancing economic growth and development of the nation (Adegbie, Nwaobia and Osinowo, 2020).

Tax revenue mobilization is a central concern of economic policymaking in many countries most especially at this period of covid-19 induce recession. Experience has shown that while some countries exhibit marked increases in their tax-to-GDP ratios, others show little or no increase over extended periods. Thus, greater domestic resource mobilization is critical for many countries. Most especially, in developing countries, enhancing the mobilization of tax revenue is integral for governments to create fiscal space to fund public investment and deliver public services in order to achieve meaningful economic growth (Akitoby et al., 2020). Currently, there has been wider and renewed interest by governments and multilateral institutions in enhancing tax capacity, stemming from the recognition that tax capacity is at the core of state building and economic growth (International Monetary Fund (IMF) 2011; Gaspar, Jaramillo & Wingender, 2016). No wonder the Nigerian government increases the Value Added Tax rate by 2.5 percent, from 5 percent to 7.5 percent in 2020 fiscal year (Kaka, 2020).

From an empirical angle, studies such as Abd Hakin, 2020; Bazgan, 2019; Etale and Bariweri, 2019; Hosen, 2019; Kaka and Ado, 2020; Neog and Gaur, 2020; Ogundana et al., 2017; using different estimation technique to assess the impact of Personal Income Tax and Value Added Tax on economic growth, gave mixed and contradictory results. For example, some studies discovered Personal Income Tax and Value Added Tax to be significantly positive and induces the growth prospects of the economy as observed by (Abd Hakin, 2020; Bazgan, 2019; Ikeokwu and Micah, 2019). While others discovered Personal Income Tax and Value Added Tax to be statistically insignificant and negative and so retard economic growth (Etale and Bariweri, 2019; Hosen, 2019; Neog and Gaur, 2020; Okeke, Mbanu & Ndubuisi, 2018; Ogundana et al., 2017). Apart from that Kaka and Ado, (2020) found a negative but statistically significant of the impact of value added tax on expenditure and economic growth of an economy. This indicate that the relationship between these economic variables is far from being settled empirically. Hence, researches in these areas appear inconclusive. The variation or inconsistency of results obtained by the empirical studies do not permit the researchers to draw an unequivocal and valid conclusion on the subject matter.

This shows that, few that address the area cannot provide a valid conclusion on the direction of relationship between the Personal Income Tax, Valued Added Tax and economic growth. This paper attempts to fill this gap by documenting the nature of the causal relationships among the variables. Also, must of the studies conducted Abd Hakin, (2020); Bazgan, (2019); Etale and Bariweri, (2019); Hosen, (2019); considered the relationship between Personal Income Tax, Value Added Tax and economic growth of the whole nation, with the exception of the study of Neog and Gaur (2020) who considered Personal Income Tax, Value Added Tax and economic growth in the study of selected Indian states. This study

is going to take a cue from Neog and Gaur (2020). In addition, the paper only pays attention to Indian which is an Asian country. This shows that fewer or no studies have been conducted specifically on state government in Africa and Nigeria in particular.

The empirical studies provided show that the study on Personal Income Tax, Value Added Tax and economic growth relationship is still open to further discussion, as their mixed and conflicting findings revealed. More so, the study is going to consider Personal Income Tax, Value Added Tax together with federal allocation, internal debt and external debt influence on economic growth of the states in Nigeria. These among others are the reasons behind this study as it adds to the existing body of knowledge by bringing out the changes Personal Income Tax and Value Added Tax has on economic growth of the states in Nigeria. The main objective of the study is to assess the impact of Personal Income Tax and Value Added Tax on economic growth at the state level. Apart from this introduction, the study is divided into four sections as follows: the review of literature where empirical studies both locally and internationally were adequately reviewed in order to provide concrete evidence on the research gap. This is followed by research methods, and the next section presents a discussion of findings, while the last section shows conclusion and recommendations.

2. LITERATURE REVIEW

Most empirical studies tend to have as a main concern in the interpretation of the effect of Personal Income Tax, Value Added Tax and debt on economic growth. So many empirical studies have explained through economic models the effect of Personal Income Tax and Value Added Tax on economic growth as a channel through which public revenues are raised, to sustain public expenditure in financing the investments of nations, and consequently lead to economic growth.The empirical evidence in the literature on the effect of Personal Income Tax and Value Added Tax on economic growth has shown some difference in results in Nigeria and abroad. First, there are some results that supported and others did not support the views that the pace of economic growth depends on the level of Personal Income Tax and Value Added Tax generated and used. Example of studies that did not support this view are: Neog and Gaur (2020) study examines the long-run and short-run relationship between tax structure and state-level growth performance in India for the period 1991–2016. The analysis in this paper is based on the model of Acosta-Ormaechea and Yoo (2012), and for the verification of the relationship between taxation and economic growth, where the panel regression method was used. With the use of 14 Indian states data, Panel Pool mean group estimation indicates that Personal Income Tax and commodity–service tax are insignificant and had a negative effect on state economic growth. Similarly, Abd Hakim (2020) investigates the effects and consequences of both direct and indirect taxes on economic growth and total tax revenue in a panel of 51 countries over the period 1992 –2016. The data were estimated using the dynamic panel generalized method of moments (GMM) estimation. The results indicate that direct taxes like Personal Income Tax and Company Income Tax are significant and negatively correlated with the economic growth, while indirect taxes seem to have a positive but insignificant impact on the dependent variable. Additionally, this study also found a significant and positive contribution of direct taxes on the total tax revenue compared to indirect taxes. The study lament that tax structure based on direct taxes such as taxes on income, profit and capital gains is harmful to the economic growth, yet more efficient in terms of collecting the tax revenue in a country.

Consequently, Hosen (2019) considered the relationship between GDP growth and indirect tax in Bangladesh as its cynosure. It examines the relationship between the growth rate of Gross Domestic Product (GDP) and the indirect-tax for the policy issues regarding long-term macroeconomic stability as well as economic development of Bangladesh. The paper focuses on the impact of indirect taxation on GDP and demonstrates the influence that taxation has on the tax paying individual and business firms irrespective of economic scale. The research incorporated econometric models for time series data of Bangladesh over a period of 43 years, and discovered that, if the Government in the long run increases the

collection of indirect tax revenue (VAT) by one percent (USD 167.511 million) then the GDP will decrease to a 0.96 percent (USD 2,572 million). Etale and Bariweri (2019) investigated the relationship between some components of tax revenue and educational development in Nigeria for the period of 2010-2018. The study considered education tax and Value Added Tax as independent variables and government expenditure on education with the exception of recurrent expenditure as a dependent variable. Secondary data were used the data analysis and multiple regression analysis was conducted through the use of Ordinary Least Square method. The study discovered that there is a positive relationship between education tax, Value Added Tax and expenditure on educational development. But the relationship between them is not statistically significant and so the effect of tax revenue on education is weak. The study concluded that educational tax contribution to the development of educational sector has not being yielding the desired results on the sector, and suggested that more funds should be channel from tax fund to be used to finance education sector since human capital development is main foundation for economic growth and development. Moreover, education tax rate be increase from 2 percent to 5 percent to generate enough funds for the development of education.

Other studies that supported the view that pace of economic growth depend on Personal Income Tax and Value Added Tax are; Osho, Ogunyankin and Fadakinte (2020) where the study x-rayed the impact of pay as you earn on social and economic development (proxy by Gross Domestic Products) in Nigeria. Secondary time series panel data was collected for the period 2009 to 2018 from the Statistical Bulletin of the Central Bank of Nigeria (CBN). The study employed Ordinary Least Squares (OLS) technique based on the computer software E-view 10 version for the analysis of data, where Gross Domestic Products (GDP) is the independent variable, proxy for social and economic development, was regressed as a function of Personal Income Tax (PIT) and Value-Added Tax (VAT), the dependent variables. The results of the analysis showed that both Personal Income Tax and Value Added Tax have significant and positive impact on social economic development. Based on the findings, the study recommended that government should strengthen the tax administration system to broaden the tax income, and embark on tax education to ensure voluntary tax compliance. The study also recommended that the tax authorities should employ qualified tax professionals who should be regularly trained and be retained in the tax administration system for effective and efficient tax administration and collection.

Ikeokwu and Micah (2019) examined the influence of indirect taxes on economic growth. Research hypotheses were developed in response to the aim of the study. The research adopted cross sectional survey while data were collected through secondary sources specifically the CBN statistical Bulletin database and FIRS. The findings revealed that Value Added Tax has significant influence on economic growth in Nigeria. It is therefore recommended that government should develop more strategies towards collection of indirect taxes in Nigeria to expand her revenue base. In the same vein, Bâzgan (2019) also proved that a positive change in the structure of indirect taxes will have a strong positive influence on the economic growth over a medium-term period. Similarly, Ogundana et al. (2017) assessed the relationship between indirect tax and direct tax effect on economic growth. The study used the descriptive research method and secondary data from 1994-2013. The results indicated that indirect and direct taxes has a significant positive effect on the economic growth, and suggested that government should take the merits of taxation to generate more revenue to enhance economic growth. In addition, Adegbie, Nwaobia and Osinowo (2020) investigated the effect of non-oil taxes on economic growth and development of Nigeria. The study employed expost facto research design. Macro data for the period 1994Q1- 2017Q4 representing seventy-six (76) observations were obtained from CBN statistical bulletin and National Bureau of Statistics. The data were analyzed using descriptive and inferential statistics employing multiple regressions. The study discovered that non-oil taxes (Value Added Tax) have significant effect on economic growth.

Okeke, Mbonu and Ndubuisi (2018) sort to ascertain the relationship between tax revenue and economic development for the period of 1994-2016 in Nigeria. The study used time series data. The Augmented Dickey Fuller Test, multiple linear regression, Granger causality test, Johansen cointegration test and error correction model in analyzing the data. The study found out that tax revenue has a positive and significant relationship with gross fixed capital formation, labor force in Nigeria. And recommended that government should increase the allocation of funds to agriculture and industrial sectors to enhance the citizen's welfare, since tax revenue has proven to contribute to economic development.

Similarly, Uzoka and Chiedu (2018) examined the impact of tax revenue on economic growth from 1997 to 2016 in Nigeria. The studies used time series data and analyzed it using cointegration test, unit root test and vector error correction mechanism. The study discovered that Capital Gain Tax and education tax have a positive and significant impact on economic growth. Ayeni, Ibrahim and Adoyemi (2017) also examine the effect of tax revenue on economic growth using time series data from 1986-2015. The method of data analysis used were paired sample T-test and descriptive statistics with the help of SPSS software. The results revealed that non-tax revenue and tax revenue to have a significant positive impact on gross domestic product. There was significant difference between the contribution of tax revenue and non-tax revenue on economic growth in Nigeria. Ojong, Ogar and Oka (2016) investigated the effect of tax revenue on economic development of Nigeria. Secondary data were collected and analyzed using Ordinary Least Square multiple regression to estimate the relationship between the dependent variable and the independent variables. The results showed a positive and significant relationship between tax revenue and economic growth. The study suggested that government should provide social amenities to all the communities in Nigeria with the revenue that is accruing to its scoffers.

Sikka and Hamphon (2015) investigated the relationship between company income tax and economic growth for a time frame of 1981-2007 in Nigeria. The study used chi-square test and multiple regression analysis to analyze the data. The study discovered a positive and significant relationship between Companies' Income Tax and economic growth and figure out tax avoidance and tax evasion as the major obstacle for generating more tax revenue in Nigeria. Olushlola and Oliver (2020) investigated the effect of tax revenue on economic growth. Exploratory research design was used. Secondary data was collected and analyzed using ordinary least square multiple regression analysis to establish the relationship between the variables. The findings showed that there is significant positive relationship between tax revenue and economic growth, and suggested the proper use of public funds so that every section of Nigerian economy will feel the impact of the growth. Moreover, government should increase expenditure to promote investment.

Other literatures that studied public debts and economic growth and show inconsistent results are; Saungweme and Odhiambo (2019) explored the relationship between public debt services and economic growth for the period of 1970- 2017 in Zambia. The finding shows that there is unidirectional granger-causality from economic growth to public debt. And suggested that borrowed funds should be directed to the diversification and expansion of the Zambian economy by the government. This will bring a long lasting economic growth, widen the revenue base of government, and improve it's to meet government financial needs as at when due.

Rahmon (2016) investigated the empirical relationship between internal and external debt, debt service payment and service provision in Nigerian economy for the period of 1981-2016. The study used Ordinary Least Square method to estimate the relationship between the variables. The discovery of the study revealed debt servicing and external debt to have inverse relationships with economic service spending. While, there is a positive and significant relationship between internal debt and government economic services delivery in Nigeria. The study suggested that government of Nigeria should go for domestic loan because they benefit the economy most, unlike foreign loans. Government should diversify the economy by

channeling resources to other sectors that can generate revenue to boast revenue generation to be used in the provision of economic services that can up lift the standard of living of its citizens.

Oboro and Ujuju (2017) Tried to verify the link between public debt and economic growth for the period of 1990- 2015 in Nigeria. The study used secondary data source and the data were analyzed using simple and multiple regression technique. The simple regression results showed a positive and significant relationship between total public debt and economic growth. While the reversed is the case when multiple regression method was used which showed eternal debt to be significant and negatively link to economic growth. Internal debt was found to be positive and significant to economic growth. And suggested that Nigerian government should emphasis in the collection of internal debt loan instead of external loans. In a similar vein, Mba, Yuni, and Oburota (2013) examined the relationship between internal debt and economic growth. The study used error correction model process to investigate the properties of the time series data using unit root and co-integration test. The results revealed that internal debt has a positive and significant relationship with Gross Domestic Product, and debt serving has a negative relationship with Gross Domestic Product. While government spending has a direct relationship but no significant link with Gross Domestic Product. The study concluded that internal debt should be use in the productive sectors especially the real sectors of the economy.

Nwannebuike, Ike and Onuka (2016) determine the effect of external debt on economic growth in Nigeria for a period of 1980 to 2013. Ex-post facto research design was adopted and OLS regression technique was used. And found out that external debt had a positive and significant influence on economic growth in the short-run. But in the long-run, it has a negative effect. Whereas, debt services payment had a negative influence on economic growth in Nigeria. That means as exchange rate increases, economic growth also increases. As regards Federal allocation, Oluyemi, and Ohiomu, (2019) in trying to resolve revenue allocation challenges in Nigeria: Implication for sustainable national development, examined the structure and formula for revenue allocation in Nigeria, and used Group unit root test and Auto regression distributed lag (ADRL) bounds testing and cointegration long-run test. The results showed that revenue allocation to have a positive and significant influence on economic growth in Nigeria and suggested that the three level of government should be funded very well to enable them carry out their expenditure responsibilities to enhance growth and development at the grass root level. Hammayo, Shittu and Abdullahi (2020) examined the effect of government revenue on infrastructural development in Bauchi state Nigeria from 2006 to 2018. Data were analyzed using Ordinary Least Squares multiple regression technique. The results suggested that revenue allocation from the Federation account and debt collection has a positive and significant impact on the provision of infrastructural development. While, local and foreign grants showed a positive and significant influence on infrastructural development in Bauchi. The study recommended that a reasonable allocation from the federation account should be made to the state government by the policy makers for capital projects to fasten the economic development at the state levels.

Omodero, Azubile and Ekwe (2018) investigated the level to which revenue allocated improved economic development for a period of 1981 to 2016. Ordinary Least Square Multi regression model was used for data analysis. The results discovered revenue allocation to state government to have negative and significant influence on per capital income the poor performance was recorded as a result of misused of resources and recommended for a drastic measure to be undertaken by the government to fight corruption in public sector and among public office holder. Dang (2013) test the impact of revenue allocation on economic growth in Nigeria from 1993 to 2012. Time series data was used and pairwise Granger causality test is employed in data analysis. The study discovered revenue allocation to have a positive and significant connection with economic growth. While revenue allocation to state has a

significant but negative connection with economic growth. The study suggested value for money should be conducted to reduced wastages and corruption at state level. Doing so will change the position of the impact of state revenue allocation on economic growth. Ghani, Grewal, Ahmed and Noor (2017) evaluates the efficiency of state public finances under the Malaysian fiscal federalism from 1990 to 2009 that is 13 years. Data Envelopment Analysis (EDA) and dynamic conditional Tobit panel data regression model. The study discovered evidence of the presence of centralized fiscal federalism system has been unable to create a competitive environment among the state governments. This has resulted in low level of efficiency in states, and state the factors that enhance technical efficiency such as fiscal centralization and support the opinion that fiscal decentralization gives incentive structures to support higher state efficiency levels. And argued that a market preserving federalism theory that states become more efficient, if more power are given to them and ensure that they spend theory resources within their fiscal capacity.

Following all these empirical studies, it is evident that consensus has not been reached on the subject matter. Moreover, none of the study above has considered the relationship between Personal Income Tax, Value Added Tax, federal allocation, domestic debt and foreign debt on economic growth. So, part of the contribution of the study is to examine whether there is an influence of personal income tax, value added tax, federal allocation, domestic debt and foreign debt on economic growth at the state level in Nigeria. This has actually paved the way for this study to justify the types of relationship and the direction of causality among variables selected for this study.

3. RESEARCH METHOD

The study used the ex post factor research design due to the complexity of the nature of the relationship existing between the variables. The selection of this method was made possible due to the fact that data for the research exist already, hence, the researcher don't have the power to change or manipulate it, in order to influence the outcome of the study. The sources of data used for the study was secondary source gathered from various medium like Central Bank of Nigeria statistical bulletin, Federal Inland Revenue Service, Debt Management Office websites. The scope of the study is limited to Personal Income Tax, Value Added Tax, internal debt, external debt, total expenditure, federal allocation and economic growth in Nigeria from 1960-2019. The study used Ordinary Least Square technique and multiple regression method in the data analysis. This study followed the steps of Etale and Bariweri (2019); Osho, Ogunyankin and Fadakinte (2020) who used Ordinary Least Square Multiple regression technique to analyze their data. Regression analysis described the relationship between the dependent variable and independent variables. The relationship can be express mathematically as:

$Y=a+b1x+b2x$ ……..$bnx+ei$

Where; Y= Economic growth (Gross Domestic Product), which is the dependent variable

X= Total expenditure, Personal Income Tax, Value Added Tax, domestic debt, foreign debt, total expenditure and federal allocation., which are the independent variables

a = Constant

e*i* = Error term

b*i*…..bn = slope of the regression (rate of changes in the Y).

Model Specification

In order to test the relationship between the variables of the study, a regression model was adopted. The study proposed total expenditure, Personal Income Tax, Value Added Tax, domestic debt, foreign debt and federal allocation as the determinant of Gross Domestic Product. Thus, the model was expressed as follow:

GDP= f(TE, PIT, VAT, DD, FD, FA)

Where; GDP= Gross Domestic Product

TE = Total Expenditure

PIT = Personal Income Tax

VAT = Value Added Tax

DD = Domestic Debt

FD = Foreign Debt

FA = Federal Allocation

4. RESULTS

The researchers carried out a descriptive and a multiple regression analyses to test the relationship among the dependent variables (Total expenditure, Personal Income Tax, Value Added Tax, domestic debt, foreign debt and federal allocation) and the predictor variable (Gross Domestic Product). Ordinary Least Square was used in the computation of the measurements of the multiple regression for the paper.

Descriptive Statistics

Table 4.1 Descriptive statistics

Variables	TE	VAT	PIT	DD	FD	FA
Mean	6.355	6.5717	1.0315	6.9819	2.2518	16.7111
Maximum	0.9349	0.1401	0.1329	0.0708	0.0344	0.6157
Minimum	6.8379	6.7887	1.1461	7.0897	2.301	17.5841
Std. deviation	3.8279	6.3078	0.7781	6.8791	2.2	15.4875
Observations	59	59	59	59	59	59

Source: Researcher compilation (2021)

Table 4.1 above shows the outcome for descriptive statistic taken from the studied variables incorporated into the model. The table 4.1 disclosed that the mean value for TE in Nigerian Listed Companies is 6.355 and the minimum as well as maximum TE are 6.8379 and 0.9349, respectively. Indicating a positive performance on the economy of the state government. It further indicates that VAT with a mean value 6.5717 and the minimum as well as the maximum values of 6.7887 and 0.1401 is used and contributes to the growth of the economy at state level in Nigeria. Also, PIT has an aggregate mean value of 1.0315 with minimum and the maximum values of 1.1461 and 0.1329. This implies that the revenue generated are used by the state government to grow the economy. DD has an aggregate mean value of 6.9819 with the minimum and maximum values of 7.0897 and 0.0708, respectively. FD has an aggregate mean value of 2.2518 with the minimum and maximum values of 2.301 and 0.044 respectively. Finally, FA with an estimated mean value of 16.7111 with the minimum and maximum values of 17.5841 and 0.6157, correspondingly.

Multicolinearity Test

Table 4.2 below displays the outcome of the multicolinearity test using the variance inflation factor (VIF) and with a tolerance values for all the independent variables is less than 1 and less than 10 which indicates that the independent variables are within the normal range as opined by (Hair, Black, Babin & Anderson, 2014). It is therefore believed that this present research is free from multicollinearity. Table 4.2 shows the multicollinearity result for the study.

Table 4.2 Collinearity Diagnostics

Variables	**Collinearity Statistics**	
	Tolerance	**VIF**
Total Expenditure	0.329	3.03
Value Added Tax	0.338	2.96
Personal Income Tax	0.510	1.96
Domestic Debt	0.632	1.58
External Debt	0.747	1.34
Federation Account	0.025	1.08
Mean VIF		1.99

Source: Researcher compilation (2021)

Correlation Matrix

According to Pallant (2011), he stated that the correlation analysis is very important in portraying the direction and strength of the undeviating association amongst studied variables. Joseph (2010) also proposed that the correlation value of 0 indicates no relationship, whereas the correlation □1.0 implies an excellent relationship. This is in consistent with the revelation of Hair, Black, Babin, Anderson, and Tatham (2010) which posited that the correlation matrix ought not to exceed 0.70 to guarantee that the multicolinearity problem is not in existence in this study. The table 4.3 below shows the correlation matrix for this study.

Table 4.3. Correlation Matrix

	GDP	**TE**	**VAT**	**PIT**	**DD**	**FD**	**FA**
GDP	1.000						
TE	0.624	1.000					
VAT	0.382	0.559	1.000				
PIT	-0.236	-0.109	0.124	1.000			
DD	0.572	0.510	0.267	-0.123	1.000		
FD	0.506	0.436	0.257	-0.129	0.420	1.000	
FA	0.411	0.723	0.675	0.029	0.214	0.320	1.000

Source: Researcher compilation (2021)

Table 4.3 presents the result of the correlation analysis on the relationship between the dependent, and independent variables of the study. Pearson correlation was employed in this study to measure and describe the extend of the relationship among the variables of the study. Table 4.3 presents the highest coefficient of 0.723 between Federal Allocation and Total Expenditure. The outcome implies a positive significant correlation between Federal Allocation and Total Expenditure, signifying the magnitude and direction of the relationship among the variables of the study in the regression analysis. However, Federal Allocation and Total Expenditure, Value Added Tax, Domestic Debt and Foreign Debt were found to be positive and significantly related to Gross Domestic Product at 1% level of significance. Meanwhile, Personal Income Tax was discovered to be negatively significant correlated with the Gross Domestic Product at 1% level of significant.

Regression Analysis

The regression analysis for Gross Domestic Product model is show in Table 3. Below:

Table 4.4 Model Summary

Model	R-Square	Adj. R-square	F-Statistics
1	0.54	0.48	0.01

Source: Researcher compilation (2021)

Table 4.4 shows the percentage variation in the dependent variable (Gross Domestic Product) that is explained by all the independent variables (Total expenditure, Value Added, Tax, Personal Income Tax, Domestic Debt, Foreign Debt and Federal Allocation). The independent variable that were studied, explains 54 percent of the relationship between Total expenditure, Value Added, Tax, Personal Income Tax, Domestic Debt, Foreign Debt and Federal Allocation and Gross Domestic Product in Nigeria, as s shown by the value of the coefficient of determination of R-square that gives 0.54. The corresponding F-statistics is highly significant at 1 percent level of significance. This implies that 54 percent of the changes in Gross Domestic Product is explained by the variation of Total expenditure, Value Added, Tax, Personal Income Tax, Domestic Debt, Foreign Debt and Federal Allocation in Nigeria. Finally, the value of the adjusted R-square coefficient of determination (Adjusted R-square) gave a value of 0.48, which means that the model for the study (with 48% confidence) was good and a proper fit for use in predicting the dependent variable.

Table 4.5 OLS Estimate of Tax Revenue, Non-Tax Revenue and Public Debt

GDP	Coefficient	Std. error	t-value	p-value
TE	0.32	0.02	2.04	0.05
VAT	0.12	0.15	0.76	0.45
PIT	-0.19	0.13	-1.54	0.13
DD	0.56	0.24	2.30	0.05
FD	0.42	0.22	1.88	0.10
FA	-0.00	0.02	-0.12	0.91
Constant	0.42	0.07	2.02	0.05
Breusch-Pagan Prob > Chi2	0.213			
Ovtest Prob > F	0.399			

Source: Researcher compilation (2021)

Table 4.5 shows that as the multiple regression analysis established, if all factors are taken into consideration (Total expenditure, Value Added Tax, Personal Income Tax, Domestic Debt, Foreign Debt and Federal Allocation), to be constant at zero, Gross Domestic Product will increase by 0.42 units in Nigeria. The data analysis also shows that, if all other independent variables are taken at zero, a unit increase in Total expenditure will lead to 0.32 units increase in Gross Domestic Product in Nigeria. Furthermore, a unit increase in Value Added Tax will lead to a 0.12 units increase in Gross Domestic Product in Nigeria. Whereas, a unit increase in personal income tax will leads to -0.19 units decrease in Gross Domestic Product. Moreover, a unit increase in domestic debt will leads to 0.56 increase in Gross Domestic Product, while, a unit increase in foreign debt will lead to an increase of 0.42 of Gross Domestic Product. Lastly, a unit increase in federation account will decrease Gross Domestic Product by -0.00. From the above analysis of the betas, it can be inferred that domestic debt contribute a lot in the increase in Gross Domestic Product, followed by foreign debt, total expenditure and Value Added Tax. While, personal income tax contributed more in decreasing Gross Domestic Product, followed by federation account allocation.

At 10 percent p-value only domestic debt and total expenditure are at 5 percent p-value. While, foreign debt is at 1o percent. Which shows that there is an influence of domestic debt, foreign debt and total expenditure on economic growth at the state level in Nigeria. While, personal income tax, Value Added Tax, and federal allocation are at 0.13, 0.45, 0.91 are not significant. This shows that personal income tax, Value Added Tax and federal allocation are insignificant. Thus, only domestic debt, foreign debt and total expenditure can significantly explain Gross Domestic Product. While, personal income tax, Value Added Tax and federal allocation are not significant in explaining Gross Domestic Product.

Breusch-pagan test for heteroscedasticity was conducted to test the covariance of the estimated model error as to whether it is constant or not. The result suggested that a statistic of 0.213 is not statistically significant at 10 percent level of significance. This indicates that null hypothesis of homoskedsaticity could not be rejected

From the result of the analysis, it was discovered that there is a positive and significant influence of total expenditure on Gross Domestic Product. This shows that any increase in total expenditure will definitely increase or enhance Gross Domestic Product. The finding was also statistically significant, meaning that the relationship between total expenditure and Gross Domestic Product is very strong. This finding is similar in one part, but contrary in another part to Mba, Yuni, and Oburota (2013) which discovered government spending to have a direct relationship but no significant link with Gross Domestic Product. It is naturally normal for the Gross Domestic Product to increase when a country expenditure is incurred or geared towards the production of the activities that has direct bearing to the improvement of the citizens' welfare and quality of life. But if the resources of the country are embezzled or diverted instead of using them to incur expenditure on development activities, the Gross Domestic Product will decline or reduced. Thus, the state governments should make sure expenditures incurred are reasonably, necessary, wholly and exclusively used for the purpose to which they are incurred to improve and enhance economic growth.

The results further discovered domestic debt to have positive relationship and to be statistically significant with Gross Domestic Product. This discovery is in line with Rahmon (2016); Mba, Yuni, and Oburota (2013); Oboro and Ujuju (2017) which found a positive and significant relationship between internal debt and government economic services delivery or expenditure. Looking at the result above, it suggested that state government should go for domestic loan because they benefit the economy, most especially if used in the productive sectors like the real sectors of the economy. This is an indication that internal borrowed funds are used or channeled towards the diversification and expansion of the economy by the government. The diversification of the economy will widen the revenue base of government, and improve it's to meet government financial needs as at when due. Hence, enhance the growth of GDP.

In the same vein, foreign debt was also discovered to be positive and statistically significant to Gross Domestic Product. However, just like it is in the case of total expenditure and internal debt, the relationship is strong and also statistically significant. This indicate that increase in external debt will also increase Gross Domestic Product. Most especially when the debt is being used in the improvement of the productive sector of the economy. The improvement in the productive sectors will lead to the generation of more revenue to the government. The revenue generated will be use to upset the debt and the interest charged. This result is similar in one aspect but differ in another aspect as it is in Nwannebuike, Ike & Onuka (2016) which found out that external debt had a positive and significant influence on economic growth in the short-run. But in the long-run, it has a negative and insignificant effect. The reverse is the case in Oboro and Ujuju (2017) which showed eternal debt to be significant and negatively link to economic growth.Contrary to the above results, personal income tax and federal allocation was discovered to have negative relationship and insignificant effect on Gross Domestic Product. Similarly, Value Added Tax was discovered to have a positive

relationship, but the relationship is statistically insignificant in Nigeria. In the case of personal income tax, the relationship was statistically insignificant and the relationship was negative and weak. This signifies that increase in personal income tax will definitely leads to decrease in Gross Domestic Product.

In the case of personal income tax, it shows that personal income tax generated by the government is not enough to guarantee or to lead to growth in Gross Domestic Product. Or possibly some part of the revenue realized through personal income tax is not being remitted to the government by the tax authorities. Thus, bulk of the personal income tax is embezzled and siphon by the tax officials and even when the money reached the government post, the money is not used for the purpose to which it was meant. Hence, Gross Domestic Product decline instead of improving. Moreover, in Nigeria because of the reliance in oil revenue for economic growth and development, emphasis where not put on generation of revenue through personal income tax and so it was neglected by the government. Until recently due to fall in oil price as a result of the advent of covid-19. This may also be the reason for the personal income tax to be negative and insignificant in relation to Gross Domestic Product. This discovery is similar to Neog and Gaur (2020) which discovered personal income tax to be insignificant and to have a negative effect on state Gross Domestic Product. While, Abd Hakim (2020) found a significant and negative correlation with the Gross Domestic Product. Invariably, Olushlola and Oliver (2020); Osho, Ogunyankin and Fadakinte (2020); Sikka and Hamphon (2015) did not agree with the above result and in their study discovered personal income tax to have a significant and positive impact on Gross Domestic product.

Similarly, Value Added Tax was discovered to have a positive and insignificant effect on Gross Domestic Product. This signifies that the relationship is positive but the effect is insignificant and weak on Gross Domestic Product. This discovery is relatively similar to Etale and Bariweri (2019) Neog and Gaur (2020) which discovered personal income tax to be insignificant and to have a negative effect on state economic growth. Similarly, Hosen (2019) had a different discovery, and concluded that, if the Government in the long run increases the collection of Value Added Tax) by one percent (USD 167.511 million) then the GDP will decrease to a 0.96 percent (USD 2,572 million). Other studies that discovered a significant and positive results on the impact of Value Added Tax on Gross Domestic Product (Ikeokwu & Micah, 2019; Osho, Ogunyankin & Fadakinte, 2020) The study showed that Value Added Tax contribution to Gross Domestic Product has not being yielding the desired results on the economy. Since the relationship is positive. That means value added tax has a good relationship with Gross Domestic Product, only that the influence of Value Added Tax on Gross Domestic Product is weak. This could possibly be due to government inability to concentrate on generating revenue from Value Added Tax due to wind fall from oil revenue in the past, or lack of remittance of the Value Added Tax by the tax authorities to the government scoopers. Or rather the inability of the government to capture more goods on the Vatable list to increase revenue generation. Or the amount generated by government as Value Added Tax is embezzled, misused or spend on things that cannot improve Gross Domestic Product, or revenue realized through Value Added Tax is not much to lead to improvement in Gross Domestic Product. This shows that more funds are needed to be generated or the funds generated should be used judiciously in financing developmental activities and human capital development to enhance Gross Domestic Product. May be that is the reason the Nigerian government decided to increased Value Added Tax rate by 2.5 percent in 2020 fiscal year. That is from 5 percent to 7.5 percent despite the effect of covid-19 on the economy (Kaka & Ado, 2020), to enable the government generate enough funds for the development of the economy.

Moreover, the study discovered that there is a negative relationship between federation account and Gross Domestic Product, and the relationship between them is also not statistically significant and so the impact of federation account is weak. Thus, increase in

federation account will also leads to decrease in Gross Domestic Product The result indicates that, despite the huge amount given to the state government from the federation account or federal government allocation, the money has not contributed to Gross Domestic Product. This result is not surprising looking at the way and manner our state government officials are living a flamboyant life styles, dashing money in millions to people, issuing fake contracts and executing contracts that do not have direct benefit to the life of its citizens, the way and manner human capital development is neglected and much more, leave more to be desired. This goes further to show that most of the developmental activities that leads to the growth of Gross Domestic Product are being funded through debt (both internal debt and external debt) as could be shown from the results above not from the federal allocation which constitute the bulk of the total revenue generated by the state government. This is somewhat the greatest challenge of governance at the state level. Living the citizens with a huge burden of debt to pay, of which if the federation allocation money is spent wisely in the developing human capital and other developmental activities, debt collection could have been reduced if not avoided totally.

5. CONCLUSION

The main objective of the study is to assess the impact of personal income tax and value added tax on Gross Domestic Product at the state level. Where the introduction of the study was captured, issues and the scope was laid out. Literature review covering the concept and empirical review were stated in the second section, while issues concerning the research design, data source and collection and method of analyzing data was presented in section three. The results of data analysis and interpretation of findings was also discussed. The results of the study showed that Total expenditure and domestic debt where discovered to be positive and to have a significant influence on Gross Domestic Product. In the same vein, foreign debt was also discovered to be positive and statistically significant on Gross Domestic Product. While, Value Added Tax was discovered to be positive and have insignificant effect on Gross Domestic Product. This signifies that the relationship is positive but the effect is insignificant and weak on Gross Domestic Product. The study when further to discovered that there is a negative relationship between Personal Income Tax, federation account and Gross Domestic Product, and the relationship between them are also not statistically significant and so the impact of Personal Income Tax and federation account are weak. The study concluded that most of the developmental activities that leads to the growth of Gross Domestic Product are being funded through debt (both internal debt and external debt) as could be shown from the results above not from the personal income tax, value added tax and federal allocation which constitute the bulk of the total revenue generated by the state government

The study recommends that government at state level should try and reduce or stop corruption, misused and embezzlement of public funds gotten from federal allocation, personal income tax, so that the money generated shall be channel to the development of human and material capital development to enhance economic growth at state levels

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