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INDIRECT TAX REVENUE AND HUMAN CAPITAL DEVELOPMENT IN NIGERIA: EMPIRICAL ANALYSIS FROM 2003-2022

Tonye Buseri[1], Perelayefa George Owota (PhD)[2], Ihenyen Joel Confidence (PhD)[3]

[1, 2, 3] Department of Accounting, Faculty of Management Sciences, Niger Delta University, PMB 71, Wilberforce Island, Bayelsa State, Nigeria.

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*__Corresponding author:__ Tonye Buseri

Department of Accounting, Faculty of Management Sciences, Niger Delta University, PMB 71, Wilberforce Island, Bayelsa State, Nigeria.

Abstract

The primary goal of this research was to examine how indirect tax income affects Nigeria's human development index. In particular, the purpose of this research was to analyse how stamp taxes, customs and excise charges, and other forms of indirect tax collection affect the human development index. Sources such as the Federal Inland Revenue Service (FIRS) Bulletin and the Central Bank of Nigeria (CBN) Statistical Bulletin provided the necessary data for these variables across a 20-year span, from 2003 to 2022. from this is a research on the human development index, the population size is the whole Nigerian economy from the beginning of the present democratic regime, which is twenty years; the study's sample size is twenty years, from 2003 to 2022. For inferential statistics, this study used SPSS version 25 and an ex-post facto research methodology to calculate coefficients, t-statistics, f-statistics, and related p-values using the multiple regression approach. The results of this study showed that indirect tax income significantly affects Nigeria's HIV/AIDS index. This study suggests that the Nigerian government should do what other governments do and make public, in a straightforward manner, the names of the entities and persons responsible for paying stamp duties, as is the case with other types of taxes.

Keywords: Indirect Tax, Human Development Index, Customs & Excise Duties, Stamp Duties

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1. Introduction

The amount of tax money a country gets to build its infrastructure is directly correlated to the level of political and social development as well as its economic growth. Thus, taxation allows for the redistribution of resources and the promotion of social fairness through the redistribution of wealth. Improving economic growth and development is the most important thing about all of these. Consequently, taxes is a powerful tool for a nation to use its own resources and foster an atmosphere that supports economic growth (Aderibigbe & Zachariah, 2014). Put simply, a well-designed tax system is crucial to any nation's economic growth, and Nigeria is no exception. According to Agunbiade and Idebi (2020), taxation is the most often used form of external financial intervention, but no government can effectively interfere and maintain economic growth in any society without sufficient funding from both internal and external sources. Taxation serves as a tool for catalysing economic performance in various ways, including but not limited to: optimum allocation of resources, increasing government revenue, encouraging savings and investment, speeding up economic development and development, price stability, control mechanism, and so on (Omojolaibi & Obieke, 2021). Consequently, it is indisputable that economic progress and the system of taxes are interdependent on one another.

According to this claim, a country's economy can only grow through taxes, which in turn leads to better workforce education and training and more advanced technology (Ibadin & OLuwatuyi, 2021). Hassan (2015) argues that increasing wealth and income are only part of economic progress. It is the act of giving individuals more options. A nation's prosperity is directly correlated to its level of economic development. Measuring performance and continuously refining measures are essential for an economy's development (Ibadin & Eiya, 2019). Health, education, and living standards are the three pillars upon which the Human Development Index (HDI) rests.

Neumayer (2015) states that the Human Development Index (HDI) sets the stage to put people at the core of development, which in turn leads to its annual reporting and is therefore seen as a measure of society well-being. It is a tool for ranking countries into four levels of human development according to their performances in these areas, and Ibadin and Eiya (2019) describe it as a composite index that measures a country's average achievements. Most people now agree that a country's HDI—which stands for its total increase or progress in education, skill, and technological advancement—is the best indicator of its economic development. Because of this, it may be said to have played a significant role in raising the living standards, health, and wealth of countless individuals (Agunbiade & Idebi, 2020).

It is disheartening to learn that tax revenue is not making a significant contribution to the growth of Nigeria's currency when contrasted with the tax-to-GDP ratio of other African nations such as Cameroon, Senegal, Tunisia, etc., despite the apparent importance of taxes to a country's economic development (Omojolaibi & Obieke, 2021). Tax non-compliance among taxpayers, which might be attributed to individuals' lack of time to attend tax offices to pay their taxes or other circumstances, is a key contributor to the poor returns from taxation in Nigeria (Wasao, 2014). Furthermore, due to ineffective management, Nigeria's revenue system is obviously underutilised and failing to promote economic growth. According to Onoh et al. (2021), when it comes to macroeconomic indicators, the economy is in serious need of reforms, balance, and radical transformation, yet it has stayed in a profound sleep or shamble. To make matters worse, most tax studies have concentrated on oil tax revenue—also known as petroleum profit tax—rather than indirect tax revenue (Aniefor, 2022; George-Anokwuru, 2023; Ezejiofor & Apete, 2023). This is because, aside from personal income tax and company income tax, which are both types of direct tax, Nigeria relies heavily on oil tax revenue. This claim is on top of the fact that most studies on indirect tax revenue have only looked at value-added tax or customs and excise duties as indicators of indirect tax revenue, ignoring the role that stamp duties have played in tax revenue increase over the years. Moreover, other writers and scholars have examined the relationship between taxes and economic development in Nigeria, but they have done so from various angles, using different metrics, and come to diverse findings. Similar to how human development index was only studied by a small number of scholars, economic growth indicators (using GDP as a proxy) were the most commonly utilised dependent variable measures (Ibadin & Oluwatuyi, 2021). Moreover, none of these experts covered year 2022 tax year in their empirical study, to the best of the knowledge of this researcher. These seeming information gaps are what this study aims to fill. Hence, from 2003–2022, this study looks at the impact of indirect tax revenue (measured by customs and excise duties and stamp duties) on the human development index in Nigeria.

Objectives of the Study and Research Hypotheses

In view of the position above, the specific objectives of this study are to:

i. Examine the effect of customs and excise duties on human development index in Nigeria.
ii. Determine the effect of stamp duties on human development index in Nigeria

With respect to these specific objectives, the following null hypotheses are stated:

Ho 1: Customs and excise duties do not have significant effect on human development index in Nigeria.

Ho 2: There is no significant effect of stamp duties on human development index in Nigeria.

2. Literature Review

Human Development Index (HDI)

A 1990 Human Development Report by the United Nations Development Programme (UNDP) created the concept of the Human Development Index (HDI). Accounts for a nation's accomplishments in three(3) areas of socioeconomic development, this index is unquestionably seen as the indicator that measures the social well-being (Ibadin & Eiya, 2019). I a good quality of life, as measured by things like life expectancy at birth; (ii) education, as shown by things like literacy rates and school enrolment; and (iii) a healthy and long life expectancy, as measured by things like birth rates, are all part of these dimensions (Ibadin & Eiya, 2019). When considering living standards, it is more important to quantify living power than purchasing power when considering excellent socioeconomic growth in relation to individuals' well-being (Morgan, 2015). In contrast to GDP, which has long been used to gauge economic progress, the Human Development Report (HDR) of 1990 established the idea of HDI as a worldwide metric measuring the 'well-offness' of people in nations all over the globe.

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Neumayer (2015) states that HDI creates the conditions for placing people at the core of development, which leads to its annual reporting (Hassan, 2015). Accounting for and evaluating socioeconomic growth, according to Emeneka (2021), relies heavily on people and their capacities. Living long, healthy lives, having access to quality education, social services, and resources are all examples of what are considered to be these skills (Sina & Moshtaghi, 2014). This is why the Human Development measure (HDI) is condensed into a single composite measure that incorporates education, living standards, and lifespan. Using the indicators of health, education, and standard of living, HDI assesses the socioeconomic progress of a nation (Ofoegbu et al., 2016).

Human Development Index Metrics

The three indices that make up the Human Development Index (HDI)—the Standard of Living Index (SLI), the Health Index (HI), and the Education Index—are taken as an average by Ibadin and Oluwatuyi (2021).

HDI = 1/3 (Standard of Living Index) + 1/3 (Health Index) + 1/3 (Education Index).

Ibadin and Eiya (2019) state that nations are evaluated according to how near their HDI is to one, and that the HDI is operationally expected to fall between zero and one. With an HDI of 0.534 in 2018, Nigeria is classified as a low-human-development nation, ranking 158th out of 189 (UNDP Report, 2019). The Human Development Index (HDI) for Nigeria was 0.535 in 2016, up from 0.467 in 2005 and 0.514 in 2014. (PricewaterhouseCoopers Limited, 2016). Ibadin and Eiya (2019) found that while looking at nations in the low human development category, Nigeria's 2018 HDI of 0.543 was above average, but when looking at countries in Sub-Saharan Africa, it was slightly above average, at 0.541. Put another way, the Human progress Index (HDI) may provide a comprehensive view of a country's socioeconomic progress (Human Development Report, 2019). It gives the geometric mean of normalised indices for each of the three dimensions of human development, which is a summary assessment of the average accomplishment in major areas of development. Some of these dimensions are:

The Dimension of Health Index (HI)

A measure of how healthy and long people tend to live, the HI is one of these dimensions. Consequently, if people could live longer and healthier lives, the death rate would drop dramatically across all age groups, the prevalence of deadly illnesses would fall naturally, and life expectancy would rise enough (Ibadin & Oluwatuyi, 2021). Life expectancy at birth is used to evaluate the health component. In theory, the HI represents the largest disparity in potential life expectancies as a percentage of the extent to which the examined region's Life Expectancy (LE) exceeded the Minimum Life Expectancy (Min. LE). In reality, the minimum life expectancy (Less) is 20 years, which is conservative according to historical data since no country in the 21st century had a life expectancy of 20 or 25 years (Ofoegbu, et. al., 2016). The maximum life expectancy (Max. LE) is 85 years, which has been a reasonable goal for many nations to strive for in the past 30 years (Human Development Report, 2019). To express the HI mathematically, we have: HI = (LE - Min LE) / Max LE - Min LE.

There are a number of factors related to a person's present health that HI does not take into consideration, which might impact and restrict their abilities. The validity of life expectancy as a statistical measure is thus called into doubt (Ibadin & Oluwatuyi, 2021).

The Dimension of Education Index (EI)

A person's level of education is a good indicator of their social and economic standing as well as their standard of living. A person's fundamental rights and current events can be better understood via education. With this information, people may take part in making some decisions and shouldering certain responsibilities. Consequently, EI paves the way for fundamental training that enables individuals to carry out their duties. In their 2019 article, Ibadin and Eiya agree that a lack of formal education might hinder a country's socioeconomic growth by making it harder for its citizens to purchase and use increasingly sophisticated goods and services. An integral part of maturing into one's full potential is expanding one's horizons intellectually (Ibadin & Eiya, 2019).

As of 2010, the EI was based on the simple average of two indicators: (i) the adult literacy rate, which has a two-thirds weighting (Human Development Report, 2019), and (ii) the combined gross enrolment ratio for primary, secondary, and tertiary education, which has a one-third weighting. (i) the combined mean and predicted number of years spent in school, with a weight of 50% each. A country's gross enrolment ratio reveals its degree of education from elementary school all the way to graduate school, while its literacy rate shows how well its citizens can read and write (Human Development Report, 2019). By adding the literacy rate and enrolment rate, we get the EI, which is mathematically expressed as: EI = 2/3.

When comparing educational accomplishments across countries, the education index is shown to have several significant differences. Every country has its own unique system of education, including different lengths of school years, effects of repetition, automatic promotion, ongoing education, and training. Thus, there is no solid ground upon which to base international comparisons (Ibadin & Oluwatuyi, 2021).

The Dimension of Standard of Living (SOL) Index

While indicators of education and lifespan do a good job of reflecting some capacities, the income component of the HDI has been utilised as an indirect predictor of other talents. With enough money, people can afford to live in safe housing, eat healthily so they live longer, and send their children to reputable schools. The SOL Index is calculated by dividing a country's GDP by its working population and then adjusting the result for purchasing power parity in US dollars (PPP$). According to Ibadin and Oluwatuyi (2021), the GDP per capita after adjusting for PPP gives a more accurate picture of the relative ability to control resources and acquire goods for a good quality of life. When expressed as a region's GDP at purchasing power parity in US dollars, the SOL Index needs three inputs. The formula takes into account (i) the region's revenue, (ii) the region's currency's exchange rate to the US dollar, and (iii) the region's price level index relative to the US price level, which is 100. According to the United Nations (UN), the least yearly income per capita (Min Income) is $100 (PPP US$40,000) while the maximum is $40,000 (HDR, 2005). Thus, the Standard of Living (SOL) Index is calculated by Ibadin and Oluwatuyi (2021) as follows: SOL Index = (Log Income - Log Min Income) / (Log Max Income - Log Min Income).

The standard of living (SOL) index uses a logarithmic formula, making its calculation more complicated than other indexes. On the

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other hand, the assumption that individuals do not require vast sums of money to live comfortably justifies the use of the logarithmic formula. Contrasted with GDP per capita, which solely measures economic development, HDI focusses on long-term human development outcomes across three basic dimensions: health, education, and standard of living (Ibadin & Oluwatuyi, 2021). This is its strength: it encompasses broader issues of human well-being and can be used as a measure for socioeconomic development.

Types of Taxation

Adelusi (2019) states that in most cases, two forms of taxation exist: direct and indirect. First, there is the form of tax that the government imposes on individuals' and businesses' revenue through its agencies; this is called a direct tax. Salary, profit, rent, and interest are all examples of such revenue. It is the taxpayers who bear the brunt of this kind of tax, and they are typically cognisant of the fact that they are paying it. The history of taxation in Nigeria dates back to the pre-colonial era. However, the principal law that began to regulate the country's tax system was the Native Revenue Ordinance of 1904 in what was then Northern Nigeria. A similar ordinance was passed in 1917 for Western Nigeria, and an identical one in 1928 for Eastern Nigeria. These three separate ordinances were later combined to form the Direct Taxation Ordinance of 1940. Many Nigerian laws impose direct taxes on businesses and individuals, such as the Petroleum Profit Tax (PPT), the Companies Income Tax (CIT), and the Personal Income Tax (PIT).

Goods and services are subject to what is known as indirect taxation. Initially, taxes are paid by manufacturers or sellers, and then, through increased prices, they are passed on to the ultimate consumers. People who pay indirect taxes, in contrast to those who pay direct taxes, typically have no idea how much money is going towards the government. The country is anticipated to get particular attention under the indirect tax system, which is characterised by its vast reach, in light of the tax evasion and avoidance incidents that plagued the direct tax system. According to Abomaye-Nimenibo et al. (2018), some examples of indirect taxes are stamp duties, value-added tax (VAT), and customs and excise charges (CED).

The following taxes were chosen as indicators of indirect taxation since they are crucial to this study's emphasis on tax revenue and economic development:

Stamp Duties

According to the research of Onwuka and Orji (2021), the first Stamp Duty Proclamation was issued in 1903 by Sir Frederick Luggard, who was the High Commissioner of the Northern Protectorate at the time. Later on, in 1928, 1931, 1935, 1939, and 1990, respectively, the Stamp Duty Ordinances were established. Lastly, in 2004, as revised, the Stamp Duties Act was passed. Aniefor (2022) states that the Stamp Duties Act (SDA), CAP S8 LFN 2004 (as modified), governs stamp duty in Nigeria, which is an indirect tax. A stamp or seal placed to a written or electronic document makes it a legal document and would be acceptable in any court of law if completed. It is a tax on that document. Documents pertaining to acts done or needed to be done in Nigeria, whether in written or electronic form, are subject to stamp duties, which are taxes. Stamp duties can be charged at two different rates: a flat rate that remains constant regardless of consideration, and an ad-valorem rate that changes depending on consideration. Section 52 of the 2019 Finance Act ("the FA 2019") broadened the SDA's purview to include digital transactions (Aniefor, 2022).

Federal Inland Revenue Service Establishment Act, the Stamp Duties Act (SDA), Cap S8, Laws of the Federation of Nigeria 2004 (as amended), the Constitution of the Federal Republic of Nigeria (item 58, Exclusive Legislative List of the 1999 Constitution), and decided cases in court of law are the statutes that govern stamp duties in Nigeria, according to Onwuka and Orji (2021). Section 4(1) of the Stamp Duty Act, as amended by S.53 of the Finance Act 2019, states that the Federal Inland Revenue Service is the only Nigerian agency with the authority to assess, collect, and stamp documents between businesses and individuals or groups in order to pay stamp duties. Meanwhile, Section 174 of the 1999 Constitution grants the Attorney General of the Federation the power to bring criminal charges against anyone in any Nigerian court for any offence arising from or under an Act of the National Assembly, including charges related to the recovery of back year stamp duties. Further, the Federal Republic of Nigeria Constitution's Exclusive Legislative List includes Stamp Duties as Item 58. Nevertheless, the National Assembly can authorise state governments to collect stamp duties from people under Item 7 of the Concurrent Legislative List. Upon payment of stamp duty, a document is transformed into a legally binding document. This means that it may be used as evidence in court and enforced in the future. In addition, the SDA specifies that Stamp Duties can be assessed at either a fixed or ad valorem rate. The Act's schedule details the stamp duty rates that apply to various papers that are listed as dutiable (Onwuka & Orji, 2021).

The Chartered Institute of Taxation of Nigeria website and Ezejiofor and Apete (2023) both state that the SDA and other tax statutes were significantly amended with the passage of the Finance Act in January 2020, which was hailed as a watershed moment in the country's tax history. The most significant changes to the SDA are the provisions for electronic receipts and stamping, as well as the addition of electronic papers as charged instruments. This means that any bank or other financial institution that accepts deposits of N10,000 or more would have to tack on a 50-naira fee. Everyone whose name is on the cheque or bank account must account for the charge. The changes show that the government is trying to increase tax income by considering how new technologies may affect business deals. Also, with oil and gas revenues continuing to decline owing to a worldwide decline in demand and price, the federal government of Nigeria announced its intention to position stamp duty as the next major source of revenue on 30th June 2020 and inaugurated an inter-Ministerial committee on recovery and audit of stamp duty (Ezejiofor & Apete, 2023).

In their clarification of specific elements of the Amended SDA, Ezejiofor and Apete (2023) state that the FIRS verified the date of electronic document reception into Nigeria in an information circular dated 29th April 2020. As stated in the circular by the FIRS, for an electronic document, receipt, or instrument to be considered received into Nigeria from outside of Nigeria, it must meet the following criteria: first, it comes into or leaves Nigeria; second, it is saved on a device (such as a computer or magnetic storage) and then brought into Nigeria; or third, it is kept on a device or computer in Nigeria.

Hence, it seems that the circular has answered the question of when an electronic document is received in Nigeria. When taken together with the amended SDA, it becomes apparent that chargeable instruments received in Nigeria electronically from the

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commencement date would be subject to stamp duty. Hence, it is no longer an adequate means to evade stamp duty to execute papers overseas and retain just electronic versions. Significantly, the Finance Act now specifies that state governments shall get 85% of stamp duty revenues and that the federal government and the Federal Capital Territory, Abuja, should receive 15%. It is anticipated that the tax administrators will resolve certain concerns, such as the inability to make bulk remittance of stamp duties via the portal, regarding the practicability of enforcing compliance, despite the commendable amendments to the SDA through the Finance Act 2020 (Ezejiofor & Apete, 2023).

Custom and Excise Duty

The Federal Government receives a substantial amount of revenue from customs duty and excise duty, which is paid by importers of certain goods (Abomaye-Nimenibo et al., 2018). These levies have always played a significant role in Nigeria's economic development, both before and after the country's oil was discovered. The Federal Government imposes various taxes on imports, exports, and statutory rates, including custom duties, excise, fees, tariffs, and more. The burden of collecting these levies falls on the Nigeria Custom Services. So, custom duties are the sum of all the taxes that the Customs and Excise Department collects from imports and exports. The government also imposes levies on some goods at different rates; these are called excise duties. Domestically produced items, as opposed to imported commodities, are subject to these levies, which are primarily levied to generate money. Certain nations impose excise taxes on goods and services including tobacco, alcohol, fuel and manufactured goods, whereas other countries' tax structures vary. Based on their source, excise taxes might be either broad or narrow. According to Abomaye-Nimenibo et al. (2018), taxes can be either general or selective, depending on whether they apply to all transactions or if they are based on a certain quantity of money.

Customs and excise charges, which are indirect taxes imposed on imported and exported products and services, are another source of non-oil tax income that has helped Nigeria's economy grow (Akhor et al., 2016). As an import tax, customs and excise duty was established in 1860 and is considered one of the earliest types of modern taxation. Imposing customs and excise charges is often part of a policy aimed at stimulating economic growth. To do this, we can increase tariffs on certain imported commodities that are also made in the nation in order to discourage their import, while keeping charges on goods and services that are necessary for economic growth fairly low. Additionally, customs and excise tariffs are useful tools for safeguarding local enterprises in their developing nations, controlling inflation, redistribution of revenue, and regulation of economic operations (Akhor et al., 2016). Local manufacturing of imported products and services will be encouraged, leading to economic growth, as the price and availability of these goods and services within the country will be adversely affected by an increase in tariffs. For example, according to Abomaye-Nimenibo et al. (2018), industrial investments have been fostered by the high import tariff on dairy goods, textile materials, agricultural produce, drinks, and similar items. These investments have had a multiplier impact on employment, production, and economic growth.

Theoretical Framework

Endogenous Growth Theory

Romer (1994) and Olawunmi and Ayinla (2007) both embraced and enlarged upon the endogenous growth hypothesis, which states that, when appropriately collected and used, government money may boost growth and improve a country's macroeconomic performance. Despite many quirks in tax-related studies, the endogenous growth theory has been the dominant framework in development economics. Economic measures, such tax policies, are pushed for by proponents of the endogenous growth theory in order to accelerate the system's per capita production growth rate (Emeneka, 2021).

The idea says that taxation and other measures that increase revenue collection are necessary for economic development because, according to the theory, economic development occurs naturally inside the system. This suggests that tax and expenditure policies enacted by the government can influence economic growth in the long run. This view maintains that tax policy and other economic instruments should be used to increase the level and pace of per capita production. An interdependent production function links labour, capital, and technology advancement, the three pillars of economic development. According to Emeneka (2021), taxes have the potential to influence economic growth by changing the choices that are made in relation to these elements. One of the earliest efforts to endogenize the growth-fiscal-policy link is Emeneka (2021). He divides public funds into four groups: those that are productive, those that are not, and taxes that are distortionary and those that are not. If taxes have little effect on investment decisions and, by extension, economic development, we say that they are non-distortionary. By include all tax system indicators as key factors in their model, Olawumi and Ayinla (2007) utilised endogenous growth theory in their thesis. In a closed economy, the basic endogenous growth AK model of total output is defined as:

$$Y AK L_t = \quad (1)$$

According to Lucas (1988), if physical and human capital are considered to be a composite and can be replicated using the same technologies, then output (Yt) is a function of the aggregate capital stock (Kt). We may express the previous equation in a linear form:

$$LnY_t = + \quad LnK_t + LnL_t + \quad (2)$$

This study is crucial to the endogenous growth theory because a well-managed tax policy may increase revenue generation and boost economic development, according to the theory.

Empirical Review

From 1994 to 2019, George-Anokwuru (2023) meticulously examined the impact of indirect taxes on inclusive growth in Nigeria. The secondary data used to accomplish the aforementioned goal came from the statistics bulletin of Nigeria's central bank and included information on the human development index, value-added tax, customs and excise taxes, and more. The primary methods for analysis were ECM and co-integration. During the time period under consideration, the regression analysis showed that there is a positive and statistically insignificant association between value-added tax and inclusive growth (human development index) in Nigeria. Inclusive growth (human development index) in Nigeria over the analysed period is negatively and significantly correlated with customs and excise charges. According to the study's conclusions, the different types of indirect taxes, such as customs and excise duties and value added taxes, should be put into social and community services like healthcare and education, as well as economic services like agriculture, construction, transportation, and communication. These would ensure that the economy runs smoothly, which in turn

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would improve people's quality of life, as stated by the human development index. More money should come in through indirect taxes. This may be accomplished if the government of Nigeria finds and closes any administrative loopholes that prevent the use of indirect tax money to raise living standards for Nigerians.

Economic growth, human development index, tax revenue, and Ibadin and Oluwatuyi (2021) were the subjects of a research. In particular, the study looked at how Customs and Excise Duties (CED) and Value-Added Tax (VAT) affected RGDP and HDI, two important metrics in economic development. For a long time, RGDP and HDI were the go-to metrics for gauging economic growth and development, respectively. Annual time series data from 1994–2017 were utilised in the article. The research used a methodology that is often associated with time series analysis: The Augmented Dickey Fuller (ADF) unit root test, the Johansen multivariate co-integration approach, and the Error Correction Model (ECM). Tax revenue and HDI were shown to have a positive and statistically significant association. Both RGDP and tax revenue were shown to have a smaller effect on HDI than the other. Since HDI criteria are well-known for being quantifiable and qualitatively measurable, it was argued that the government should institute development-driven tax policies.

3. Methodology

The *ex-post facto* research design was adopted for this study because the data used is historical in nature, hence it required no manipulation, while the period covered exceeded a year. In other words, this study covers a time frame of 20 years, beginning from 2003 to 2022. The population size of a time series study is the age of the case study (in this case, Nigeria) and Nigeria got her independence in 1960, which makes the country 74 years and as such, the population of this study should be 74 years. However, the population size of this study is restricted to the age of this current democratic dispensation which started in 1999 with the election of former President Olusegun Obasanjo. Therefore, the population size of this study is 24 years from 1999 till date, and the population is the entire economy of Nigeria, measured by human development index. Using Taro Yamane formula, the sample size of this study was determined thus:

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size

N= population size

1= constant

e = level of significant taken to be 0.05

$$n = \frac{24}{1 + 24(0.05)^2}$$

$$n = 23$$

Hence, a sample size of 23 years is appropriate for this investigation. Having said that, the study's sample size is limited to the years 2003–2022. The researcher relied on secondary sources to compile the data needed for this investigation. Put simply, the information used for this study was culled from the following sources: the National Bureau of Statistics (NBS), the Bulletin of the Federal Inland Revenue Service (FIRS), and the Statistical Bulletin of the Central Bank of Nigeria (CBN). We used descriptive and inferential statistics to examine the data. The descriptive statistics provided an overview of the univariate behaviour, including measures like skewness, Jacques-Bera, and maximum and lowest values. The study used SPSS version 25 for inferential statistics and the multiple regression approach to get the coefficients, t-statistics, f-statistics, and p-values. An developed functional effect for the independent variables served as the basis for the study analysis that examined the impact of indirect tax revenue on the human development index in Nigeria (SD & CED). The Human Development Index (HDI) was measured linearly using these independent variable measures.

Follow these steps to view the model specification:

HDI= *f* (CED, SD)

$a_1>0$;

Where:

HDI = Human Development Index of the economy

CED = Customs and Excise Duties of the economy

SD = Stamp Duties of the economy

4. Results and Discussion

Data Presentation

Table 4.1: Descriptive Statistics

	HDI	CED	SD
Mean	0.5013	48.33	15.8635
Maximum	0.538	108.02	19.66
Minimum	0.45	17.77	2.65
Std. Dev.	0.027861	25.92	7.8387
Skewness	-0.22827	0.8339	3.43056
Kurtosis	-1.20426	0.011678	12.63806
Jarque-Bera	1.883958	3.923201	3.330839
Probability	0.389856	0.140633	0.189111
Observation	20	20	20

Source: Author's Computation, 2025.

Table 4.1 shows that the average Human Development Index (HDI) is 0.5103. During that time, HDI ranged from 0.538 at its highest point to 0.450 at its lowest point. A skewness rating of -0.228 suggests that HDI distribution is somewhat left-skewed. The data points to a flat distribution, as indicated by its Kurtosis of -1.20. The probability value of 0.39 and the Jarque-Bera value of 1.88 indicate that the variable follows a normal distribution. A mean of 48.3300 is assigned to customs and excise duties (CED). Throughout the specified time frame, CED amounts as high as 108.020 and as low as 17.770. A skewness value of 0.8339 is assigned to CED. As a result, CED is right-handed distributed. The distribution of CED is flattened down by its kurtosis value of 0.012, which is less than 3. With a probability value of 0.14 higher than the threshold value of 5% and a Jarque-Bera value of 3.92, CED is likely to follow a normal distribution. Over the time period under consideration, stamp duties (SD) had an average value of 15.8635, with a range of 19.66 to 2.650. As can be seen from the skewness value of 3.431, SD has a positive skewness. The distribution is significantly peaked, as seen by its Kurtosis (12.64).

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The probability value of 0.19 (19%) and the Jarque-Bera value of 3.33 indicate that the variable follows a normal distribution.

Test of Hypotheses

Table 4.2: Estimated Coefficients of the HDI Error Correction Model

Dependent Variable: DLOG(HDI)

Regressor	Coefficient	Standard Error	T-Ratio	Probability
DLOG(CED)	-0.037473	0.015430	-2.428561	0.0265
DLOG(SD)	-0.021184	0.017057	-2.069426	0.0455
ECM(-1)	-0.285233	0.140451	-2.030830	0.0582
C	0.005201	0.002885	1.802495	0.0892
C	0.005201	0.002885	1.802495	0.0892

R-Squared 0.4668 **R-Bar-Squared 0.3099**

DW-Statistic 2.13 F-Stat. = 2.9768[0.041]

Source: Author's Computation, 2025

The R-squared value ($R2$) for the short run human development index model was around 0.47, and the adjusted R-squared value ($\bar{R}2$) was 0.31. The results demonstrated that the independent variables accounted for over 47% of the systematic variances in the Nigerian human development index. According to the modified R-squared value, the explanatory factors accounted for approximately 31% of the variance in the human development index. A 5% threshold of significance was found via the F-statistic, which was 2.98. It showed that the model as a whole was statistically significant. Consequently, at the 5% level of significance, it was not possible to reject the hypothesis of a log-linear connection between the human development index and the explanatory factors in the equation.

A negative and statistically significant coefficient for customs and excise duties (CED) was observed at the 5% level of significance. For example, a ten percent rise in customs and excise charges would have a short-term effect of reducing the rate of human development index by around 0.04%, according to the -0.04 coefficient and -2.42 t-value. Additionally, it showed that in the near term, customs and excise charges significantly lower Nigeria's human development index.

Stamp duties (SD) had a negative and statistically significant coefficient of -0.02 at the 5% level of significance, with a t-value of approximately -2.07. This meant that, in the short run, the rate of human development index would decrease by approximately 0.02 percent if stamp duties were to increase by, say, 10%. So, in the near term, stamp duties have a negative and substantial impact on Nigeria's human development index.

After determining the HDI Error Correction Model's short-run dynamics, this research used the Least Squares regression method to estimate the long-run models that are related with them. In Table 4.3, we can see the outcomes of the long-term models.

Table 4.3: Estimated Coefficients of the Long Run HDI Model

Dependent Variable: LOG (HDI)

Regressor	Coefficient	Standard Error	T-Ratio	Probability
LOG(SD)	-0.066705	0.024723	-2.675688	0.5074
LOG(CED)	-0.075506	0.019646	-3.843240	0.0011
C	-0.942721	0.112180	-8.403655	0.0000

R-Squared 0.9677 **R-Bar-Squared 0.9609**

DW-Statistic 1.7081 F-Stat. = 142.33[0.000]

Source: Author's Computation, 2025.

With an R-squared value of around 0.97 and an adjusted R-squared value of 0.96, the long run human development index model's coefficient of determination was R^2. The results demonstrated that the independent variables accounted for nearly all of the systematic fluctuations in the human development index in Nigeria, making up around 97% of the total. The explanatory factors accounted for almost 96% of the variance in the human development index, according to the corrected R-squared. Significant at the 1% level was the F-statistic, which was 142.33. It showed that the model as a whole was statistically significant. That is why, at the 1% level of significance, we cannot rule out the possibility that the human development index has a log-linear effect on the equation's explanatory variables.

There was a statistically significant negative coefficient for customs and excise duties (CED). Its t-value was -3.84 and its coefficient was -0.076. Even at the 1% level, the t-statistic passed the significance test. So, in the long term, customs and excise charges have a negative and substantial effect on the human development index.

At the ten percent level of significance, the standard deviation coefficient was negative and not statistically significant. The t-statistic remained significant even at the 1% level, as its coefficient was -0.067 and the t-value was -2.67. This finding suggests that stamp duties will have a negative and substantial effect on Nigeria's human development index in the long term.

Discussion of Findings

This study found that customs and excise charges had a negative and statistically significant impact on Nigeria's human development index, both in the short and long term. Contrary to the first hypothesis, which predicted that customs and excise charges would have no discernible impact on the HDI, this second hypothesis suggests that these taxes have a negative and statistically significant influence on the HDI. Ibadin and Oluwatuyi (2021) also found that customs and excise charges significantly reduce real GDP, therefore our results are consistent with theirs.

Relating to the second hypothesis, this study found that stamp duties had a negative and statistically significant impact on the human development index both in the short and long term. Consistent with the findings of Aniefor (2022), who found that stamp duties significantly impact economic growth and development, we discover the following.

5. Conclusion and Recommendations

The primary goal of this research was to examine the relationship between the human development index and indirect tax income, namely customs and excise taxes and stamp duties. This study used the following data sets: 2003–2022, retrieved from the following

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sources: Federal Inland Revenue Service Statistical Bulletin, Central Bank of Nigeria Statistical Bulletin, and Nigeria Bureau of Statistics. The data was analysed using the multiple regression technique with the help of SPSS version 25. The study revealed the following:

i. The human development index in Nigeria is significantly and negatively impacted by customs and excise levies.
ii. The Human Development Index in Nigeria is significantly and negatively impacted by stamp duties.

In conclusion, the overall trend is that the human development index is negatively and significantly affected by indirect tax income. What this means is that tax revenues, if used wisely, might have a major impact on Nigeria's economic growth in the future. In light of the above, it is important to highlight that the growth or stagnation of Nigeria's human development index may be influenced by the amount of money collected through indirect taxes.

In the light of the empirical findings, the following recommendations are made:

i. Considering that it is the desire of the government to make stamp duties the next major revenue source for Nigeria, the government should strengthen the stamp duty tax system by clearly and specifically outlining the persons, along with the instruments, that are liable to pay stamp duties and under what circumstances. This is so because at the moment, there is so much ambiguity surrounding stamp duties. Therefore, it is the belief of the researcher that just as electronic payment of stamp duties has been introduced, government should as well clearly and specifically disclose publicly the organisations and individuals that should be paying stamp duties, just as it is obtainable with other forms of tax.
ii. To promote domestic production and discourage imports of certain products and services, the government could raise charges on select imported commodities while keeping levies on essential goods and services low. The local economy will benefit from this as it will boost manufacturing of these goods and services. There will be a multiplier impact on employment, production, and economic growth and development as a result of the high import tariff on dairy goods, textile materials, agricultural produce, drinks, and similar items.

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