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# Real Sector Output And Tax Revenue in Nigeria

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**ABSTRACT**

The 2023 Appropriation Act shows that the cost of servicing debt is 65% approximately of the estimated revenue to be generated which if maintained at this level will see Nigeria in debt perpetually, there is therefore a need to improve public revenue level in Nigeria. Hence, this study was carried out to assess the influence of real sector output on tax revenue in Nigeria. This study is built on the resource dependence theory. Ex-post facto research method was used in this study and secondary data was collected over a twelve-year period from 2010 to 2021 from National Bureau of Statistics Bulletin and the Federal Inland Revenue Service report. The multiple regression model was used to examine the influence of manufacturing and industry sector on tax revenue in Nigeria. The result shows real sector output has a negative influence on direct tax revenue and a positive influence on indirect tax revenue in Nigeria. It is concluded from this study that real sector output has a significant influence on indirect tax revenue in Nigeria. It is recommended that in order to boost indirect tax revenue, government should provide enabling environment for the real sector in order to boost indirect tax revenue.

**Keywords**: Ability to pay, Corruption, Direct tax, Indirect tax, Population, Real sector,

## INTRODUCTION

There has been many talk about the national debt level in Nigeria in recent times. This is not necessarily due to the level of debt in Nigeria as an examination of the debt to GDP ratio threshold actually allows Nigeria to incur an increasing level of debt to GDP. As its debt to GDP ratio is low compared to developed countries such as United States of America (USA), Germany amongst others. Despite this trend, it is worrisome that Nigeria when compared to it contemporaries in Africa have a tax to GDP ratio averaged at 27% while that of Nigeria fluctuates within the range of 6 to 8% (Audu, 2021). This is low and poses a challenge for the sustainability of the Nigerian economy as the latest Appropriation Act which is for year 2023 shows that the cost of servicing the debts incurred is estimated at N6.31 trillion while the total revenue estimated to be generated for the same fiscal year is N9.73 trillion (BudgIT, 2023). This shows that cost of servicing debt is sixty-five percent approximately. This clearly shows a revenue generating problem. As this situation might leave the economy perpetually in debt. In corporate finance, government debts are considered as risk free because every government and country is assumed to perpetually exist. However, history has shown Greece declared bankruptcy (Ozturk & Sozdemir, 2015). Even though their loan was restructured it therefore raises concern for effective management of public debt and invariably this points to raising sustained income levels. In a bid to review ways to boost tax revenue, a critical examination of organizations show that firm size has an influence on the income level (Agustini, 2016). Borrowing from this logic in the corporate world, it suggests that the level of revenue to be raised in the economy might be a function of the economic potential of the economy. Therefore, the primary objective of this study is to examine the influence of the real sector on tax revenue in Nigeria. In order to achieve the main objective, the following specific objectives were met which are to:

i. Assess the influence of the real sector output on direct tax revenue in Nigeria; &

ii. Evaluate the influence of the real sector output on direct tax revenue in Nigeria.

In order to achieve the specific research objectives, the following research questions were answered:

i. To what extent does the real sector output influence direct tax revenue in Nigeria?
ii. How does the real sector output influence indirect tax revenue in Nigeria?

The above research questions will be answered using the following research hypotheses:

**$H_0$1:** Real sector output does not have a significant influence on direct tax revenue in Nigeria

**$H_0$2:** Real sector output does not have a significant influence on indirect tax revenue in Nigeria

The remaining part of this study is made up of the conceptual review, theoretical framework, review of existing literature, methodology, data analysis, discussion of findings, conclusion and recommendation.

## Conceptual Review

### Real Sector Output

Batko (2013) described a real economy as one that involves the actual production or purchase of goods and services. In an attempt to further clarify on the real sector, it is placed in contrast with the money sector which is concerned basically with the flow of finance. The money sector shows financial ownership of the factors in the real sector. The real output of the sector revolves around the agriculture produce, manufactured products, real estate, oil, labor services amongst others. On the other hand, the money or finance economy revolves around the financial intermediaries, the capital and money market and other financial services. Oyebanji *et al*., (2019) explained that the Central Bank of Nigeria (CBN) classified the real sector in Nigeria into agricultural, industrial, construction, trade (which includes both wholesale and retail) and all non-financial services. Oyebanji *et al*., (2019) opined that it is the main driver of the growth of the economy as it is concerned with the actual production of goods and services which creates value and employs more of the labor force available in the economy compared to the financial economy. In validation of the real sector as the main driver of the economy, Nnyanzi (2015) showed empirically that agriculture and manufacturing significantly contributed to GDP and tax revenue in Uganda.

### Tax Revenue

Tax revenue can be described as the major income to any government in existence (Audu, 2020). Tax revenue is used to drive infrastructure development such that economic activities are sustained and more tax revenue can be generated (Onodje, 2009). Tax revenue is made up of both direct tax revenue and indirect tax revenue. Onyeka and Nwankwo (2016) opine that the actual tax revenue realized represents the condition of the environment put in place. Brautigam (2008) opines that tax revenue refers to the level at which a government can incur expenses without involving debt finance. Direct taxes can be evaded while it is difficult to avoid indirect taxes (Somorin, 2019). Indirect taxes are usually on consumption which is a function of the output from production, direct taxes are usually on gains.

In Nigeria, since the beginning of the fourth republic in 1999, Nigeria has maintained a deficit budget practice which means that public expenditure has been more than public revenue which in Nigeria is made up of oil and non-oil revenue (Omolehinwa & Naiyeju, 2015). The non-oil revenue being tax revenue means that there is need for more tax revenue to be generated by the government. Hence, the need for this study as an attempt to assess how the enhancement of the output from the real sector will influence the level of tax revenue generated in Nigeria.

## Theoretical Framework

Resource dependence theory development can be traced to the contribution of James Thompson in the 20th century with its emergence in the 1960's more specifically. The resource dependence theory postulates that systems need to relate with other systems in their environment to create value and the resources that they need to survive. The theory justifies relationships as being a determinant of the value created that will enhance the generation of resources required to run the system. This therefore means that there is a need for a level of cooperation among the various systems in the environment. The theory therefore supposes that a system is only as powerful as other systems in the environment recognizes it to

be so. This means that firms will be ready to partner with the government to the extent that the government supports its existence.

The assumptions put behind this theory are that organizations respond better to the environment based on the degree of responsiveness from the government. In addition, it is assumed that activities and strategies of firms are developed as a reaction to their environment.

Furthermore, the theory is premised on the basis that organizations are faced with competition to reach out to customers and to get supplies of input (raw-materials) which will also influence their activities hence the ability of government to stabilize the business environment to ensure a level playing ground and drive productivity. The resource dependence theory moved the focus of organizational performance as critically being within the influence of internal leadership alone but also in relations with the limiting factors in the environment.

Criticism against the resource dependent theory shows that managers need to also show skill after scanning the environment to manage the effect of the environment. This shows that the environment does not alone influence organizational success but also the managerial aptitude in the firm (Gerald Davis).

Furthermore, Donald Palmer showcased that regardless of how the environment was made to be conducive, some organizations are formed to pursue the interest of its owners which might not necessarily to pursue profit or to create value.

Despite these criticisms, the resource dependence theory seems fit for this study as it explains the relationship between the real sector output and tax revenue. This can be used to show how the activities of government can influence business organizations and more specifically, those in the real sector. From the theory, it shows how the activities of government can influence the performance of firms which if high can translate to high tax revenues for the government. Hence, the theory suggests that the government needs to produce a conducive environment to ensure that outputs from firms are sustained at a significant level.

**Review of Extant Literature**

Rafsanjani and Agustina (2022) assessed the effect of tax capacity and effort on tax performance in Indonesia. Secondary data was gathered over a period span from 2014 to 2018. This covered thirty-four provinces. They showed that tax effort and capacity have a significant effect on tax generated.

Chigome and Robinson (2021) examined the determinants of tax capacity among the southern African countries. Quantitative research method was used and secondary data was gathered from 13 southern African countries. The result showed that financial deepening, economic development and trade openness all have a significant effect on tax capacity.

Saptono and Mahmud (2021) analyzed some identified factors and their influence on tax revenue among Association of Southeast Asian Nations (ASEAN) countries. Panel data analysis was carried out and secondary data was obtained for a period which ranges from 2009 to 2015. They pointed out from the study that per capita income, industrial sector contribution to GDP and trade liberalization all have a significant effect which is positive on tax revenue.

Piancastelli and Thirlwall (2020) examined the tax capacity on the tax revenue generated. Panel data analysis was used to analyze secondary data generated from 59 countries selected over a time range from 1996 to 2015. The result of the study showed that South Africa showed the highest tax effort and Switzerland showed the least effort.

Amoh (2019) examined tax capacity and effort on tax burden in Ghana. Secondary data was collected and analyzed using the ordinary least square method. Tax burden in Ghana is low which points at tax system inefficiency and low tax effort.

Adegbie *et al.,* (2019) assessed the effect of real sector growth on tax revenue in Nigeria. *Expost facto* research design was used and secondary data was collected over a time period spanning from 1981 to 2017. The study showed that agriculture and trade sector had a significant effect on tax revenue while all other real sector had an insignificant effect on tax revenue in Nigeria.

Oyebanji *et al*., (2019) examined the effect of real sector output on tax revenue in Nigeria. The *expost facto* research design was used and secondary data was collected over a time frame from 1981 to 2017. The outcome of the study shows that real sector output while controlling for inflation and exchange rate have a significant effect on tax revenue in Nigeria.

Nnyanzi (2015) assessed the influence of agriculture sector on tax revenue in Uganda. The *expost facto* research design was used and secondary data was collected over a time frame from 1987 to 2011.The study shows that agriculture and manufacturing ratio to GDP has a significant effect on tax revenue in the short-run.

Rabiei and Balagetabi (2013) assessed the association between tax capacity and oil revenue among six OPEC countries. *Expost facto* research design was used and secondary data was gathered over a time span from 1990 to 2008. The study showed that tax capacity and per capita income has a positive relationship.

## METHODOLOGY

The quantitative research method was used in this study while the *ex-post facto* research design was employed in this study. The study focused on Nigeria for a period of twelve years which ranged from 2010 to 2021. The reason for selecting this time frame is due to data availability on the breakdown of tax revenue component into direct and indirect tax revenue. The multiple regression method was used to analyze the influence of the independent variable (real sector output) on the dependent variable (tax revenue). The independent variable was represented with output from the manufacturing and industry sectors of the economy as proxies while the dependent variable was represented with direct and indirect tax revenue as proxies. The T-test was used to test the significance of the result at a set rate of 5%. The breakdown of the multiple-regression model is depicted below:

Y=f(X)

Tax Revenue = f (Real sector output).

Mathematically, this can be written as shown below:

$\text{Log DTR} = \text{Log } \beta_0 + \text{Log } \beta_{1RSG} + \text{Log } \beta_{2POP} + \text{Log } \beta_{3COR} + e$……………….i

$\text{Log ITR} = \text{Log } \beta_0 + \text{Log } \beta_{1RSG} + \text{Log } \beta_{2POP} + \text{Log } \beta_{3COR} + e$ ……………….ii

Where

DTR = Direct Tax Revenue (Dependent Variable)

ITR = Indirect Tax Revenue (Dependent Variable)

$\beta_0$ = Intercept where independent variable is zero

$\beta_{1RSG}$ = Real sector to GDP (Independent Variable)

$\beta_{2POP}$ = Population of urban to total population (Independent Variable)

$\beta_{3COR}$ = Technology capacity (Independent Variable)

e = error term

## DATA ANALYSIS AND DISCUSSION OF FINDINGS

### Test of Hypotheses

### Hypothesis One

**$H_01$:** Real sector output does not have a significant influence on direct tax revenue in Nigeria.

**Table 1. Regression result on Hypothesis One**

| **Estimation Techniques** | **Regression Result** | | | |
|---|---|---|---|---|
| **Dependent Variable: IT** | **Coeff.** | **Std. Err** | **T-Stat** | **Prob** |
| **Constant** | 2867.094 | 1199.843 | 2.390 | 0.041 |
| **MAN** | 0.001 | 0.181 | 0.006 | 0.995 |
| **IND** | 0.025 | 0.131 | 0.188 | 0.855 |
| Adjusted $R^2$ | -0.140 | | | |
| F-Stat | $F_{(2, 12)} = 3.25$ (0.731) | | | |

**Source: Author's Computation (2023)**

Table 1 shows that real sector output does not have a significant effect on direct tax revenue. This is represented by the computed p-value of 0.731 which is higher the set p-value of 0.05 for this study. The result also shows that manufacturing and industrial activities each have a positive influence on direct tax as indicated in value of the coefficient for each of the variable. This means that the higher the value of contribution from these industries, the higher direct tax revenue will be but at an insignificant level. The adjusted r square is -0.140 which suggests that real sector output is not a good predictor for direct tax revenue.

**Hypothesis Two**

**$H_0$2:** Real sector output does not have a significant influence on indirect tax revenue in Nigeria

Table 2. **Regression result on Hypothesis Two**

| **Estimation Techniques** | **Regression Result** | | | |
|---|---|---|---|---|
| **Dependent Variable: DT** | **Coeff.** | **Std. Err** | **T-Stat** | **Prob** |
| **Constant** | 107.109 | 205.240 | 0.522 | 0.614 |
| **MAN** | 0.103 | 0.031 | 3.316 | 0.009 |
| **IND** | -0.038 | 0.022 | -1.708 | 0.122 |
| Adjusted $R^2$ | 0.814 | | | |
| F-Stat | $F_{(2,12)} = 25.145$ (0.00) | | | |

**Source: Author's Computation (2023)**

Table 2 reveals that real sector output has a significant effect on indirect tax revenue in Nigeria. This is shown be a computed p-value of 0.00 which is lower than the set p-value of 0.05 for this study. The result further shows that manufacturing output have a significant positive influence on the level of indirect tax revenue in Nigeria. It shows that industrial sector output has a positive but insignificant influence on indirect tax revenue in Nigeria. In addition, the result shows that the output from the real sector is a good predictor for indirect tax revenue in Nigeria. This is represented by an adjusted R square of 81.4%.

## DISCUSSION OF FINDINGS

The outcome from Table 1 of this study shows that the output from the real sector does not have a significant effect on the level of direct tax. This is similar to the findings of Oyebanji *et al.*, (2019) who showed that real sector output has an inverse non-significant effect on total tax revenue. This is contrary to the anticipated result and this can be as a result of direct tax is assessed only on profit or the income of the employee. The result of the test of hypothesis two as shown on Table 2 shows that real sector output has a positive significant effect on indirect level of tax revenue. This is in tandem with the finding of Adegbie *et al.,* (2019) who opine that real sector output have a significant effect on total tax revenue. Real sector output is expected to have a significant effect on indirect tax revenue based on the nature of indirect tax revenue which is assessed on actual value created. Hence, in line with the theory of resource dependence which shows that entities are to use their internal resources to achieve their goal, it therefore means that Nigeria as an entity should steer it resources in such a way that tax revenue is increased. However, this study shows that direct tax revenue won't be influenced but the indirect tax which cannot be easily evaded.

## CONCLUSION AND RECOMMENDATION

The study was designed to examine the effect of real sector output on tax revenue in Nigeria. The result shows that real sector has a positive influence on the indirect tax revenue in Nigeria and a weak inverse influence on direct tax revenue in Nigeria. It is concluded from this study that tax real sector output has an insignificant effect on direct tax revenue on one hand and a significant influence on indirect tax on the other hand. Based on the finding from this study, the following recommendations are given:

i. In order to raise the level of indirect taxes which are usually associated with consumption, an enabling environment should be provided for the real sector to thrive as this will positively influence the indirect tax revenue positively.
ii. As resources are put in place to increase the output from the real sector in Nigeria, measures should be put in place to ensure that indirect taxes are accurately collected and remitted to the coffers of the government adequately.

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