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# An investigation of the link between indirect tax, oil receipt, debt on foreign reserves in Nigeria

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## Abstract

The main objective of the study was to investigate the influence of indirect tax, direct tax, oil revenue, total debt on foreign reserves in Nigeria from 1980 to 2019. Ex post factor research design was adopted in this research and data was analyzed with the aid of Ordinary Least Square multi linear regression technique. The study found out that, there is a negative and statistically significant influence of indirect tax and direct tax on foreign reserves in Nigeria. Similarly, it was discovered that oil revenue and total debt has positive and non-statistical significant influence on foreign reserves. The study concluded that there is an influence of oil revenue and total debt on foreign reserves, as well as no influence of indirect tax and direct tax on foreign reserves. In addition, the lack of influence of indirect tax and direct tax shows that government has not being taking advantage of its taxation to generate enough revenue to meet its expenditures, as well as boost foreign reserves. And suggested that government should not depend mainly on oil revenue to meet expenditure and sustain its foreign reserves, but should try as much as possible to diversify the economy towards the creation, encouragement and sustenance of small scale and medium industries, and the development and extraction of non-oil mineral resources for export to boost its foreign reserves. Lastly, government should enhance its revenue generation in taxes to meet its expenditures to give room for the revenue generated through crude oil to increase foreign reserves.

## Introduction

Central Bank of Nigeria accumulates foreign reserves for so many purposes. A common explanation is the precautionary role of holding external reserves, although, this also depends on the nation. Foreign reserves are accumulated as a by-product of some reasons such as pursuit of financial stability, price, export competitiveness, import cover, ratio of reserves to broad money, monetary and exchange rate policy (Arslan & Cantú, 2020). Other reasons for holding foreign reserves according to Nwafor (2017) are; to serves as a form of backing on domestic currency, international trade, a means of holding Sovereign Wealth Fund (SWF) to deal with exchange rate fluctuation, credit worthiness and rating, serves as shock absorbers in terms of shocks in oil price for emergencies and disasters.

Natural gas and crude oil contributes almost 95 percent of Nigerian foreign reserves or earning, 90 percent to total export and 80 percent of GDP, Nigeria was enlisted as the 49<sup>th</sup> biggest exporter and 51<sup>st</sup> biggest importer with a balance of trade rank at 82<sup>nd</sup> Worldwide. In the early 2000 to 2014 oil price surged and consumers where squeezed. The poorest developing nations were worst hit while oil producing countries gathered plenty wealth. While the reverse was the case when the price declined, for the vast majority of nations in the world, the declined in price of oil was a boom to them, and more importantly, during the coronavirus recession of 2020, but for the

producers like Nigeria it was a devastating shock (Mulder & Tooze, 2020). The constant fluctuation in oil prices in the international market for the past decade has effected foreign reserves accumulation in Nigeria. This was made possible due to the inability of Nigerian government to diversify its economy and the covid-19 induce shock on the oil price in 2020 (Nwafor, 2017). The monoculture nature of the economy and the over reliance on oil for revenue generation encourages the World Bank to rank the economy as one of the most unstable in the world in its reports in 2015 due to instability of the macroeconomic, propel basically by external shocks.

Various studies have been undertaken on the examination of the effect of indirect tax and direct tax on economic growth in Nigeria (Hakim, 2020; Neog & Gaur, 2020; Ogundana et al., 2017), oil revenue and oil price on economic growth. Inflation, exchange rate, unemployment, investment, external debt and total debt on foreign reserves and economic growth, (Akpan, 2016; Asagunla & Agbede, 2018; Farouk et al., 2016), Public debt and economic growth (Ochuko & Idowu, 2019; Saungweme & Odhiambo, 2019). It is also true that Izekor and Aigbovo (2018) assessed the causality effect of crude oil price shock on the Nigerian foreign exchange reserves. The study only gave emphasis on crude oil price shock to foreign exchange reserves. Similarly, Bankole and Shuaibu (2013) examines the impact of oil price changes on foreign reserves over a period of 40 years, and also considered only the relationship between oil price changes and foreign reserves. As such, this study focused on the relationship between indirect tax, direct tax, oil revenue, total debts and foreign reserves in Nigeria.

The main aim of the study was to examine the influence of indirect tax, direct tax, oil revenue and total debt on foreign reserves in Nigeria. The scope of this study is limited to indirect tax, direct tax, oil revenue, total debt and foreign reserves in Nigeria from 1980 to 2019. The selection of a single country research and the timeframe was made possible by the availability of data. In spite of this limitation, the country chosen is the biggest exporter of oil in Africa. This country depends solely on crude oil revenue as a source of revenue to finance it public spending. 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, collection and method of analyzing data was presented in section three. The results of data analysis and interpretation of findings was also discussed. Lastly, the study was concluded in section five.

## **Literature Review**

### **Indirect Taxes**

Indirect taxes are taxes imposed on transactions irrespective of the situation of both the buyers and sellers. This is a tax imposed on expenditure of commodities and services produced in and outside the country (Kantudu & Kaka, 2009). The incidence of this type of taxes are partly or wholly shifted to the consumers of such commodities or services. Indirect taxes fall on taxes on transactions of commodities and services with different rates like Value Added Tax and custom duties (import, export and excise duties) (Kantudu & Kaka, 2009). Ikeokwu and Micah (2019) defines indirect tax as a tax that are charged on commodities. In other word, indirect tax are taxes generate by the government indirectly from the sales of goods, services and imports and exports of commodities. The tax burden is always borne by the consumers of these goods which makes the tax burden to be shifted by the sellers easily unlike direct tax. Indirect tax is subdivided as follows: Value added tax, custom duties (import and export) and excise duty.

Hosen (2019) analyzed the relationship between GDP and indirect tax for a period of 43 years. The results opined that indirect tax contributes negatively to economic growth. Since an increase in indirect tax leads to a decrease in economic growth. Similarly, Neog and Gaur (2020) in their recent study examined the long-run and short-run relationship between tax structure at the state level, and discovered indirect tax to have a negative effect on economic growth in the short-

run. Alternatively, Ikeokwu and Micah (2019) examined the impact of indirect tax on growth and discovered a positive and statistically significant influence of indirect tax on economic growth. While, Ogundana et al. (2017) examined the impact of indirect tax on economic growth of Nigeria from 1994 to 2013. Descriptive research design was used and data analyzed using Ordinary Least Square multi regression model. The results discovered indirect tax to have a positive and significant impact on economic growth. Mallick (2020) assessed the role of institutions and governance and the use of ICT infrastructure in generating direct tax and indirect tax revenue for the government. The results showed that ICT infrastructure and governance quality are non-significant and with a positive effect in both the indirect tax revenue collection.

### **Direct Taxes**

Direct taxation is a tax charged directly on the income and profit of individuals or corporate organizations. The incidence of direct taxation cannot be shifted to another person (Kantudu & Kaka, 2009). However, Kaka (2020) defined direct tax as “those taxes that may be adjusted to the individual characteristics of the taxpayer. Therefore, conventional income taxes can be classified as direct taxes and same may be said of most taxes on assets and wealth as long as there are potentials for adjustments for the characteristics of owners.” In another word, direct taxes are taxes that are being charged directly on the income and profit of individual and corporate bodies by the government such as company income tax, petroleum income tax, personal income tax, capital gain tax and education tax (Kantudu & Kaka, 2009). Thus, direct taxes are taxes that are levied compulsory on the income of persons and companies. The burden of this type of tax cannot be shifted directly to the consumer, as such it is borne by the taxpayer. The components of direct tax in Nigeria are personal income tax, petroleum profit tax, capital gain tax, companies’ income tax and education tax. Direct taxes are classified as follow: personal income tax, petroleum income tax, capital gain tax, education tax, and company income tax.

Mallick (2020) assessed the role of institutions and governance and the use of ICT infrastructure in generating direct tax and indirect tax revenue for the government. The results showed that ICT infrastructure and governance quality are non-significant but has a positive effect in both the direct tax revenue collection. Similarly, Hakim (2020) also investigated the influence and consequences of direct tax on economic growth and total expenditure for 51 countries over a period of 1992 to 2016. The results discovered direct tax to be significant and negatively link with economic growth. Also, Ogundana et al. (2017) examined the impact of direct tax on economic growth of Nigeria from 1994 to 2013. The descriptive research design was used and data analyzed using Ordinary Least Square multi regression model. The results discovered direct to have a positive and significant impact on economic growth. However, Neog and Gaur (2020) had an opposing result in their recent study on examining the long-run and short-run relationship between tax structure at the state level, and discovered direct tax to have a negative effect on economic growth in the short-run.

### **Oil Revenue**

This is the total amount of income generated from the disposal of crude oil both internally and externally from consumers. The revenue generated from crude oil is ordinary expected to contribute positively to the growth and development of other sectors of the economy, most especially in a country that is endowed with a lot of oil deposits. Oil revenue is the main sources of revenue to the economy where budgets and fiscal policies are estimated and a major source of Nigerian foreign exchange reserves.

Farouk, Farouk et al. (2016) determined the influence of oil revenue on economic growth in Nigeria from 1980 to 2013, and found out that oil revenue has a significant and positive impact on economic growth. Similarly, Omitogun et al. (2018) investigated the relationship between oil

price, revenue variation and economic growth, and discovered that oil revenue has a significant and positive influence on economic growth in the short-run, but in the long-run, oil revenue is negatively related with economic growth. Alternatively, Asagunla and Agbede (2018) examine the contribution of oil revenue to Nigerian output growth from 1981 to 2014, and found out that oil revenue does not contribute to economic activities in the short-run in Nigeria.

### **Total Debt**

Public debt: is the total amount of debt a nation government owed to lenders within or outside the state. In other words, it is the total amount borrowed by a country government from abroad or inside the country. There are two types of public debt. Internal public debt also called domestic debt, and it is that portion of the total debt owed to lenders within the state. External public debt is the portion of the total debt owed to lenders outside the state. The higher the amount of external debt the more the expenditure to be put to the provision of infrastructures and economic development by the government. This type of debt is paid in form of the currency collected. In this paper, public debt is the summation of both the domestic and foreign loans of the government.

Saungweme and Odhiambo (2019) explored the causal link between public debt and economic growth and public debt service and economic growth in Zambia for a period of 1970 to 2017. The results failed to discover any causal link between public debt and economic growth. But discovered a unidirectional Granger causality from economic growth to public debt, not minding whether it is a short-run or long-run analysis. Contrary to the above study, Ochuko and Idowu (2019) investigated the impact of public debt on economic growth of Nigeria from 1981 to 2018, a period of 38 years. And discovered domestic debts of the federal government to be positive and statistically significant in contributing to economic growth of Nigeria. And concluded that foreign debt contributed negatively to the economic growth and development of a country, maybe due to corruption, misappropriation and embezzlement of funds borrowed abroad.

### **External Reserve**

Foreign reserves are a means used to support monetary and foreign exchange policies and others to achieve the macroeconomic goals of safeguarding stability of our currency and pave way for smooth and normal functions of external and internal payment systems. In other words, it is referred to as assets held on reserve by the Central Bank in foreign currencies. It is also a source of finance for the payment or settlement of government expenditure abroad, mostly, those that are not related to import bills for the government to settle (Akpan, 2016). These reserves are used to back liabilities and influence monetary policy. The purpose of holding foreign reserves are to keep the value of their currency at a fixed rate, boost trade and economic growth, maintain liquidity, control inflation, provide confidence of the foreign investors, meet foreign obligations, fund sectors of the economy, and diversify portfolios.

So many different and various reasons have been given on the need for a nation to gather enough foreign reserves whether the country is a developing or developed economy. For instance, Akpan (2016) identified the purposes of holding foreign reserves by many countries to include; foreign exchange market stability and emergency, credit worthiness, transaction buffer, and exchange rate. Other reasons for holding foreign reserves according to Nwafor (2017) are; serves as a backing on domestic currency, international trade, a means of holding sovereign wealth funds (SWF) to deal with exchange rate fluctuation, credit worthiness and rating, serves as shock absorbers in times of shock in oil prices, for emergencies and disasters.

Bankole and Shuaibu (2013) in their paper, examined the impact of oil price changes on international foreign reserve over a period of 1960 to 2011, using Vector Auto regression (VAR) model. The paper discovered that oil price changes affect international reserve in the long-run with relative minimum effects in the short-run. While variance analysis revealed a marginal impact.

Similarly, Izekor and Aigbovo (2018) assessed the impact of crude oil price shocks on the Nigerian foreign reserves. Data were gathered from World Bank and OPEC database from 1993 to 2017. The ex post factor research design was used and time series econometric method. The study ascertained that the decrease in foreign reserves as a measure of economic degradation were not caused by the shock in oil price, but rather by wrong policies implementation in Nigeria. And suggested a government should come up with policies that will limit foreign travels on medical vocation for government official and the presidency in Nigeria.

Olayungbo (2019) investigated the Granger causality effects of oil price on the exchange rate and foreign reserves in Nigeria from 1981 to 2018. It used non-stationary of variables and discovered cointegration long-run relationship to exist on oil price and foreign reserves. The Granger causality findings showed oil price to have a strong Granger causal on foreign reserves in the short-run. This shows that government should depend absolutely on oil price to sustain her reserves and diversify the economy in industrialization and export to earn foreign exchange. Moreover, Akpan (2016) used OLS regression model to analyze the explanatory variables like inflation, exchange rate, unemployment, investment, external debt, and total debt on foreign reserves. The results ascertained that all variables were stationary at first difference with the exception of inflation. The cointegration results discovered the presence of long-run link between foreign reserves and explanatory variables. This shows that foreign reserves is a necessary ingredient in the macroeconomic.

Azar and Aboukhodor (2017) studied the accumulation of foreign exchange reserves and the development of micro-economy in Bahrain, Oman, United Arab Emirates, Saudi Arabia, and Qatar from 1996 to 2015. The results indicated a positive and significant link between foreign reserves and oil prices, Gross Domestic Product, the ratio of currency accounts to Gross Domestic Product and the ratio of broad monetary to gross Domestic Product. It also discovered a negative and significant relationship between exchange rate and foreign exchange reserves. Nwafor (2017) focused on external foreign reserves as a solution to economic growth in Nigeria spanning from 2004-2015. OLS regression model was used in the data analysis. The discovery showed that external reserves has a negative and insignificant influence on economic growth and exchange rate in Nigeria.

From the studies, it is clear that so many studies have been carried out on the impact of indirect tax and direct tax on economic growth in Nigeria (Hakim, 2020; Neog & Gaur, 2020; Ogundana et al., 2017), oil revenue, and oil price on economic growth. Inflation, exchange rate, unemployment, investment, external debt and total debt on foreign reserves and economic growth, (Akpan, 2016; Asagunla & Agbede, 2018; Farouk et al., 2016), Public debt and economic growth (Ochuko & Idowu, 2019; Saungweme & Odhiambo, 2019). But the above literature review has not disclosed any studies that has been carried out on the influence of direct tax, indirect tax, oil revenue, and total debt on foreign reserves in Nigeria. Thus, part of the contribution of this study is look at the influence of the combination of direct tax, indirect tax, oil revenue, and total debt as an independent variable on foreign reserves as a dependent variable in Nigeria.

## Research Method

The study used the causal-comparative design. Causal-comparative design is referred to as ex-post factors research design. Ex post factor research design to help in investigating the possible cause and effect relationships by identifying the consequences and search back by analyzing data to establish the causal factors. 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 doesn'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 sources like Central Bank of Nigeria statistical bulletin, Federal Inland Revenue Service, Debt Management Office

websites. The scope of the study is limited to taxes, total debt, oil revenue and foreign reserves in Nigeria from 1980-2019. The study used Ordinary Least Square technique and multiple linear regression method in the data analysis. This study followed the steps of Akpan (2016) and Izekor and Aigbovo (2018) who used Ordinary Least Square Multiple regression techniques to analyze their data. Regression analysis described the relationship between the dependent variable and independent variables. The relationship can be express mathematically as:

$$Y = a + b_1x + b_2x \dots \dots b_nx + e_i \quad 1$$

Where; Y= Foreign Reserves, which is the dependent variable

X= direct tax , indirect tax, oil revenue and total debt which are the independent variables

A= Costant

$e_i$  = Error term

$b_i \dots b_n$  = slope of the regression (rate of changes in the Y).

In order to test the relationship between the variables of the study, a regression model was adopted. The study proposed direct tax, indirect tax, oil revenue, and total debt as the determinant of foreign reserves. Thus, the model was expressed as follow:

$$FR = f(DT, IT, OR, TD) \quad 2$$

Where; FR= Foreign Reserves

DT= Direct Tax

IT= Indirect Tax

OR= Oil Revenue

TD= Total Debt

## Results and Discussion

The study conducted is made up of descriptive statistics and multiple regression analyses to test the relationship among the independent variables (direct tax, indirect tax, oil revenue, and total debt) and the predictor variable (foreign reserves). Ordinary Least Square was used in the computation of the measurements of the multiple regression for the paper.

### Descriptive Statistics

**Table 1.** Descriptive statistics

Variables	DT	IT	OR	TD	FR
Mean	0.8479	0.0112	0.0887	21.1752	0.6424
Maximum	0.0652	0.0069	0.0501	0.8558	0.2530
Minimum	0.5902	0.0148	0.0360	19.4068	0.3386
Std. deviation	0.9286	0.0251	0.1766	22.7508	1.8346
Observations	39	39	39	39	39

Sources: Author compilation (2020).

Table 1 above is made up of the basic descriptive statistics of the variables in the research. It also described the total averages, like the mean. Variance such as standard deviation, minimum and maximum, and the number of observations. Table 1 showed that the mean value for foreign reserves to be 0.6424, the standard deviation of 0.2530, and the minimum and maximum of 0.3386 and 1.8346, respectively. This is an indication that foreign reserves are positive and good for the economy. Direct tax posits a mean value of 0.8479, the standard deviation of 0.0652, and minimum and maximum values of 0.5902 and 0.9286. while indirect tax has a total mean value of 0.0112, the standard deviation of 0.0069 with a minimum and maximum values of 0.0148 and 0.0251. oil

revenue has an aggregate mean value of 0.0887, standard deviation of 0.0501 and a minimum and maximum values of 0.0360 and 0.1766, all together. Lastly, total debt has a total mean of 21.1752 with a standard deviation of 0.8558 as well as the minimum and maximum values of 19.4068 and 22.7508 respectively.

### Multicollinearity Test

Multicollinearity test using the Variance Inflation Factor (VIF) together with the tolerance valves for the independent variables are disclosed below in table 2.

**Table 2.** Collinearity Diagnostics

Variables	Collinearity Statistics	
	Tolerance	VIF
Direct Tax	0.2148	4.66
Indirect Tax	0.3289	3.04
Oil Receipt	0.4919	2.03
Total Debt	0.5712	1.75
<i>Mean VIF</i>		2.87

Sources: Author compilation (2020).

Table ii above shows the results of the multicollinearity test using the Variance Inflation Factor (VIF) and with a tolerance values for all the independent variables to be less than 1 and less than 10 which indicated that the independent variables are within the normal range as observed by (Hair et al., 2010). It is therefore believed that this current research is free from multicollinearity as disclosed from the above results.

### Regression Analysis

The linear regression analysis is used as a statistical tool to examine the links that emerged among the predictive variable from the group of four explanatory variables in this study. The predictive variable is foreign reserves, and the explanatory variables involves the direct tax, indirect tax, oil receipts, and total debt. The tables below revealed the analysis of the results for the multi linear regression model.

The regression analysis for foreign reserves model is show in Table 3 below:

**Table 3.** Model Summary

Model	R-Square	Adj. R-square	F-Statistics
1	0.96	0.95	0.01

Sources: Author compilation (2020).

The coefficient of determination explains the extent to which changes in the predictor variable can be explained by the changes in the explanatory variables. Or rather, the percentage variation in the dependent variable (foreign reserves) that is explained by all the independent variables (direct tax, indirect tax, oil receipts, and total debt). The independent variable that were studied, explains 96 percent of the relationship between direct tax, indirect tax, oil receipts, total debt, and foreign reserves in Nigeria, as s shown by the value of the coefficient of determination of R-square that gives 0.96. The corresponding F-statistics is highly significant at 1 percent level of significance. This implies that 96 percent of the changes in foreign reserves is explained by the variation of direct tax, indirect tax, oil receipts, and total debt in Nigeria. Finally, the value of the adjusted R-square coefficient of determination (Adjusted R-square) gave a value of 0.95, which



means that the model for the study (with 95% confidence) was good and a proper fit for use in predicting the dependent variable.

**Table 4.** OLS Estimate of Tax Revenue, Non-Tax Revenue and Public Debt

FR	Coefficient	Std. error	t-value	p-value
DT	-1.47	0.17	-8.56	0.01
ID	-31.38	2.15	-14.60	0.01
OR	0.25	0.37	0.67	0.50
TD	0.02	0.01	1.29	0.20
Constant	1.83	0.28	6.46	0.01
Breusch-Pagan Prob> Chi2	0.48			
Ovtest Prob> F	5.01			

Sources: Author compilation (2020).

The findings in Table 4 disclosed that out of the four independent variables (direct tax, indirect tax, oil receipt, and total debt) studied in a relationship with foreign reserves as a predictor variable revealed that direct tax is negative but statistically significant in relation to foreign reserves. This is displayed in table iv, which shows a regression coefficient and p-value of  $B > -1.47$  and 0.01. This indicated that direct tax is statistically significant and negatively connected to foreign reserves. Similarly, indirect is also statistically significant but negatively related to foreign reserves, with a regression coefficient and p-value of  $B > -31.38$  and 0.01 respectively. This clearly explains that indirect tax is statistically positive but negatively related to foreign reserves. This shows that direct tax and indirect tax are important but they do not have any connection or influence on foreign reserves in Nigeria. Oil revenue and total debt are statistically insignificant but positively related to foreign reserves as shown in the above table iv. These results also revealed a regression coefficient and p-value to be  $B > 0.25$  and 0.67 for oil revenue, and  $B > 0.02$  and 1.29 for total debt. This result exposed that oil revenue and total debt are positively and statistically insignificant to foreign reserves. The positive figure indicated that as the percentage amount collected as oil revenue and total debt decreases, there is a possibility of foreign reserves to increase. The outcome of this results is similar to Asagunla and Agbede (2018) who discovered oil revenue to be statistical insignificant in relation to economic growth. Similarly, Olayungbo (2019) in his study found out that, there is a relationship between oil price revenue and foreign reserves but the relationship is statistically insignificant. Also, Bankole and Shuaibu (2013) discovered only a marginal or insignificant impact of oil revenue on foreign reserves. The implication of this result is that government should not depend mainly on oil revenue to sustain its foreign reserves. Alternatively, Nigerian government should try as much as possible to diversify the economy and enter into creation or encouraging and sustainability of small scale and medium industries, as well as the development and extraction of non-oil mineral resources for export to boost its foreign reserves.

However, the results on the influence of total debt on foreign reserves are the same with that of Akpan (2016) who discovered the presence of long-run relationship between total debt and foreign reserves, even though, the direction of the importance or significance differ. Nonetheless, the discovery has indicated that foreign reserves are an essential ingredient in maintaining the economic stability of a nation. This is because it serves as a guarantor for the collection of foreign debt, and the less a country borrows, the more the foreign reserves increases. From the Breasch-Pagan test for heteroskedastic which uses the chi-square statistics, the result shows that there is no evidence of heteroscedasticity in the model with foreign reserves as a dependent variable. Table iv above disclosed the estimated chi-square probability of 0.48 for foreign reserves to be insignificant. The test for specification errors, Ramsey (1969), in his study looks at the test for specification errors in order to determine whether there are omitted variables in the model using reset test for functional misspecification. Thus, in line with this idea, the study also used the Ramsey reset test for functional misspecification. The test indicated that the model is free of specification errors. The

test used the F-statistics to test for the omitted variables in the model, and reported of F-statistics of 5.01 for foreign reserves model, which is insignificant. This finding indicated that there no omitted variables in the model.

## Conclusion

The main objective of the study was to investigate the influence of indirect tax, direct tax, oil revenue, total debt on foreign reserves in Nigeria. Where the introduction of the study was presented, issues and the scope was laid out. A 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 analysis was captured in section three. The results of data analysis and interpretation of findings was also discussed. The study found out that, there is negative and statistical significance of the influence of indirect tax and direct tax in relation to foreign reserves in Nigeria. Similarly, it was discovered that oil revenue has positive and non-statistical significant influence on foreign reserves in Nigeria. This result is similar to Bankole and Shuaibu (2013) and Olayungbo (2019), where their study also discovered a relationship between oil revenue and foreign reserves but the relationship is statistically insignificant. Lastly, total debt has a positive and statistically non-significant influence on foreign reserves. The result is a little bit similar to the study of Akpan (2016) who discovered the presence of long-run relationship between total debt and foreign reserves. The study concluded that there is an influence of oil revenue and total debt on foreign reserves, and no influence of indirect tax and direct tax on foreign reserves. In addition, the lack of relationship between indirect tax and direct tax shows that the government has not being taking advantage of its taxation to generate enough revenue to meet its expenditures, as well as boost foreign reserves. And suggested that government should not depend mainly on oil revenue to sustain its foreign reserves, but should try as much as possible to diversify the economy towards the creation or encouragement and sustenance of small scale and medium industries, and the development and extraction of non-oil mineral resources for export to boost its foreign reserves. Lastly, the government should enhance its revenue generation in taxes to meet its expenditures to give room for the revenue generated through crude oil to increase foreign reserves.

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