

Nigeria tax system is categorised into direct and indirect tax. The direct taxes are; PIT, CIT, PPT, CGT and EDT while indirect taxes are; VAT, stamp duty, excise and customs duties.

2.2 Economic Development

In an economy where there is competition, it is difficult to redistribute resources in a way where everyone is better off (Sandmo, 2003). To achieve this equal redistribution and making everyone better off, Sandmo (2003) states that, firstly, every producer must have an equal marginal cost of producing commodity; secondly, there must be marginal willingness to pay for the commodity and thirdly, there should be Pareto optimality, that is, the marginal cost of production equals marginal willingness to pay for the commodity.

Urbanisation has a positive relationship with economic growth, but this growth is often not equally shared (Goodfellow, 2016). Goodfellow (2016) argues that the Asian tigers' economies; Hong Kong, South Korea and Singapore used property taxation between the 1960s and 1990s for their development unlike Rwanda and Ethiopia with rising urbanisation yet could not introduce property tax because of fear by politicians not to lose their political base. However, unlike the Rwanda and Ethiopia urbanisation, the Asian Tigers' urbanisation comes with industrialisation.

In a study measuring economic development and well-being, Marone (2012) states that GDP can be measured through product, expenditure and income approach and is faced with five limitations: GDP counts only goods and services that have monetary value and are sold in formal markets; GDP has a problem of counting side products of production or consumption that are not sold or bought, for instance, air pollution without taxes are negative externality while good education is positive externality; GDP does not register a change in the value of assets, and GDP does not distribute resources and has nothing about poverty. Marone (2012) then opines that measuring well-being goes beyond GDP. Also, Woodruff (2019) states that

the factors that affect economic development are: human resources, physical capital, natural resources and technology.

Since the early 1970s, the standard measurement of economic progress has failed to account for the environmental costs and equally failed in the balanced measurement of economic and socio aspect of human progress (Marone, 2012). However, in 1990s efforts were made by the UN to have an alternative measurement instrument aside from GDP and as such the work of an Economist, Amartya Sen on Human Development Index (HDI) was adopted for measuring progress and human well-being (Marone, 2012).

Other alternatives to measuring well-being as stated by Marone (2012) are Millennium Development Goals (MDGs) as adopted by 189 UN member countries in the year 2000; Measure of Economic Well-being (MEW); Genuine Progress Indicator (GPI); Inequality Adjusted Human Development Index (IHDI); Multidimensional Poverty Index (MPI); Happy Planet Index (HPI); Index of Economic Well-Being (IEWB); Quality of Life Index; Gender Inequality Index (GII) and the EU Sustainable Development Indicators (SDI). In this study, HDI will be used for the measurement of economic development.

HDI is an index used to rank countries on human development. This is scored using indicators including expectancy, per capita and education (World population review, 2019).

2.3 Critical Review of Related Literature

In a study to determine the relationship between tax revenue and economic development in Nigeria, Ironkwe and Agu (2019) revealed that tax revenue has a positive and significant relationship with unemployment in Nigeria. The researchers, however, failed to define what constituted the tax revenue and makes it difficult for comparison with the outcomes of other researchers.

Also, in a study on the analysis of tax revenue and economic development in Nigeria, Okeke, Mbonu and Ndubuisi (2018) revealed that tax revenue has a statistically significant

relationship with infant mortality, labour force and gross fixed capital formation in Nigeria. In arriving at the result of the study, the researchers used different tax types that make up the non-oil tax revenue which is however not the same as the current study.

Worlu and Nkoro (2012) in their study equally found that tax revenue stimulates infrastructural development. Though, they adopted a macro-econometric approach. Similar to the study carried out by Okeke et al. (2018), and Worlu and Nkoro (2012), Oladipolu and Ibadin (2016) showed that there is a positive and significant relationship between tax revenue and infrastructural development in Nigeria. They used indirect taxes as the predictor of the study.

Harelimana (2018) in a study confirmed the outcomes of earlier literature reviewed that there is a significant relationship between taxation and economic development. In a paper commissioned by the United Nation Department of Economic and Social Affairs (UN-DESA), Sandmo (2003) states that carbon tax has the potentials to generate enough funds for the UN Millennium Development Goals.

However, Inyama et al. (2017) had a different finding where they revealed that tax (PPT, CIT and VAT) revenue resources had a positive and insignificant effect on infrastructural development in Nigeria. Also, Nmesirionye, Jones and Onuche (2019) had the same outcome of a positive and insignificant impact of tax on real GDP in Nigeria.

In their analysis of government tax revenue to determine the relationship with economic development in Nigeria, Okonkwo and Chukwu (2019) used PPT, EDT and CIT as the tax revenue. The study revealed that tax has no significant influence on economic development in Nigeria. The outcome of the study could have been different had they used total taxes in Nigeria.

The literature reviewed showed that different studies used different variables, that is, different tax types in Nigeria. As explained in the tax administration section of this study the Nigerian

tax system has eight tax types categorised into direct and indirect, oil and non-oil. For a better comparison with other studies, it is important to have the same independent variables which are not different from variables used by other researchers.

2.4 Theoretical Framework

The study adopts the theory of optimal taxation. Slemrod (1990:157) stated that “optimal tax formulas are either guides to action or nothing at all”. In the study, it was opined that the theory of taxation is a normative approach to taxation in the past two decades. For taxes to be important they must satisfy some desirable criteria (Sorensen, 2009). Therefore, the theory of optimal taxation is meant for the government to choose tax policies that better the welfare of her citizens and this can be achieved according to Ramsey (1927) by raising revenue through adjustments to tax rates on proportional taxes widely known as lump-sum taxation. However, Mirrlees (1986) stated that lump-sum taxation in practice is impossible long before the analysis of non-lump-sum taxation.

Boskin (1976) further explained the theory of optimal taxation by stating that it has two disparate paths: the theory of optimal commodity which is indirect taxation and the theory of optimal income which is direct taxation. The theory of optimal taxation is mostly based on the foundational work of Ramsey (1927) and Mirrlees (1971) and the main achievement of the theory of optimal taxation according to Boskin (1976) is the directives under certain assumptions of rules which the tax system must apply to achieve maximum welfare for the citizens.

3.0 METHODOLOGY

It is a section that highlights the population and explains the method adopted in sampling technique, the statistical test employed, sources of data collection and hypothesis used for the study (Inyiama et al., 2017).

The data for the study is secondary; the Human Development Index (HDI) sourced from Human Development Report of 2019 (UN Nigeria) and tax revenue generated from FIRS tax revenue for the period between 2011- 2019. The 2019 HDI score of 0.532 is based on a review of the 2019 Human Development Report (World Population Review, 2019). The tax revenue comprises the Company Income Tax, Personal Income Tax, Stamp Duty, Capital Gain Tax, Value Added Tax, National Information Technology Development Tax and Education Development Tax. The oil and non-oil taxes are used as the Independent Variables and the HDI is used as the Dependent Variable of the study. The sampling technique of the study is convenience and this is chosen because of the available data at the disposal of the researcher. Multiple regression through SPSS version 24 is used for the analysis.

The regression method is adopted for this study because the data is not complex hence the use of SPSS for the analysis.

4.0 RESULTS AND DISCUSSION

4.1 Data Presentation

In this section, the data from the study will be presented and analysed. Regression is a tool of statistics used in determining the relationship between variable(s) and one dependent variable (Tabachnick & Fidell, 2007).

Table 1: Tax Revenue and HDI

Year	Oil Tax 'NBillion	Non-Oil Tax 'NBillion	HDI
2011	3070.59	1557.88	0.494
2012	3203.13	1804.49	0.512
2013	2617.71	2187.89	0.519
2014	2453.95	2260.61	0.524
2015	1097.95	2176.24	0.527
2016	1157.81	2149.65	0.528
2017	1520.48	2507.46	0.533
2018	2467.58	2853.33	0.534
2019	2111.43	3151.67	0.532

Source: FIRS Tax Revenue Statistics 2019 and Human Development Report 2019

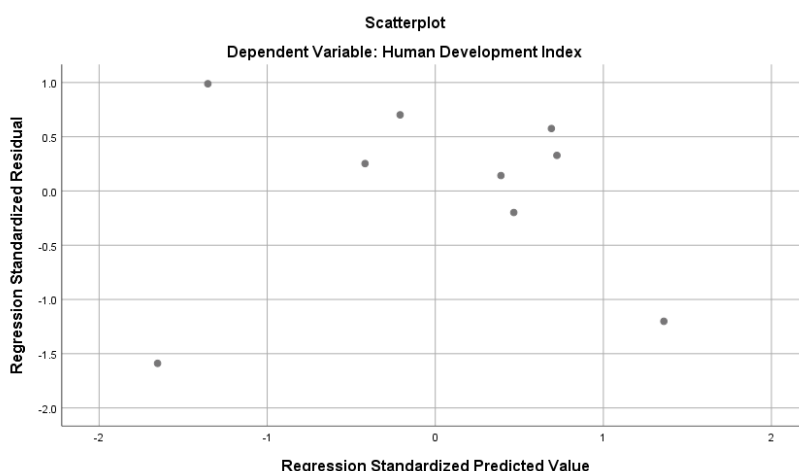
Table 1 contains figures of the oil tax revenue, non-oil tax revenue and Nigerian HDI from 2011 to 2017. Column one represents the year adopted for the study, column two and three represent the oil and non-oil revenue respectively and the figures are written in billions of Nigeria Naira while column four represents the HDI of Nigeria.

The oil revenue increase from ₦3,070.59B to ₦3,203.13B (4%) in 2011 and 2012. Every year from 2012 through 2015 the revenue generation from oil fell by 18%, 6%, and 55% respectively. The inconsistency in the oil revenue generation was witnessed in 2019 after there was a gradual increase from 2016 to 2018. On the other hand, there was a gradual increase in revenue generation from non-oil tax revenue except between 2015 and 2016.

Before the analysis, it is important to ensure that all the regression assumptions are satisfied (Hair, Black, Babin, & Anderson, 2010). These assumptions are; normality, linearity, size of sample, multicollinearity and homoscedasticity (Coakes & Ong, 2011). Meyer, Becker, and Van Dick (2006) state that violation of any of the assumptions could distort the results.

When the distribution of the scores is centred in a rectangle in a scatter plot, then the linearity assumption is achieved (Hair, Black, Babin, & Anderson, 2013).

Figure 1: Scatterplot for Linearity test



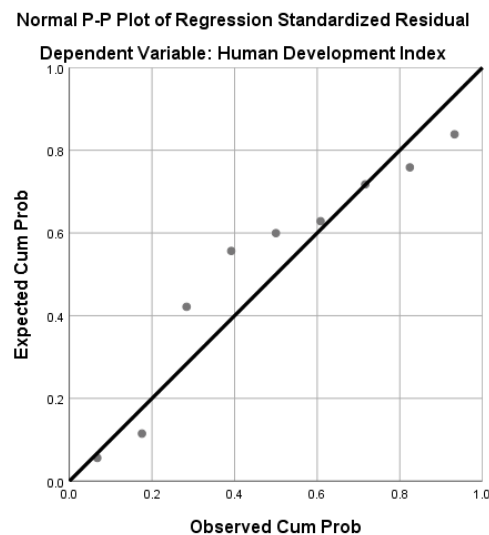
Source: Researcher SPSS analysis

Figure 1 is a scatter plot to test the linearity assumption.

The scores are roughly centred in a rectangular format. That means the linearity assumption is achieved. The independent variables of a study should not be highly correlated (Tabachnick & Fidell, 2007). When this happens, it shows that multicollinearity exists. This can be checked through a correlation matrix. Sekaran and Bougie (2010) suggest a benchmark of 0.7 and any score greater than 0.7 assumes the presence of multicollinearity. From the study, the correlation is -0.320 which shows that the multicollinearity assumption is not violated. Multicollinearity can equally be tested with the value of tolerance and variance inflation factor VIF. Hair et al. (2013) state that there is a presence of multicollinearity when the value of tolerance is less than 0.1 and VIF of greater than 10. In this study, the tolerance is 0.898 and VIF is 1.114 which equally shows that multicollinearity assumption is not violated.

Hair et al. (2010) state that graphically, the normality assumption is achieved when data distribution follows a diagonal line.

Figure 2: Normal p plot for normality test



Source: Researcher SPSS analysis

Figure 2 represents a normal probability plot to test the normality of the data. It shows that the data is normally distributed hence the normality assumption is not violated. Homoscedasticity assumption is not violated when variances of the predictions determined by

regression remain constant (Knaub, 2007). Levene’s test can be used to check the homoscedasticity assumption. From the study, Levene’s test of equality of error variances shows that the error variance of the dependent variable is equal across groups which means the homoscedasticity assumption is not violated.

Table 2: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.001	2	.001	18.031	.003 ^b
	Residual	.000	6	.000		
	Total	.001	8			

a. Dependent Variable: Human Development Index

b. Predictors: (Constant), Non-Oil Tax Revenue, Oil Tax Revenue

Table three: Coefficient Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.496	.013		37.990	.000		
	Oil Tax Revenue	-7.065E-6	.000	-.428	-2.630	.039	.898	1.114
	Non-Oil Tax Revenue	1.823E-5	.000	.696	4.274	.005	.898	1.114

a. Dependent Variable: Human Development Index

Table 4: Model Summary Table

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson
						F Change	df1	df2		
1	.926 ^a	.857	.810	.005602	.857	18.031	2	6	.003	1.928

a. Predictors: (Constant), Non-Oil Tax Revenue, Oil Tax Revenue

b. Dependent Variable: Human Development Index

Results

Model Summary: $R^2 = 0.875$

ANOVA: $F(2,6) = 18.031, p = 0.003$

4.2 Discussion

Before the analysis of this multiple regression, the basic assumptions of regression were checked and are all satisfied. **From table 4**, the R square is 0.875, this shows that the independent variables are significant predictors of the dependent variable at 87.5% and only 12.5% that is due to chance.

The p-value of the study is less than 0.05 as shown in **table 2**, which means it is statistically significant. The study revealed that non-oil tax has a positive and significant contribution to the economic development in Nigeria thereby rejecting hypothesis₂ and it is a confirmation of earlier studies by Okeke et al. (2018), Worlu and Nkoro (2012), Oladipolu and Ibadin Fsen (2016). However, from table 2 assuming the non-oil revenue is held constant, then for every increase in the unit of HDI the oil revenue negatively contributed 428 to economic development in Nigeria. Therefore, hypothesis₁ is accepted and this is a confirmation of the study by (Inyiama et al., 2017).

Despite the significant effect of non-oil tax revenue on the economic development of Nigeria, generally, the economic development of Nigeria is low. According to UNDP, any countries with an HDI score of less than 0.55 are referred to as The Least Developed Countries (LDCs) and are known as countries with an unstable government, widespread poverty and poor health care. From the world population review (2019), the HDI of Norway is 0.953, Saudi Arabia is 0.853, Russia 0.816, Venezuela is 0.761, Algeria is 0.754, Tunisia is 0.735 and Nigeria is 0.532. The world highest HDI is Norway which relies on her natural resources just the way Nigeria is endowed with. Saudi Arabia and Russia depend heavily on oil like Nigeria but

have higher HDI. Venezuela, a contemporary country like Nigeria, Algeria and Tunisia are both African countries like Nigeria yet have higher HDI than Nigeria.

This difference is due to low tax revenue generation in Nigeria which is 6.5% to GDP. High tax generation is used to develop human resources through improved skills, education and training; investment in infrastructural facilities like roads, rails and factories; and technological advancement through research, development and innovation to grow the economy and increase the wellbeing of Nigerians.

5.0 CONCLUSION

The importance of taxes cannot be overemphasized. When this is properly harnessed it improves the well-being of the citizens. The economic development of a country means the well-being of her citizens and not just economic growth or increase in GDP.

The non-oil tax revenue has a significant impact on economic development in Nigeria. However, the oil tax does not have a significant impact on economic development in Nigeria. To reduce the effect of the changes in the energy policies the different tiers of government should explore other sources of income by diversifying the economy and intensify tax collection efforts. The taxes collected should be properly managed to enable the government to use it in areas that will be beneficial to the citizens.

For further study, researchers are advised to research the contribution of each tax type that makes up the non-oil tax to economic development in Nigeria.

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