

## TAXATION AND MANUFACTURING SECTOR PERFORMANCE IN NIGERIA

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### ***Abstract***

*This research undertakes to explore how revenue from taxation affect the economy of Nigeria. This research takes deeper look into the economic effects of taxation on the contributions of the manufacturing sector to the economy. Focal tax components were on value added tax (VATX), petroleum profit tax (PPTX), and corporate income tax (CITX) as these constitute the major tax revenue sources. The research also considers total public debt (TPDT) to be a critical source of financing economic activities and thus is included as a moderating variable. The research data is collected from several sources including the FIRS, the NBS, and CBN. The period under review is twenty-eight (28) years from 1994 to 2021. Several statistical and econometric methods were adopted for data analysis, viz., descriptive statistics; augmented Dickey-Fuller (ADF) and Philip-Perron unit tests; the auto-regressive distributed lag (ARDL) technique; and Granger causality test. Findings of this research revealed that all three tax revenue components, viz., value added tax, petroleum profit tax and corporate income tax had a positive relationship with manufacturing sector GDP. This implies that revenue from taxation components help to improve the performance of the manufacturing sector in Nigeria. It is suggested that government sustain its policy efforts in developing the manufacturing sector of the company. Policies in the sector should be designed to encourage small manufacturers to be captured in the formal sector and expand their manufacturing capacity. This will help to capture more manufacturing organisations in the tax nets and thus further improve revenue generations.*

### **Background**

Revenue from taxation provides the most important revenue source to address many of the documented shortcomings plaguing the dependence on natural resources as primary revenue source. It is noted to be more stable and less prone to external shocks (Ayeni, Omodero & Ntim,

2022). It is also a more sustainable source of revenue (Schratzenstaller, 2015; Kalendiene & Pukeliene, 2011) and also responds to economic stimulation (Ojede & Yamarik, 2012) as countries can easily collect more taxes as the economy grows (Asaolu, et. al, 2018). Thus, Nigeria like many other developing countries is gradually moving towards taxation as a more sustainable, and stable source of revenue.

At its most basic form, taxation is characterized as a compulsory, non-repayable remittance made by citizens and other entities like corporate organizations to the government. Unegbu and Irefin, (2011) cited in Asaolu, Olabisi, Akinbode, Alebiosu (2018) described taxation as a mandatory levy imposed by the government or other constituted authority on the taxable income of every taxable individual, corporation, and institutions or products and services within a particular jurisdiction meant to defray the expenditure on public goods and infrastructure. In same publication, Jarkir (2011) is noted to describe taxation as "a contribution exacted by the government or state as a mandatory and unrequited resource transfer from the private economic agent to the public coffer and levied on the basis of agreed and predetermined criteria (Asaolu, et al. 2018). This means that all entities within a jurisdiction are compelled by law to contribute to the revenue of the jurisdiction.

Extant literature evidence the fact that taxation contribute to the economy in several ways such as making direct contribution to the revenue capacity of the government (Didia & Tahir, 2021; Oladipupo & Ibadin, 2015). Furthermore, taxation serve as an economic policy in redistribution of wealth resources (Cowell, 2008; Benabou, & Tirole, 2006) and redirection of economic activities and investment to priority sectors/industries to induce growth in the right direction (Omesi & Nzor, 2015; Cowell, 2008); as a policy tool to discourage production/consumption of products and services that are perceived to be socially/economically harmful (Chaloupka, Powell, Warner, 2019; Oladipupo, & Ibadin, 2015).

Available data indicates that federal government revenue from indirect taxation - especially VAT has been increasing significantly in recent times (FIRS Annual Report, 2021). Thus, for the most recent year on record - 2021, value added tax contributed N2.073 trillion Naira or 32 percent to total tax revenue. This is significantly higher than the N1.190 trillion or 22.6 percent recorded in 2019 and this is expected to continue increasing as new VAT policy measures continues to come on stream (FIRS Annual Report, 2021). This research is intended to evaluate the effect of taxation on manufacturing sector contribution to Nigeria Economy.

### **Research Problem**

Taxation is of great importance to any nation in its pursuit of self-reliance and in meeting its economic regulation needs (Ewa, Adesola & Essien, 2020; Ibadin & Oladipupo, 2015; Odusola, 2006). Taxation is provides the mechanism which the government utilizes to implement and achieve its economic objectives (Etim, Paul & Essien, 2018; Odusola, 2006). However, taxation is also noted to have some serious consequences more especially if the tax policy or system is not properly designed or implemented. As noted by Obaretin, Akhor, & Oseghale, 2017), taxation can also hinder economic growth/development especially where it is perceived to be inimical to economic activities. This so in cases where the tax rate is perceived to be too high. This can discourage both local and foreign investment in affected sectors or industries - unless it was conceived or designed for that purpose.

Another problem relates to the issue of multiple taxation which is prevalent in Nigeria's tax administration structure. This is very relevant in Nigeria where there are three tiers of government and the state and local governments impose spurious taxes on economic units even after they may

have taken care of tax obligations at the federal level (Adegbie, Nwaobia, & Osinowo, 2020). Other problems relates to tax evasion and avoidance (Obaretin, Akhor & Oseghale, 2017; Micah, Chukwuma & Umobong, 2012; Nzotta, 2007); corruption, misuse/misapplication of tax revenue (Obaretin, Akhor, & Oseghale, 2017; Odusola, 2006); ineffective/inefficient tax administration systems (Micah, Chukwuma & Umobong, 2012; Odusola, 2006); and outdated tax administrations systems and processes (Odusola, 2006; Obaretin, Akhor & Oseghale, 2017).

While there are numerous research relating to taxation and its nexus to the economy (Ewa, Adesola & Essien, 2020; Olaoye, Ogundipe & Oluwadare, 2019; Ayeni, Ibrahim & Adeyemi, 2017; Ihenyen, & Ebipanipre, 2014). However, very little of the extant research have been conducted to interrogate how taxation affect the manufacturing sector's contribution to economy. The present research is intended to contribute to knowledge by filling this identified gap in previous research.

### **Purpose of the Research**

The aim of this research is to determine how taxation affects the contribution of the manufacturing sector to the economy of Nigeria. This aim will be achieved by evaluating the relationship between value added tax (VAT); corporate income tax (CITX); petroleum profit tax (PPTX), and the manufacturing sector GDP in Nigeria economy.

### **Theoretical Framework - Tax Incidence**

The theory of tax incidence proposes that economic units - persons or firms - who pay tax are not necessarily the ones that bear the tax burden. This is an important delineation of legal and economic incidence as it may inform policy in the imposition of certain taxes (Mieszkowski, 1969). According to Fullerton, and Metcalf (2002), it involve the positive analysis of the impact of the imposition of taxes on the distribution of welfare within an economy which begins with the very basic insight that the economic unit who is legally obligated to make the tax payment may not be the economic unit whose income/welfare is ultimately reduced by the presence of the tax.

Distinction is also made between the entities/persons who ultimately bear burden of the tax and those on who it was initially levied. The tax burden measures the real economic weight of the tax - which is measured by the difference between post-imposition incomes or utilities prior to and after the imposition of the tax with consideration for how the tax affects or results in price changes (Auerbach, 2018). For example, if a 20 percent tax imposed on the importers/sellers of cars leads to a 20% percent increase in the prices of the vehicles, then the tax burden is borne entirely by the buyer even though the tax was initially imposed on the importer/seller.

This presupposes that the buyer do not have an alternative other than to buy the given product. If there is an alternative, for example a local manufacturer of a similar product, the buyer may decide to buy from the local manufacturer on d-same tax is not imposed. Thus, the seller may decide either not to import the car or alternatively (depending on his profit margin) bear the full burden of the tax or share it with the buyer. This also brings to the fore issues relating to the rationale for the tax - whether to effect changes in consumption pattern or entirely for revenue mobilization/generation.

Depending on the nature of the product and its demand (elastic or inelastic), tax authorities can predict who ultimately bears the burden of taxation and this will inform the decision of whether to proceed with the imposition of the tax or not. As noted by Fullerton, and Metcalf (2002), an important concept in tax incidence relates to the fact that the actual or ultimate burden of the tax does not depend on who or where the tax was initially collected from but rather on the price elasticity of the demand and price elasticity of supply of the given product. Thus, as a general policy issue, tax incidence is not supposed to violate the principles of a desirable tax system - more

especially as it relates to transparency and fairness (Auerbach, 2018). This implies that a proper study is to be undertaken prior to imposition of a tax to determine where the actual burden lies and if such a burden is desirable for the identified economic unit. The incidence of tax if not properly assessed may have implication to productivity and investment.

### **Empirical Evidence**

Agunbiade, and Idebi (2022) examined the relationship between tax revenue and economic growth in Nigeria over a period of thirty-nine (39) years from 1981 to 2019. To measure tax revenue, the research chose the three most high profile tax revenue sources in the country - *vis-à-vis*; companies income tax (CIT), value added tax (VAT) and petroleum profits tax (PPT). Data were sourced from the FIRS and NBS and analyzed using the vector error correction model (VECM) and Johansen test of co-integration test. Findings of the research revealed that a long-run relationship between the variables and a causal relationship among economic growth and the different tax components. The study recommended that there should be a broad based tax strategy to focus on all key areas of the tax system in order to increase in tax revenue generated. Furthermore, emphasis should be on simplification of the tax system and ease of implementation.

The research by Ayeni and Omodero (2022) investigated the effects of federal government tax revenue on the economic growth of Nigeria. The research utilized time series data spanning twenty-two (22) from year 2000 to 2021. Similar to Agunbiade, and Idebi (2022), the research focused in corporate income tax, petroleum profit tax and value added tax and their relationship to the economy measured in terms of GDP. Data used in the research were of secondary nature and were sourced from public institutions including the FIRS and CBN. Findings of the research which were obtained through the application OLS analytical methods showed that revealed that petroleum profit tax, and value added tax had a positive and significant effects on the economy. However, corporate income tax had a negative and significant effect on the economy. Based on the findings, it was suggested that tax authorities should educate the general public on the need and benefits of paying their taxes. There is also the need to encourage or incentivise companies to pay their taxes in order to improve the growth of the economy.

Nwobodo, Adegbe, and Fakunmoju (2022) investigated the effect of indirect taxes on Nigeria economic growth. The study used ex-post facto research design with focus value added tax (VAT) and customs and excise duty (CED) as economic revenue diversification and real gross domestic product (RGDP) as a measure of economic growth within the period of covering from 1995 to 2019. ARDL method was employed for data analysis. Findings of the research showed that there that customs and excise duty was a major short-run determinant of economic growth, while value added tax was not a short-run determinant of economic growth. Further, there was long-run relationship between value added tax, customs and excise duty and economic growth. The study concluded that both in the short and long-run, value added tax and customs and excise duty affect economic growth. The research thus recommended that government should ensure that the burden of value added tax and customs and excise duty is minimal on investors and consumers in order to encourage economic growth and investment.

Atolagbe, and Abiodun (2021) sought to determine the impact of trade liberalization and other macroeconomic factors on tax revenue in Nigeria. Data for the research was collected from various public institutions including the CBN, FIRS and NBS for a period of spanning thirty-nine (39) years from 1981 to 2019 and analyzed using the ARDL and ECM. From the findings, it was learned that a one percent change in trade liberalization resulted in a three percent change in both total and domestic tax revenue. Further, there was short and long-run equilibrium relationship among

the variables. The macroeconomic indicators were shown to be predictors of both domestic and external tax revenues are gross domestic product components petroleum and mining, FDI, agriculture, per capita income, exchange and inflation rates. The researcher proposed improvement in tax revenue through comprehensive trade liberalization policies as well as regulate changes in macroeconomic variables.

Ogudu, Kingsley, and Akinlosotu (2018) conducted a panel data analysis investigating the nexus between corporate income tax and the performance of the manufacturing sector in Nigeria from 2013 – 2017. The research adopted the ex-post facto design was adopted for which data was collected from a sample of five (5) consumer goods manufacturing companies listed on the Nigeria Exchange (NGX). Data was collected from various issues of the annual financial statement of selected manufacturing companies. The fixed and random effect regression technique was utilized for data analysis. Findings revealed that corporate income tax had a direct significant impact on net income and return on equity of manufacturing companies in Nigeria. They recommended the utilization of tax revenue in the provision of social and economic infrastructure to improve standard of living and reduce cost of production.

Nnubia, and Obiora (2018) examined the effect of tax incentives on economic growth in Nigeria. Secondary data relating to tax incentives and economic growth were sourced from CBN, and FIRS which were drawn from 2007 to 2016. The collected data were analysed using ordinary least square (OLS) estimation method and findings showed that annual tax allowance is positive and had significant impact on economic growth while investment allowance had a negative and significant impact on economic growth. The study recommended that to encourage investment in the manufacturing sector, there should be a focus on enacting policies that encourage investment by increasing the rate of investment allowance on fixed capital investment.

Nweze, and Edame (2016) empirical examined the relationship between oil revenue and economic growth in Nigeria for the period 1981 to 2014. The research employed secondary data on gross domestic product, oil revenue and government expenditure which were sourced mainly from CBN publications. Various advanced econometric methods of OLS regression method were used for data analysis. Among others, results of data analysis indicated that there was a long-run relationship oil revenue and economic growth and government expenditure and economic growth. However, the relationships were negative - implying that in the long run, oil revenue and government expenditure were deleterious to economic growth. The research thus concluded that there is need for the government to should invest the revenue generated from petroleum and related tax revenue in other domestic sectors manufacturing and the agric sector.

Gadzo, Gatsi, and Kportorgbi (2013) investigated the impact of corporate income tax on the financial performance of manufacturing companies listed in Ghana. The study used panel least square (PLS) data methodology covering (10) ten listed manufacturing corporate organizations over a seven (7) years period to empirically evacuate the influence of company income taxation on the firms' financial performance. Findings of the study revealed that there is significantly negative association between corporate taxation and financial performance.

## **Methodology**

This section presents the methodological approaches to the research. The ex-post facto design is considered to be appropriate for the research. This is because the phenomena under scrutiny has already happened and the variables are obtained and analyzed “as is” and not subject to control or interference from the researcher. The area of interest is the Nigerian economy - with specific reference to the federal government taxation/revenue and its relationship with to the

manufacturing sector of the economy. The period of the study is expected to be from 1995 to 2021 comprising a period of twenty-seven (27) years. Secondary data type/source will be utilized. The data for the study is historical in nature and was collected 'as is' without modification/alteration by the researcher. Hence, the data was collected from the Central Bank of Nigeria (CBN); National Bureau of Statistics (NBS) and Federal Inland Revenue Services (FIRS). Variables of interest are those relating to taxation - value added tax (VATX); petroleum profit tax (PPTX); corporate income tax (CITX); manufacturing sector contribution to the economy - manufacturing sector GDP (MGDP); and total public debt (TPDT) which was included as a moderating variable.

**Method of Analyses and Model Specification**

This study adopted the econometric model as put forward by Olaoye, Ogundipe, and Oluwadare (2019); and Onakoya, Afintinni, and Ogundajo (2017) who posited in their model that: tax revenue generated by the federal government is a determinant of economic growth. The multiple regression model is specified to test for the relationship between the variables of the study. However, to avoid the problems associated with running an analysis with a non-stationary dataset, the unit root test will be conducted in order to ensure that the data is stationary and avoid a spurious regression result. For the purpose of this research, the functional form of relationship between the research variables is stated as follows:

$$MGDP = f(VATX, PPTX, CITX, TPDT) \dots\dots\dots 1$$

and statistically:

$$MGDP = b_0 + b_1VATX + b_2PPTX + b_3CITX + b_4TPDT + u \dots\dots\dots 2$$

To ensure that all variables are normally distributed as required for time series data analysis, all variables are converted and expressed in their natural log form:

$$\ln MGDP = b_0 + b_1\ln VATX + b_2\ln PPTX + b_3\ln CITX + b_4\ln TPDT + u \dots\dots\dots 3$$

A priori Expectation  $b_1, b_2, b_3, b_4$  and  $> 0$

The theoretical relationship among the variables of interest as well as expected signs and significance of the parameter estimates of the models are explained by the a priori expectation that increase in funding of federal government tax revenue from value added tax, petroleum profit tax and corporate income tax will reflect in positive performance in the economy via the manufacturing. This theoretical reasoning is supported in a similar research works by Olaoye, Ogundipe, and Oluwadare (2019); and Onakoya, Afintinni, and Ogundajo (2017).

**Data and Results**

Descriptive statistics result in table 1 shows that the maximum manufacturing (MGDP) sector GDP of N25725.870 billion was recorded in 2021 while the lowest was N370.156 recorded in 1994. For the period of the research (1994 to 2021), the mean value for manufacturing (MGDP) sector GDP was N5645.638 billion; - t is noted from the above that in line with maximum values, manufacturing sector GDP performance had the high mean value - which is also reflected in the standard deviation with 6377.931. On the other hand, the taxation components, viz., value added tax (VAT), petroleum profit tax (PPTX), and corporate income tax (CIT) had maximum values of N2072.850 billion; N3201.320 billion; and 1747.950 billion and minimum values of N7.260 billion; N42.830 billion; and N12.280 billion respectively. Of the three independent variables, petroleum profit tax (PPTX) had the highest mean and standard deviation at N1313.375 billion and 964.643 respectively.

**Table 1 Descriptive Statistics**

	Mean	Maximum	Minimum	Std. Dev.	J-B	Prob.	Obs.
<b>MGDP</b>	5645.638	25725.870	370.156	6377.931	18.512	0.000	28
<b>VATX</b>	507.167	2072.850	7.260	519.849	8.841	0.012	28
<b>PPTX</b>	1313.375	3201.320	42.830	964.643	1.370	0.504	28
<b>CITX</b>	570.653	1747.950	12.280	563.429	2.959	0.228	28
<b>TPDT</b>	8531.818	35097.790	1037.296	8913.157	14.976	0.001	28

However, value added tax (VATX) had a the lowest standard with the value of 519.849 implying that values for VATX within the period of the research were clustered closer to the mean of N507.167 billion than the observed values for petroleum profit tax (PPTX) and corporate income tax (CITX). It is also instructive that petroleum profit tax higher values of income than other tax components - which is consistent with extant empirical findings.

The moderating variable - total public debt (TPDT) recorded a maximum value of N35097.790 billion recorded in 2021 which also coincides with the other variables. However, the minimum public debt value of N1037.296 billion was recorded in 1996 implying that more fluctuations in outstanding public debt balance than the other variables. Its standard deviation was also remarkably higher than others at 8913.157 implying that the values for public debt witnessed more spread from the mean than other variables. In all, the probability of the Jarque-Berra statistics for all variables was statistically significant - implying that in its present form, the dataset were not normally distributed. This informs the justification for transforming the variables into their natural log form prior to further analyses. The last column of the result indicates that twenty-eight (28) observations were recorded from 1994 to 2021.

**Table 2 Stationarity Test Summary Result**

Variable	ADF Test		Philip-Perron		Order of Integration
	Levels	First Difference	Levels	First Difference	
MGDP	0.878502	-4.184892*	-0.310767	-4.435865*	I[1]
VATX	-2.703997	-5.180646*	-2.793713	-6.442431*	I[1]
PPTX	-2.107114	-4.280068*	-2.516289	-4.212531*	I[1]
CITX	-2.108411	-5.992565*	-2.686068	-5.992565*	I[1]
TPDT	-0.598312	-3.791151*	-0.434953	-3.805246*	I[1]

**Note:** \* indicates signifies at 5 percent; 95% critical values are reported in parentheses below each test value.

Two unit root (stationarity) test methods were applied to the dataset to improve the detection of non-stationary time series. In table 2 it is observed that the augmented Dickey-Fuller (ADF) test and Philip-Perron (PP) tests are implemented. The summary result indicates that while agricultural sector GDP was stationary at zero order of integration [I(0)], all other variables (manufacturing (MGDP), value added tax (VATX), petroleum profit tax (PPTX), corporate income tax (CITX), and total public debt (TPBD) were stationary after first differencing order of integration I(1). The above results imply that the ARDL model is the appropriate estimation technique to be used.

### Taxation and Manufacturing Sector Performance

The analysis in table 3 below focuses on the highlighted models (rows) which are auto-identified by the ARDL process in Eviews based on the lag period that give the most accurate outcome (please see appendix for detailed results). Table 3 shows a positive relationship between corporate income tax (CITX) and manufacturing sector performance which is measured with manufacturing sector GDP. The coefficient of regression for the relationship between the variables

gave a value of 0.3268. This implies that increasing revenue from corporate income tax sources is predicted to enhance manufacturing sector GDP and vice versa. The relationship is also statistically significant as the probability of t-statistic gave a value of 0.0078 (0.78%) which is much less than the 5% critical limit.

**Table 3: ARDL Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.3391	0.1268	2.6737	0.0233
MGDP(-1)*	-0.4778	0.1004	-4.7577	0.0008
VATX(-1)	0.1083	0.0714	1.5178	0.1600
PPTX(-1)	-0.1677	0.0455	-3.6884	0.0042
<b>CITX**</b>	<b>0.3268</b>	<b>0.0985</b>	<b>3.3162</b>	<b>0.0078</b>
TPDT(-1)	0.1941	0.0473	4.1077	0.0021
D(MNFG(-1))	0.3255	0.2145	1.5176	0.1601
D(MGDP (-2))	0.5991	0.1898	3.1569	0.0102
<b>D(VATX)</b>	<b>0.2782</b>	<b>0.0887</b>	<b>3.1369</b>	<b>0.0106</b>
D(PPTX)	0.0301	0.0348	0.8655	0.4071
D(PPTX(-1))	0.2161	0.0454	4.7540	0.0008
<b>D(PPTX(-2))</b>	<b>0.0704</b>	<b>0.0287</b>	<b>2.4539</b>	<b>0.0340</b>
D(TPDT)	0.0637	0.0492	1.2932	0.2250
D(TPDT(-1))	-0.1401	0.0453	-3.0940	0.0114
<b>D(TPDT(-2))</b>	<b>-0.1870</b>	<b>0.0647</b>	<b>-2.8896</b>	<b>0.0161</b>

R-squared: 0.999; F-stat: 1264.372; F-stat: 1264.372; Prob. (F-stat): 0.000; D-W stat: 2.803

The relationship between value added tax (VATX) and manufacturing sector GDP was positive with a coefficient of regression value of 0.2782 indicating that a unit increase in revenue generated from value added tax sources is predicted to be associated with a 0.2782 units increase in manufacturing sector GDP and vice versa. Similar to the above, the relationship was also statistically significant considering that the probability of t-statistic value of 0.0106 (1.06%) is less than the 5% critical limit. Petroleum profit tax (PPTX) had a positive relationship with manufacturing sector GDP. The coefficient of regression for the relationship between the variables gave a value of 0.0704 with the implication that a unit increase in revenue from petroleum profit tax (PPTX) sources is predicted to result in 0.0704 units increase in manufacturing sector GDP and vice versa. The relation between the variables had a probability of t-statistic value of 0.0340 (3.4%) which is less than the 5% critical limit. However, the moderating variable - total public debt (TPBD) had a negative relationship with manufacturing sector GDP with a coefficient of regression value of -0.1870 with the implication that increasing level of public is predicted to have a deleterious effect on the manufacturing sector GDP the probability of t-statistic had a value of 0.0161 (1.61%) implying that the relationship between public debt and manufacturing sector GDP was statistically significant. The coefficient of determination (R-square) indicates that as much as 99.94% of the variables in manufacturing sector GDP can be explained by variations in the three components of taxation and total public debt in the model, viz., value added tax, petroleum profit tax and corporate income tax, and total public debt. The probability of F-statistic had a value of 0.000 indicating that all independent variables in the model - including the moderating variable as a unit are statistically significant in predicting manufacturing sector performance in Nigeria.

**Table 4: Granger Causality Test Result**

Null Hypothesis:	Obs	F-Stat	Prob.	Direction of Causality
VATX does not Granger Cause MGDP	26	1.2212	0.315	None



MGDP does not Granger Cause VATX		1.1344	0.3405	
PPTX01 does not Granger Cause MGDP01	26	2.4811	0.1078	None
MGDP01 does not Granger Cause PPTX01		0.9617	0.3984	
CITX01 does not Granger Cause MGDP01	26	1.1696	0.3299	None
MGDP01 does not Granger Cause CITX01		0.3479	0.7102	

Table 4 above show the results of the Granger Causality test for taxation and manufacturing sector GDP. From the results, it can be observed that: with a probability value 0.315, the null hypothesis that value added tax VATX does not Granger Cause MGDP is not rejected. Similarly, the null hypothesis that MGDP does not Granger Cause VATX is also not rejected as the probability value is higher than 0.05 at 0.3405. The implication of this result is that there is a no causal relationship between value added tax (VATX) and manufacturing sector GDP (MGDP). Thus, while both variables may register some causal effect on each other, the size and quantum of the effect is minimal as such not statistically significant in both directions. Similar outcome is also reported for the causal relationship between petroleum profit tax (PPTX) and manufacturing sector GDP (MGDP); and corporate income tax (CITX) and manufacturing sector GDP (MGDP).

### Discussion of Findings

Taxation is a critical source of revenue for governments to meet development obligations. Its importance is hinged on the fact that if properly designed and implemented, taxation provides the most consistent and stable source of revenue in comparison to other sources such as natural resources exploitation, foreign capital inflow all of which may be subject to global economic conditions that are beyond the control of the domestic government. In this research, an extensive investigation is undertaken to explore how revenue from taxation affect the economy of Nigeria. This research takes deeper look into the economic effects of taxation on the contributions of the manufacturing sector (MGDP) to the gross domestic product of the country. In measuring taxation, the research focus was on value added tax (VATX), petroleum profit tax (PPTX), and corporate income tax (CITX). The research also considers total public debt (TPDT) to be a critical source of financing economic activities and thus is included as a moderating variable. The research data is collected from several sources including the FIRS, the NBS, and CBN. The period under review started from the inception of value added tax in Nigeria to the data for which complete data points are available from the various sources. Thus, the period of the research covered in the research is twenty-eight (28) years from 1994 to 2021. Several statistical and econometric methods were adopted for data analysis, viz., descriptive statistics; augmented Dickey-Fuller (ADF) and Philip-Perron unit tests; the auto-regressive distributed lag (ARDL) technique; and Granger causality test.

Findings of this research revealed that all three tax revenue components, viz., value added tax, petroleum profit tax and corporate income tax had a positive relationship with manufacturing sector GDP. This implies that revenue from taxation components help to improve the performance of the manufacturing sector in Nigeria. The manufacturing sector contributes to tax revenue generated by the federal government through various sources including the mandatory corporate income tax which every incorporated business organisation is obligated to pay, second through the value added tax that is charged on all manufactured (graded and packaged) products, third through personal income tax charged on individual income among others. Thus, while FIRS do not generate sector based data on corporate and value added tax revenue, it is evident that the manufacturing sector makes immense contribution to the revenue drive of the government. In addition, local manufacturing provide local substitution for products that ordinarily will be imported from other

countries. As such, manufacturing helps to cut down on imports which drain foreign exchange. The sector also earns the country foreign exchange for the country through the export of locally manufactured products. Considering the importance of the manufacturing sector to economic growth and development, numerous researchers has called for the government to provide incentive for companies in the sector. For example, Nnubia, and Obiora (2018) in their research recommended that government provide tax related incentives including tax holidays to manufacturing companies.

Others have also called for government to channel tax revenue towards the provision of infrastructure and other amenities that will encourage companies to expand their manufacturing capacity or the entry of new firms into the sector (Nweze, & Edame, 2016). Thus, the research by Ogudu, Kingsley, and Akinlosotu (2018) found that corporate income had a positive effect on economic performance - especially through the provision of infrastructure that enhance the manufacturing capacity in the country. However, the research by Gadzo, Gatsi, and Kportorgbi (2013) revealed that specific to individual organisations, tax burden occasioned corporate income tax has a negative effect on the performance of individual organisation. Thus, tax related policies by the government should consider both the macro-level and individual organisation effects of taxation to ensure a proper balance that provide optimal benefits to the entire society.

### **Conclusions and Recommendations**

From the findings, it is concluded that the performance of the manufacturing in Nigeria have benefitted from value added tax revenue. This is notably through the provision of infrastructure that helps to enhance manufacturing capacity of the country and hence reduce dependence on import. Additionally, the manufacturing sector have also benefitted from corporate income tax and petroleum profit tax revenues revenue - which constitute major sources of tax revenue in the country. The significance level of the outcomes for all three tax components in relation to manufacturing sector performance implies that these tax revenue sources are can be relied on generate growth enhancing results in the manufacturing sector in the future. It is suggested that government sustain its policy efforts in developing the manufacturing sector of the company. However, it is likely that further improvement in performance will be recorded by providing incentives for small and medium scale manufacturing enterprises. Policies in the sector should be designed to encourage small manufacturers to be captured in the formal sector and expand their manufacturing capacity. This will help to capture more manufacturing organisations in the tax nets and thus further improve revenue generations. There is also need for the government to take more drastic measures to improve infrastructure development in the country. This is considering that achieving the desired results in the activities and operations of other sectors depends to a large extent on the core and basic infrastructure.

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