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# RELEVANCE OF INDIRECT TAX REVENUE ON ECONOMIC DEVELOPMENT IN NIGERIA, 1991-2020.

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***ABSTRACT***

*The study examined indirect tax revenue and economic development in Nigeria from 1991-2020. The specific objective of the study were among others; to determine the effect of VAT efficiency on human development index in Nigeria Also, determine the effect of import tax efficiency on human development index in Nigeria determine the effect of export tax efficiency on human development index in Nigeria. Ex-post facto research design was employed. Population of the study comprised the population of the Nigerian economy. Sample size is the same as the study population. The instrument of the study is secondary data. The formulated research questions were analyzed with both descriptive and econometrics techniques. While simple regression analysis was adopted to test the hypotheses. The findings of the study among others were that; there is positive relationship between* vat *efficiency and human development index in Nigeria. There is positive relationship between exports tax efficiency and human development index in Nigeria. From the findings the following recommendations were made among others; The analysis showed that, indirect tax revenue impacted on economic development; thus, government should formulate and implement export policy measures towards exporting goods that are growth and development drivers, particularly, refined goods in the area the nation has comparative advantage in order to make the domestic production viable and compete with the industrialized economy of the world. Given the fact that, the empirical result showed that, indirect tax revenue is positively with economic development in terms of HDI and per capita income, in Nigeria, government should coordinate the ministry in charge of tax revenue (FIRS) so that more revenue generated will be well-managed and channel to the critical sectors of the economy in the absence of systemic corruption in order to enhance growth and development of the Nigerian economy.*

***KEYWORDS; Indirect Tax Revenue, Economic Development, VAT, Human Development Index, Export Tax Efficiency, Import Tax Efficiency***

## INTRODUCTION

Every economy needs a great deal of revenue to provide and sustain critical services for their citizens. Thus, an essential revenue base for government is the imposition of various forms of taxes. Taxes are obligatory levies by law which are imposed by government on a subject or his property (Yusuf & Udeorah, 2021). A good tax system is characterized by higher revenue productivity which depends on the degree of extent of responsiveness of the tax system to changes in economic activity. This responsiveness of taxes is commonly assessed through the concepts of revenue. Consequently, tax revenue measures the total response of tax revenue to changes in income and discretionary changes in tax policy (Soro, 2020). Thus, tax revenue serves as a source of revenue generation to stimulate economic growth and development of a country.

"Economic development on the other hand, involves changes in the composition of output and in the allocation of inputs by various sectors and as well improve the material welfare especially for individuals with the lowest incomes, the eradication of mass poverty and illiteracy, changes in the composition of inputs and output" (Jhingan, 2013; Kindleberger & Bruce, 1958). In a broader context, economic development reflects social and economic progress and requires economic growth. Thus, taxes are major sources of government expenditure to drive a nation economic

development. Essentially, taxes are categorized into two broad bases; these are direct and indirect taxes. "This classification depends on the incidence of the tax burden". But incidence of tax imposed on a good or service depends on price elasticity of demand and supply of a concerned goods or service. "Direct taxes such as; petroleum profit tax, personal income tax and capital gain tax are those taxes levied on individuals and factors of productions which taxpayer directly pays to the government and cannot be shifted to any other person or group". While "indirect tax is the one that can be transferred to another individual or group by the person or business that owes it and thereby the consumers bear the ultimate burden" (Obayori & Omekwe, 2020). But the principal concern of this study is how indirect tax revenue influences economic development.

In the meantime, an *indirect tax* is a type of tax that is levied on goods and services before they reach the customer who ultimately pays the *tax* as a part of market price of goods or services purchased. Thus, *indirect taxes* are basically taxes that are usually imposed on a manufacturer or supplier who then pass on to another entity or individual. Meaning that the burden of this type of tax can be shifted by the taxpayer to someone else or the final consumer (*Schenk & Oldmanr, 2007)*. Many countries have energized their economic growth and development through revenue from indirect tax. For instance, in the year 2012, United Kingdom, South Africa, Qatar and Malaysia recorded an average percentage of GDP indirect tax revenue of 25.5%, 24.92%, 19.9% and 15.61% respectively. While Qatar a known oil producing country recorded 19.9%, Nigeria recorded 1.5% as a tax revenue percentage of GDP in the same period (Odoemelam, 2018)**.** One of the reasons for infinitesimal percentage contribution of indirect tax revenue to GDP is over dependence on oil revenue. Thus, the need to re-organize the priorities of the Nigerian economy became urgent as the international price of crude oil, Nigeria's biggest foreign exchange earnings have been falling since the year 2015 and Nigeria has been faced with the inevitable vulnerability of a monoculture economy. For a nation that had gone through an unprecedented economic boom in the seventies, it was a terrible experience (Afolayan & Okoli, 2015). Also, the increasing cost of running the government, and economic recession have returned the attention of managers of the nation's economy to the importance and sustainability of taxes, especially indirect taxes such as value added tax (Obayori & Omekwe, 2019).

Moreover, in Nigeria, the incidence of tax evasion and avoidance by tax payers is high, leading to low level of government revenue which further reduces the level of government expenditure, culminating into a reduction in the income savings and expenditure of households and firms, leading to low level of economic activities and economic development. Thus, it became urgent, to find alternative means of raising revenue for the government, both internally and externally. The external means is through promoting and exportation of non-oil goods like primary agricultural products and semi- processed agricultural products. One of the internal means is through general over-hauling of Nigeria tax system by introducing a well-managed and efficient indirect tax system. Other factors that prompted government into action was the advice received from the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD-the World Bank). Similarly, the need for a paradigm shift of the country's mode of finance also called for effective indirect tax system.

While revenue from indirect tax such as VAT, tariff, export duty, import duty (custom duties), in Nigeria is encouraging, it remains difficult to systematically assess the revenue of these taxes revenue on the economy in terms of development. Some school of thought are of the view that some form of taxes such as VAT leads to business inflation and as well favours capital intensive firms that can meet the global challenges (Olaoye, 2013). Also, recent research works on taxation such as Obayori and Omekwe (2020), Inimino et al (2020) as well as George-Anokwuru et al (2020) showed that revenue from taxes have not be well utilized to propel development in terms of improve HDI and poverty reduction (Ewubare & Obayori, 2019).

However, this study determined whether higher indirect tax rates and lower direct tax rates lead to higher aggregate tax revenue in order to bring about economic development in Nigeria.

**Conceptual Framework**

The conceptual framework was determined under two segments; namely the dependent and independent variables. The independent variables which measure indirect tax revenue are; VAT efficiency, export tax efficiency and import tax efficiency. While human development index was used as the dependent variable indices to measure economic development.

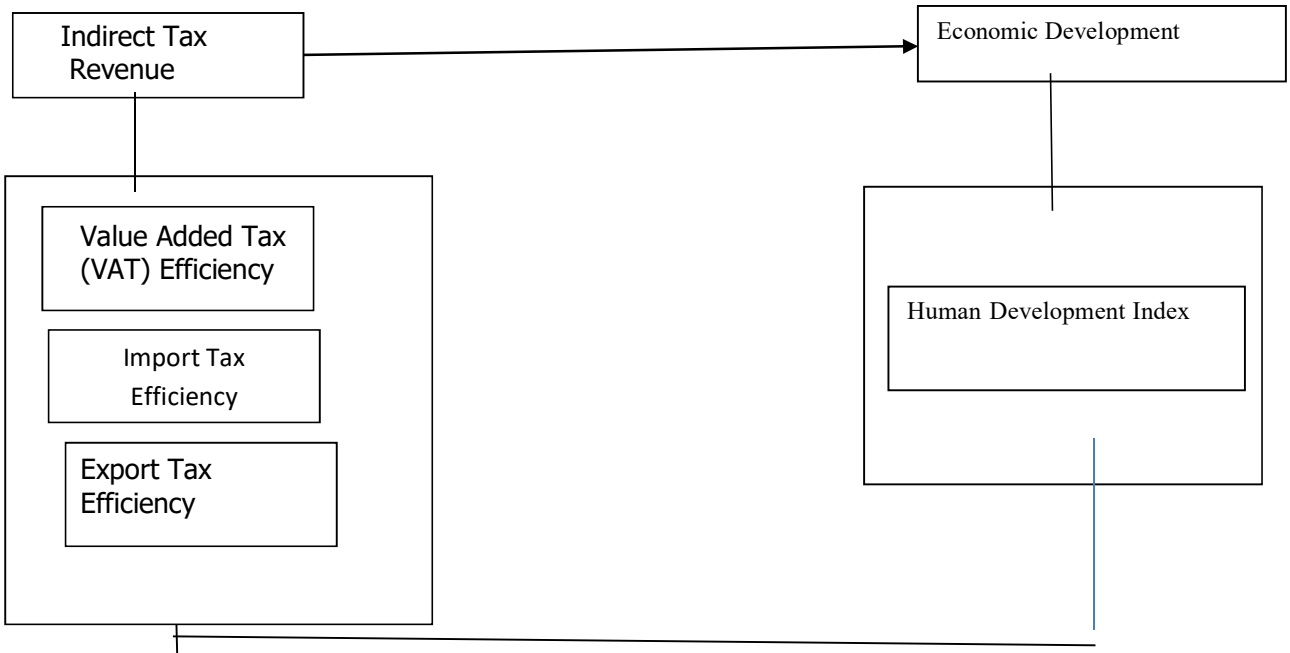


**Figure 1.1**: Conceptual frame work showing the Relationship between Indirect tax Revenue and Economic Development

**Source:** *Central Bank of Nigeria Statistical & Bulletin and World Bank Data Base, Researcher 2025.*

**Aim and Objectives of the Study**

The aim of the study is to determine indirect tax revenue and economic development in Nigeria from 1991-2020. The specific objectives are to;

1. determine the effect of VAT efficiency on human development index in Nigeria
2. determine the effect of import tax efficiency on human development index in Nigeria
3. determine the effect of export tax efficiency on human development index in Nigeria

**Research Questions**

1. What is the effect of VAT efficiency on human development index in Nigeria?
2. What is the effect of import tax efficiency on the human development index in Nigeria?
3. What is the effect of export tax efficiency on human development index in Nigeria?

**Research Hypotheses**

**$Ho_1$**: VAT efficiency does not have significant effect on human development index in Nigeria

**$Ho_2$**: Import tax efficiency does not have significant effect on human development index in Nigeria

**$Ho_3$**: Export tax efficiency does not have significant effect on human development index in Nigeria.

**Scope of the Study**
**Geographical Scope**
The geographical area covered in this research is Nigeria. Nigeria is the 8thmost populated nation in the world and the most populated in sub-Saharan Africa with a total geographical area of 923.768 square kilometers and an estimated population of about 200 million people. It lies wholly within the tropics along the Gulf of Guinea on the Western Coast of Africa.

**Content Scope**
The scope of the study covered the period 1991 – 2020. The empirical analysis focuses on the effect of indirect tax revenue on economic development in Nigeria. Meanwhile, economic development was measured by poverty index, per capital income and human development index; and moderated with tax policy. The measures of indirect tax revenue were value added tax efficiency, imports tax efficiency and exports tax efficiency.

**Unit of Analysis Scope**
The quantitative approach was adopted for the analysis. This is because the study determined the variables at macro level; as the subject matter of revenue generated through tax revenue to bring about economic development concerns the Nigerian as a whole.

**REVIEW OF RELATED LITERATURE**
This chapter determines relevant literatures that are related to the subject matter of tax and economic development under the following sub-headings: conceptual review, theoretical review, empirical review and evaluation of literature reviewed/Gap in the Literature.

**Conceptual Review**
**Indirect Tax Revenue**
Anyanwu (1993) stated that, tax is more or less compulsory, non-returnable contribution of money used occasionally for goods and services and flows from private individuals, institutions or groups to the government. It may be levied upon wealth or income of a person or body corporate or in form of surcharge on prices. Similarly, Okpe (1998) averred that tax is regarded as a compulsory charge imposed by the public authority (Federal, State and Local Government) for the general purposes of Government. It is also defined as the act of laying a tax or imposing taxes on the subjects of a state by government or on the members of a corporation or company by the proper Authority. It is a levy regularly imposed and regarded as contribution to the general pool from which government expenditure are made.
Gyani (1990) went on to say that tax is a compulsory contribution imposed by the government on citizens in accordance with legislative provisions and paid by them through agents to defray the cost of administration. Also, Famoyin (1990), justified tax as a compulsory contribution imposed upon persons for the general purpose of the government. Once levied, every taxable person must pay tax. He also added that taxes are benefits, but for providing the government with funds necessary for the general administration of the country.

Taxation in summary is the transfer of income or resources from the private sector to the public sector in order to enable the public sector to carry out some, if not all of the Nation's economic and social goals. The goals may be in the form of provision of Government basic services regularly and particularly in the educational, public health, transportation sectors, amenities and capital formation. Taxes may be levied upon wealth or income or in the form of surcharge on prices.

**Value-Added Tax (VAT):**
VAT is the acronym for valued added tax. This tax which is in other words called consumption tax and is being defined as the amount charged by the government for every goods or services

purchased from time to time. This means it can only be paid when there is consumption of goods or services. VAT is an indirect tax, which is imposed on goods and services at each stage of production, starting from raw materials to final product. VAT is levied on the value additions at different stages of production. It forms part of the price paid for the good or service so consumed. It was introduced in Nigeria in 1993 by the General Ibrahim Babangida administration to replace sales tax which hitherto generated revenue for the state governments.
VAT was designed broadly to be a levy on imported goods, as well as on locally manufactured goods, hotel services, bank transactions etc. It was to be federally-collected and a uniform rate of 5 per cent was fixed on all affected items while VAT proceeds are shared among the three tiers of government at an agreed proportion.

**Export Taxes:**
These are taxes imposed on goods exported to other countries and are easy to collect as payment is done locally with local currency and is a source of income to the government. This tax may be in the form of discoursing exportation of certain goods.

**Import Tax:**
This is a tax levied on imported goods for obvious reasons such as tariff to discourage importation and the duty is collected from the importer at the point the goods enter the country. It is a source of government revenue particularly in Less Developed Countries (LDCs).

**Concept of Economic Development**
Economic development is thus a multivariate concept; hence there is no single satisfactory definition of it. Economic development is a process where low income national economies are transformed into modern industrial economies. It involves qualitative and quantitative improvements in a country's economy. Political and social transformations are also included in the concept of economic development in addition to economic changes.

According to Haller (2012), economic development is a process that generates economic and social, quantitative and, particularly, qualitative changes, which causes the national economy to cumulatively and durably increase its real national product. Economic development requires collective action and large-scale, long-horizon investment. Similarly, economic development addresses the fundamental conditions necessary for the micro economic functioning of the economy. It is within the purview of government. Though it is certainly possible to have growth without development in the short or even medium-term, economic development creates the conditions that enable long-run economic growth. Jobs are a main concern of policy: for growth what matters is the number of jobs while for economic development the focus is wages, career advancement opportunities, and working conditions (Feldman & Francis, 2003).

**Human Development Index (HDI**):
Invented by Lord Meghnad Desai and Nobel Laureate Amartya Sen and launched by Mahbubul-Haq, a leading Pakistani economist. The HDI is a composite index of three social indicators: life expectancy, adult literacy and years of schooling. It also take into account real GDP per capita. Thus the HDI value of a country is calculated by taking three indicators Longevity, Educational attainment and decent standard of living. HDI ignores other indicators of human development such as infant mortality, nutrition etc. and it measures relative rather than absolute human development. Human development index ranges from 0.897 in high human development countries while for low human development countries it is 0.436.

**Economic Growth/Gross Domestic Product**

Economic growth means an increase in the average rate of output produce per person usually measured on a per annum basic. It is also the rate of change in national output or income in a given period. Economic growth is the increase of per capital gross domestic product (GDP) or other measure of aggregate income. It is often measured as the rate of change in real GDP. Economic growth refers only to the quantity of goods and services produced. On the other hand, gross domestic product is the monetary value of total outpour of goods and services produced within the geographical boundary of a country within a given period of time usually one year.

Godwin (2007) defines economic growth as an increase in real gross domestic product (GDP). Growth is an increase in economic variable, normally persisting over successive periods. The variable concerned may be real or nominal, and may be measured in absolute terms.

Economic growth, as defined by Jhingan (2013), is an increase in the production and consumption of goods and services. Economic growth occurs when there is an increase in the multiplied product of population and per capita consumption. Similarly, Akpakpan (2010) sees economic growth as an increase in the actual output of goods and services.

Economic growth is the other measure of aggregate income, typically reported as the annual rate of change in real GDP. Economic growth is primarily driven by improvements in productivity, which involves producing more goods and services with the same inputs of labour.

The term, economic growth is primarily concerned with the long-run. The short-run variation of economic growth is termed the business cycle. The long-run variation is one of the central questions of economics; despite some problems of measurement, an increase in GDP of a country greater than population growth is generally taken as an increase in the standard of living of its inhabitants.

**Theoretical Review**

Since tax is very crucial to the development of the economy, it becomes imperative to look at the basic theories surrounding taxation as well as economic development. However, this study was anchored on ability to pay theory of tax.

**Ability to Pay Theory of Tax**

The idea of progressive tax income- that is, that people with the ability to pay more should pay a higher percentage of their income was developed by Adam Smith in the year 1776. Simply put, taxes are paid to the government base on the ability of the citizens. It is the most popular and mostly accepted principle of equitable taxation. People that receives higher income are to pay higher taxes than those who receive lower income under this principle. For example, the capacity to pay tax of individual A is higher than that of individual B, individual A should pay a higher tax than individual B. justice can be attained if taxes are levied on this principle, though it doesn't solve our problem. Practicing this theory actually starts a problem. First problem is the meaning of ability to pay. Secondly" Accountants do not have a consensus on how to quantify an individual's ability to pay tax. This can be observed from the following;

**(a) Ownership of property:**

Some Accountants argued that ownership of property is a good basis to measure one's ability to pay tax. The concept was not accepted on the basis that if an individual earns more and doesn't spend on acquiring properties, he would avoid paying tax or paying more tax. Whereas an individual who acquires more properties pays more tax. It becomes unjustifiable when an individual who earns more pays lesser tax because he doesn't acquire properties and the other pays more tax because he acquires properties.

**(b) Tax on the basis of expenditure:**

The ability to pay tax according to some economists, should be based on the expenditure incurred by an individual i.e. an -individual that incurs a greater expenditure should pay higher taxes and the one with 'lesser expenditure, lesser tax. This opinion is quite unreliable and not fair in all ramification. If we consider expenditure as a yardstick for the ability to pay tax, an individual with a large family and many people depending on him will pay a higher tax than an individual with a smaller family. This creates a greater burden on the former. Hence, it becomes unjustifiable.

**(c) Income as the basis**:

From accounting view, income should be the yardstick to measure an individual's ability to ability to pay tax. This principle is considered fair and just since an individual with a higher level of income pays a greater tax to the government than an individual with lesser income. Hence, countries in their modem tax system, considers income as the basis of individual's ability to pay tax.

**Empirical Review**

**Tax Revenue and Economic Development**

Soro (2020) determined the elasticity and revenue of the Ivorian tax system over the period 1984 to 2016. To do this, it uses the Ordinary Least Squares (OLS) method to estimate the revenue and elasticity. The empirical analysis showed that all the variables were stationary using ADF unit root test. The OLS results showed that short-run tax revenue estimates are statistically greater than one. It was therefore recommended that a viable tax system should be encouraged.

Khadan (2020) determined long-run and short-run tax revenue estimates for a group of 12 Caribbean countries over the period 1991–2017. Using panel regressions of fixed effect analysis, the study found that the long and short-run tax revenue estimates are statistically greater than one. However, the results vary by tax categories: with respect to indirect taxes, which accounts for almost 65 percent of total tax revenues, the revenue of the long-run coefficient is significantly less than 1 (0.35), while for direct taxes it is significantly greater than 1 (1.33). It also found that long-run tax revenue was lower in the post global financial crisis period. With respect to short-run revenue, corporate taxes and trade taxes are the most buoyant, while property taxes were found to be statistically insignificant.

Tanchev and Todorov (2019) analyzed tax buoyancies and economic growth in Bulgaria from the first quarter of 1999 to the second quarter of 2017. The revenue measures the response of tax revenue to changes in economic growth. The study employed Fully Modified Least Squares (FMOLS) and autoregressive distributed lag model (ARDL). The study aims to show which type of revenues (from direct or from indirect taxes) is more important for Bulgaria's state budget. It is shown that the buoyancies of aggregate tax revenue, personal income tax and social security contributions significantly differ from one another in the long-run. The buoyancies of the value-added tax and the corporate tax are above one in the long run. In the short-run the revenue of the aggregate tax revenues, the corporate tax, the income tax and the social security contributions are different from one. The short-run revenue of VAT exceeds one, hence dynamics of VAT revenues is sustainable. The collectability of the aggregate tax revenue, personal income tax and social security contributions has increased neither in the long run nor in the short run.

Barrack and Olukuru (2016) used error correction model to estimate in a comparative study the revenue of income tax, value-added tax, import tax, excise tax and total tax revenue in using annual data from 1972 to 2014 for Kenya and South Africa. The results suggested that the tax systems for both countries are dynamic in the long and short term with an average speed of adjustment between the long term and short-term estimates. Also, Keho (2013) determined the revenue of the UEMOA countries by calculating the revenue of individual taxes in each of the member countries of this

economic space over the period 1996-2008. The results showed that the overall tax system is not dynamic in Côte d'Ivoire. And, the poor performance of indirect taxes negatively affects the overall performance of the tax system. On the other hand, the small fluctuations in trade and indirect taxes are attributable to the low tax elasticities at the base, which indicates that, despite the increase in imports and GDP, import taxes are not collected accordingly.

Omondi et al (2014) determined the effects of tax reforms on revenue and elasticity of the tax System in Kenya from 1963–2010. The ECM result showed that, there is evidence of a long-run positive relationship between the revenue of aggregate revenue and economic growth in Kenya. Another study by Timsina (2010) used error correction model to study tax elasticity and revenue in the economy of Nepal from 1975-2005. He demonstrated that, there is a long-run buoyancies of aggregate tax revenues, VAT, personal income tax and import taxes.

Upender (2008) determined the degree of revenue in India by fitting a logarithmic regression model with an interaction variable. It considers the period after 1992 as the period of tax reform to determine the forecasts of tax reforms initiated by the government of India. The results showed that revenue is positively significant and greater than unity during the pre-reform period. However, the coefficient on the interaction variable is significantly negative, showing a downward change in the degree of revenue during the post-reform period. The revenue estimate, which was just above unity during the pre-reform period, is lower than unity during the post-reform period, which shows that overall taxation is relatively inelastic. Thus, it concludes that the revenue during the periods before and after-tax reform is not stable.

Akbar and Ahmed (1997) determined the elasticity and revenue of various taxes and expenditures of the federal government of Pakistan during the period 1973-1990 using the methodology of Prest (1962). They found that the revenue and elasticity of taxes were low due to the low elasticity and revenue of tariffs and excise duties. Elasticity and revenue were found to be relatively higher for sales tax followed by income taxes. Jeetun (1978) found that Pakistan's direct and indirect taxes were very inelastic over the periods from 1960 to 61 and from 1975 to 1976. Among indirect taxes, tariffs appeared to be more elastic, followed respectively by tariffs import, excise and sales taxes. The main reason for the low elasticity was the low elasticity of the tax relative to the base.

## METHOODOLOGY

### Research Design

Ex-post facto research design was used in analyzing the various data collected. This is because; the study is quantitative in nature and thus demanded the use of time series variables to determine the relationship between the economic variables under consideration.

### Population of the Study

The study is macro in nature, therefore the population of the study comprised the population of the Nigerian economy. Furthermore, given that the population overs the whole of information on subject matter in Nigeria, the population correspond to time frame is from the period of 1994 to 2019.

### Sample Size

Is the same as the study population.

### Sources of Data Collection

The sources of data for the study were through secondary source, particularly CBN Statistical bulletin, National Bureau of Statistics and World Bank data base. The data contained part A and B. Part A is independent variables, which measured tax revenue, and these include; export tax efficiency, value added tax efficiency (VAT) and export tax efficiency. While, the second part (part B) is the dependent variables which measured economic development. ; Human Development Index.

**Method of Data Analysis**

This study adopted both descriptive and econometrics techniques. While the descriptive statistics described the nature of the variable vis-à-vis average, median and standard deviation, the econometrics method of Ordinary Least Square multiple regression analysis the relationship between two or more variables.

**Model Specification**

The model that established the relationship between the dependent and the independent variables will be stated below:

HDI =f (VAT, ITE, XTE) (3.1a)
HDI =f (VAT, ITR, XTE) (3.1b)
HDI=f (VAT, ITE, XTE) (3.1c)

The linear form of the model is stated thus;

$HDI = \alpha_0 + \alpha_1 VAT + \alpha_2 ITE + \alpha_3 ITR + U$ (3.2c)

In order to put the variables on the same scale, the logarithm form of the three models equation were presented as follows;

$LogHDI = \alpha_0 + \alpha_1 LogVAT + \alpha_2 LogITE + \alpha_3 LogXTE + U$ (3.3c)

Where;
HDI = Human Development Index
VAT= Value added tax efficiency (VAT Revenue/GDP)
ITE = Import tax efficiency (Import Tax/GDP)
XTE= Export tax efficiency (Export Tax/GDP)
U = Error Term
t = Time Frame
$\beta_0, \theta_0, \alpha_0$ and $b_0$ = Intercept parameters
$\beta_1$-$\beta_3$, $\theta_1$-$\theta_3$, $\alpha_1$-$\alpha_3$, $b_1$-$b_3$, = slope parameters
Log = Logarithm to base ten

**DATA PRESENTATION, ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS**

**Data Presentation:**

Human development index (HDI), and as the dependent variable to measure economic development. While, value added tax efficiency (VAT), import tax efficiency (ITE) and export tax efficiency (XTE) served as measures of the independent variable. See Table 4.1 for detailed. The unit of measurement of per capital income, VAT efficiency, imports and exports efficiency is in billion Naira. While, HDI is in unit scale.

**Data Analysis and Results**

**Demographic Analysis**

This analysis helped to show the trends related to population or observation and as well analyses analyze the nature and characteristic of the variable used for the analysis. The analysis focused mainly on descriptive statistics.

Table 4.2 **Descriptive Statistics of the Variables**

| **Measurement** | **HDI** | **VAT** | **ITE** | **XTE** |
|---|---|---|---|---|
| Mean | 0.476185 | 7.013337 | 5.142521 | 0.311135 |
| Std. Dev. | 0.047367 | 5.367665 | 1.958255 | 0.148991 |
| Skewness | -0.672664 | 0.852103 | -1.139257 | -0.124720 |
| Kurtosis | 2.975286 | 3.555699 | 3.064090 | 1.460152 |
| Jarque-Bera | 2.036834 | 3.614761 | 5.845197 | 2.737520 |
| Probability | 0.361166 | 0.164083 | 0.053794 | 0.254422 |
| Sum | 12.85700 | 189.3601 | 138.8481 | 8.400650 |

| | | | | |
|---|---|---|---|---|
| Sum Sq. Dev. | 0.058334 | 749.1075 | 99.70385 | 0.577156 |
| Observations | 26 | 26 | 26 | 26 |

***Note*** *HDI= Human development index, VAT=Value added tax efficiency, ITE= Import tax efficiency and XTE=Export tax efficiency.*

**Source** *Researcher's Computation from (E- View- Version 12)*

The descriptive statistics reported in Table 4.2 indicated that human development index (HDI) has an approximate mean of 0.4762 with the corresponding standard deviation of 0.0474. Also, value added tax efficiency (VAT), has an approximate mean of ₦7billion with the corresponding standard deviation of ₦5billion. Import tax efficiency (ITE), has an approximate mean of ₦5billion with the corresponding standard deviation of ₦2billion. Similarly, exports tax efficiency (XTE), has an approximate mean of ₦0.3111billion with the corresponding standard deviation of ₦0.1489billion Thus, it can be infer from the analysis that the standard deviation of all the variables except tax policy were not higher than their respective means. Therefore, standard deviation of the variables converged around their respective mean.

Meanwhile, the skewness test showed that while only VAT efficiency is positively skewed. While, the remaining variables (HDI, ITE and XTE) all have negative slope,

Moreover, based on the analysis of the kurtosis; HDI, and XTE are platykurtic relative to normal, since the approximate values for kurtosis which are; 1.394375, 2.036834 and 1.460152 respectively, were less than 3. This suggested that the variables have short and thin tails, and their central peaks are lower and broader. Meanwhile, VAT and ITE all have leptokurtic distributions relative to normal, since the approximate values for kurtosis are more than 3. This indicated a flatter than normal distribution and the variables have large tails. That is, their central peaks are higher and sharper. However, the probability of Jarque-Bera statistics suggested that the null hypotheses of normal distribution for all the variables except tax policy were accepted at 5% level. Therefore, it was concluded from the statistical properties of the time series that, the variables were not normally distributed, may have resulted from the problem of unit root. This necessitated stability via ADF unit root test.

**Multivariate Analysis**

Multivariate analysis was carried out to analyze the relationship between two or more variables. Thus, the analysis involves a dependent variable and multiple independent variables. This section presented and discussed the multiple regression result in relation to the objectives and hypotheses of the study.

**Discussion of Ordinary Least Square Multiple Regression Result for HDI Model**

This section analyzed and discusses the regression result in line with the objectives and hypotheses of the study in order to validate economic assumptions.

**Table 4.1 Analysis and Discussion of Regression Result for the Estimated Human Development Index Model**

| Dependent Variable Human Development Index (HDI) | | | | |
|---|---|---|---|---|
| **Variables** | **Coefficients** | **t-statistics** | **Probability** | **Critical value @5%** |
| Constant (C) | 0.402536 | 17.46089 | 0.0000 | 0.0500 |
| VAT | 0.001817 | 0.817477 | 0.4220 | 0.0500 |
| ITE | 0.007425 | 1.291262 | 0.2094 | 0.0500 |
| XTE | 0.154941 | 1.761926 | 0.0914 | 0.0500 |
| R-Squared | 0.5571 | f-statistics | 4.2597 | |
| Durbin Watson | 1.4558 | Prob (f-statistic) | 0.0156 | |

***Note HDI=*** *Human development index, VAT=Value added tax efficiency, ITE= Import tax efficiency and XTE=Export tax efficiency.*
**Source** *Researcher's Computation from (E- View- Version 12)*

The results of the estimated model as presented in Table 4.6 showed that the R-squared ($R^2$) value which measure the goodness of fit of the estimated model is 0.5571. Thus, the variation in human development index brought about by VAT efficiency, import tax efficiency and export tax efficiency is about 56%. This showed that the model is a good fit. The Durbin Watson (DW) which measures the level of serial correlation in an estimated model has the value of 1.4558. This value is not too far from the DW bench mark of 2.0. Thus, serial autocorrelation is not a serious problem in the estimated HDI model. Thus, the estimated model is valid for policy formulation. In like manner, the f-statistics which measures the overall significant of the independent variables in the model showed that, the three independent variables are significant in explaining the HDI in the Nigerian economy. This is because, the probability of (f-statistic) of 0.0152 <0.0500 critical value at 5% level of significance. .

Meanwhile, the results in Table 4.6 showed that, the coefficient of Value Added Tax efficiency (VAT) has positive but insignificant relationship with HDI. The positive sign conform to accounting/economic theory which posited positive link between the two variables. Thus, a unit increase in VAT efficiency will causes a corresponding increase in HDI by 0.1817%. The result conforms to the finding of Moses, Chikewelu and Amahalu (2018) who determined tax revenue and economic development in Nigeria and demonstrated that tax revenue in the form of VAT has positive relationship with health status; a component of HDI.

Similarly, the results in Table 4.6 showed that, the coefficient of export tax efficiency (XTE) has positive but insignificant relationship with HDI. The positive sign conform to accounting/economic theory. Thus, a unit increase in export tax efficiency will causes a corresponding increase in HDI by 15.49% in Nigeria during the period of study.

The coefficient of import tax efficiency (ITE) has positive but insignificant relationship with human development index (HDI) in Nigeria during the period of study. This means that, a unit increase in import tax efficiency will increase HDI by 0.7425%. The positive value of import is not in tandem with accounting/economic theory which posited negative link between the two variables. This result is a true reflection of the Nigerian economy that is characterized with excessive importation of secondary products which does not improve the development of the Nigerian economy.

**Bivariate Analysis**
This is a form of quantitative analysis that involves the analysis of two variables for the purpose of determining the relationship between them. Bivariate analysis can be helpful in testing simple hypotheses in a study. Here in the study, the hypotheses were tested in relation to f-statistic.

**Hypothesis One, Two and Three**
There is no significant relationship between indirect tax revenue (measure by VAT efficiency, imports and exports efficiency) on human development index (HDI) in Nigeria. The estimated results in Table 4.6 showed that, the probability (f-statistic) for the three independent variables is lower than, the probability value at 5%. (0.0156 <0.0500) Thus, the alternative hypothesis which states that, there is a significant relationship between indirect tax revenue and human development index (HDI) in Nigeria was accepted. This implies that, the combination of VAT efficiency, imports and exports efficiencies will significantly help to improve human development index in Nigeria during the period of review.

**Summary of Findings**

The estimated ordinary least square (OLS) multiple regression result showed that, indirect tax revenue measured by value added tax efficiency, import tax efficiency and export tax efficiency jointly impacted on human development index in Nigeria during the period of study. In like manner, all the three independent variables (value added tax efficiency, import tax efficiency and export tax efficiency) were positively related with human development index in Nigeria during the period of study.

**Discussion of Findings**

This section discusses the findings of the study based on the OLS result to know whether or not the stated objectives/hypotheses were achieved.

**Value Added Tax Efficiency and Human Development Index in Nigeria from 1991-2020:**

The coefficient of Value Added Tax efficiency has positive but insignificant relationship with HDI. Thus, an increase in VAT efficiency will causes a corresponding increase in HDI by 0.1817%. The result conforms to the finding of Moses, Chikewelu and Amahalu (2018) who determined tax revenue and economic development in Nigeria and demonstrated that tax revenue in the form of VAT has positive relationship with health status; a component of HDI.

**Exports Tax Efficiency and Human Development Index in Nigeria from 1991-2020**

The finding showed that, exports tax efficiency has positive relationship with human development index (HDI). Therefore an increase in exports tax efficiency will causes a corresponding increase in human development index in Nigeria during the period of study. The finding corroborates the empirical work of Obayori and Omekwe (2020), who averred that indirect tax in the forms of export and imports duties have direct link with economic development indicators such as GDP, and HDI.

**Imports Tax Efficiency and Human Development Index in Nigeria from 1991-2020**

The ordinary least square multiple regression result depicted that, import tax efficiency has positive but insignificant relationship with human development index (HDI) in Nigeria during the period of study. This means that, a unit increase in import tax efficiency will increase HDI by 0.7425%. The positive value of import is not in tandem with accounting/economic theory which posited negative link between the two variables. This result is a true reflection of the Nigerian economy that is characterized with excessive importation of secondary products which does not improve the development of the Nigerian economy. The remote effect of excess import over exports is evidence in low production in the domestic industries which resulted to low employment rate. This in turn will lead to low standard of living and low literacy level and poor quality of life. The finding is in line with the scholarship of Okeke et al (2018), who averred that, there is a positive relationship between tax revenue and economic growth.

**SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND CONTRIBUTION TO SCHOLARSHIP**

**Summary**

This study determined indirect tax revenue and economic development from 1991 – 2020. The specific objectives of the study were to; determine the effect of VAT efficiency on human development index in Nigeria; determine the effect of import tax efficiency on poverty index in Nigeria; determine the effect of import tax efficiency on human development index in Nigeria; and determine the effect of VAT efficiency on human development index in Nigeria. Secondary data human development index, VAT efficiency, imports and exports tax efficiencies were sourced from CBN statistical bulletin and World Bank data base. The collected data were analyzed with the techniques of stationarity test (ADF unit root test) and ordinary least squares (OLS) multiple

regression analysis. The empirical result showed that;

Indirect tax revenue measured by value added tax efficiency, import tax efficiency and export tax efficiency jointly impacted on human development index in Nigeria during the period of study. In like manner, all the three independent variables (value added tax efficiency, import tax efficiency and export tax efficiency) were positively related with human development index in Nigeria during the period of study.

**CONCLUSIONS**

This work empirically determined indirect tax revenue and economic development in Nigeria from 1991 – 2020. This was done against the background that the revenue of indirect tax such as VAT, exports and import duties has the potential to increase the revenue base of government and make funds available for developmental purposes through accelerated economic growth, improved human development index. Based on the empirical results, it was concluded that indirect tax revenue in terms of value added tax efficiency, import tax efficiency and export tax efficiency significantly impacted on economic development in Nigeria during the period under review. The implications of the finding is that the Nigerian government can boost economic growth and development through realizing that revenues should focus on boosting revenue from indirect tax sources.

**RECOMMENDATIONS**

Based on the findings of this work, the following policy recommendations are suggested: -

(i) The analysis showed that, indirect tax revenue impacted on economic development; thus, government should formulate and implement export policy measures towards exporting goods that are growth and development drivers, particularly, refined goods in the area the nation has comparative advantage in order to make the domestic production viable and compete with the industrialized economy of the world.

(ii) Given the fact that, the empirical result showed that, indirect tax revenue is positively with economic development in terms of HDI and per capita income, in Nigeria, government should coordinate the ministry in charge of tax revenue (FIRS) so that more revenue generated will be well-managed and channel to the critical sectors of the economy in the absence of systemic corruption in order to enhance growth and development of the Nigerian economy.

(iii) Given the fact that the empirical result showed that indirect tax revenue in the forms of VAT efficiency, exports and import tax did not individually impacted on economic development, in the term so poverty reduction during the period under review, therefore, government should identify administrative loopholes that drains the revenue from VAT, imports and export duties so that, they can significantly impact on economic development in terms of achieving good standard of living, good education and quality health status and as well environment devoid of insecurity.

**Contribution to Scholarship**

(i) The study has contributed significantly to the bodies of knowledge by proving empirically that indirect tax revenue serves as major source of the Nigeria revenue that significantly contributed to economic development in terms of poverty reduction, improved human development index and increase per capita income.

(ii) Moreover, none of the known empirical works cited in Nigeria used annual data to determined tax revenue and economic development. This study made a significant contribution to knowledge in this area by using data on tax revenue or efficiency. This was measured as ratio of indirect tax to total output of the economy measured by real gross domestic product.

(iii) The study also departed from work on tax revenue and economic development. But rather determined tax revenue and economic development.in Nigeria within the period under review

**REFERENCES**

Abdul-Rahamoh, F. H. T. & Adejare, A. T. (2013). Analysis of the effect of petroleum tax on Nigeria economy. *Asia Journal of Humanities and Social Sciences, 1*(1), 1-12

Abomaye-Nimenibo, W. A. S., Michael, J. E. M. & Friday, H. C. (2018). An empirical analysis of tax revenue and economic growth in Nigeria from 1980 to 2015, *Global Journal of Human-Social Science, 18*(3), 8-40.

Adegbie, F. F & Fakile, A.S. (2011). Company income tax and Nigeria economic development. *European Journal of Social Sciences, 22*(2), 1-9.

Adereti, S. A., Sanni, M. R. & Adesina, J. A. (2011). Value added tax and economic growth in Nigeria. *European Journal of Humanities and Social Sciences, 10*(1), 1-11.

Afolayan, S. M. & Okoli, M. N. (2015). The impact of value added tax on Nigerian economic growth: An investigation. *European Journal of Business and Management, 7*(9), 226-236.

Ajakaiye, D. O. (2010). Macroeconomic effects of VAT in Nigeria: A computable general equilibrium analysis. *African E c o n o m i c s Research Consortium (AERC), 2*(2), 86-92.

Akbar, M. & Ahmed, Q. M. (2017). Elasticity and buoyancy of revenues and expenditure of federal government. *Pakistan Economic and Social Review, 35*(1), 43-56.

Akhor, S. O., & Ekundayo, O. U. (2016). The impact of indirect tax revenue on economic growth: The Nigeria experience. *Igbinedion University Journal of Accounting, 2*(8), 62-87.

Akpakpan, E. B. (2010). *The Economy: Towards a new type of economics*. Belpot Publishers.

Anyanwu, J. C. (2017). *Monetary economics: Theory, policy and institutions.* Hybrid Publishers.

Bakare, A. S. (2013). Value added tax and output growth in Nigeria. *Proceedings of 8th Annual London Business Research Conference Imperial College.*

Barrack, M. & Olukuru, J. (2016). Tax buoyancy: A comparative study between Kenya and South Africa. School of finance and applied economics. Strathmore University.

Basila, D. (2010). Investigating the relationship between VAT and GDP in Nigerian economy. *Journal of Management Corporate Governance*, *2*(2), 65-72.

Bhartia, H. L. (2019). *Public finance (13th ed).* Vikas Publishing House PVT Ltd.

CBN (2018). Central Bank of Nigeria Publication (29).

Chigbu, E. E. & Ali, P. P. (2014). An econometric analysis of the impact of VAT on economic growth in Nigeria, *European Journal of Business Management, 6*(18), 62-73.

Deli, Y., Garcia, A., Kostarakos, I. & Varthalitis. P. (2018). Dynamic tax revenue buoyancy estimates for a panel of OECD countries. *The Economic and Social Research Institute, 3*(4), 45-67.

Denis, B. (2010). Investigating the relationship between VAT and GDP in Nigerian economy. *Journal of Management and Corporate Governance*, *2*(2), 78-98.

Ebeka, C. H. (2010). Remittances, value added tax and tax revenue. *Research Gate, 3*(2), 56-76.

Edewusi, D. G. & Ajayi, I. E. (2019). The nexus between tax revenue and economic growth in Nigeria. *International Journal of Applied Economics, Finance and Accounting***,** *4*(2), 45-55.

Edoumiekumo, S. G., Tamarauntari, M. K., & Steve, S. T. (2014). Income poverty in Nigeria: incidence, gap, severity and correlates. *American Journal of Humanities and Social Sciences, 2*(1), 1-9.

Ekeocha, P. C. (2010). Modeling the potential economic effect of VAT reform: Simulation analysis using computable general equilibrium analysis, Paper Submitted for ECOMOD.

Ekine, T. N. (2014). *Macroeconomics: Dimensions of competitive indicators and policy performance*, Dominus Printing Company.

Emmanuel, C. U. (2013). The effect of value added tax (VAT) on the economic growth in Nigeria*. Journal of Economic and Sustainable Development, 4*(6), 190-202.

Eriksson, P. & Kovalainen, A. (2015). *Qualitative methods in business research: A practical guide to social research*. Sage.

Ewubare, D. B. & Obayori, E. L. (2019). Comparative study of the impact of oil rent on healthcare in Nigeria and Cameroon: A three stage methodical approach. *International Journal of Science and Management Studies, 2*(1), 58-63.

Eyisi, A. S., Oleka, D. O. & Nwaorgu, I. A. (2015). The effect of taxation on micro-economic growth in Nigeria. *International Journal of Economics, Commerce and Management, 3*(4), 1-11.

Famoyin, Y. (2015). The search for growth, in policies for long run growth, symposium series. *Accounting Horizon, 2*(1), 56-78.

Feldman, M. P. & Francis, J. (2013). Fortune favors the prepared region: The case of entrepreneurship and the capitol region biotechnology cluster. *European Planning Studies*, *11*(7), 45-57.

Gatawa, N. M., Aliero, H. M. & Aishatu, A. M. (2016). Evaluating the impact of value added tax on the economic growth of Nigeria. *Journal of Accounting and Taxation, 8*(6), 59-65.

Gbegi, D. O. & Okoye, E. J. (2013). Effective value added tax: An imperative for wealth creation in Nigeria*, Global Journals Inc.13*(3), 45-68.

George-Anokwuru, C. C. B. & Obayori, J. B. (2020). Direct tax and the growth of the Nigerian economy: The case of petroleum profit ta.*, Academic Journal of Current Research, 7*(6), 41-49.

George-Anokwuru, C. C. B., Olisa, F. U. & Obayori, J. B. (2020). Indirect tax and employment generation in Nigeria, *Asian Business Research Journal, 5*(4), 5-12.

Godwin, O. (2007). *The Nigerian foreign exchange market and finance of international trade.* Mikewin Publishers.

Gyani, F. (1990). Increasing the capital income tax may lead to faster growth. *European Economic Journal, 8* (22), 103-115.

Haller, A. P. (2012). Concepts of economic growth and development: Challenges of crisis and of knowledge. *Economy Trans-disciplinarity Cognition*, *15*(1), 66-71.

Harrod, R.F. (1939). An essay in dynamic theory. *Economic Journal*, *49*(4), 14-33.

Ihendinihu, J. U., Jones, E. & Ibanichuka, E. A. (2014). Assessment of the long-run equilibrium relationship between tax revenue and economic growth in Nigeria: 1986-2012. *The Standard International Journals, 2*(2), 39-47.

Ikpe, M. & Nteegah, A. (2013). Value added tax and price stability in Nigeria: A partial equilibrium analysis. *European Journal of Government and Economics, 2*(2), 137-147.

Ilaboya, O., & Mgbame, C. (2012). Indirect tax and economic growth. *Research Journal of Finance and Accounting, 3*(11), 70-82.

Inimino, E. E., Otubu, O. P. & Akpan, J. E. (2020). Petroleum profit tax and economic growth in Nigeria, *Asian Journal of Sustainable Business Research*, *1*(2), 121-130.

Ishlahi, A.A. (2015). Ibu Khaldun's theory of taxation and its relevance, *Turkish Journal of Islamic Economics, 2*(2), 1-19.

Jeetun, A. (2018). Buoyancy and elasticity of taxes in Pakistan. *Applied Economics Research Centre (AERC) Karachi.* 2(7), 56-89.

Jhingan, M.L. (2013). *Macro-economic theory* (12th edition), Vrinda Publisher Ltd.

Johnson, A. A. (2013). Tax policy, inflation and unemployment in Nigeria. *European Journal of Business Management, 5*(15), 114-129.

Onowu, Joseph Uche, Tonye, Young-Arney. (2024). Federal Taxes and Infrastructural Development in Nigeria 9, 161-178.

Stanley Azeru Oludi, Joseph Uche Onowu. (2022). Tax Incentive Practices and Financial Performance of Consumer Goods Companies in Nigeria 5, 99-115.