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Tertiary Education Tax, Information Technology Development Levy and Funding of Educational System in Nigeria

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Abstract

Due to poor funding of education in Nigeria, there has been a lot of instability in the educational system which ranges from frequent industrial revolt to a complete shutdown of schools in the country. The situation has become unbearable for families that now have their wards sitting at home due to no academic activities going on in the institutions of learning. This is not just because of poor governance but has been majorly attributed to limited sources of income available for school funding. The study assesses the effectiveness of tertiary education tax and information technology development levy in providing the needed funds for schools. The secondary data employed for this study cover a period from 2010 to 2021 and the multiple regression model is applied for the analysis. The result reveals that education in Nigeria requires more funds as the tertiary education tax lacks the capacity to adequately fund academic activities in the country. However, information technology development levy exerts a considerable impact on education financing. Therefore, the study proposes that the government should exploit other funding opportunities from other national income sources to augment the tertiary education tax. Also, the government should improve the fiscal planning for education expenditure by reducing the funds for other less essential expenditure responsibilities in the annual budget. The study also suggests that the government should endeavor to address the issues affecting the educators so that they can continue their classroom activities without grievances.

Keywords: Tertiary education tax, technology development levy, budget, educational system

1. Introduction

Educational development and funding are critical roles that governments around the world hold in high regard. The reason for this is that a country's human capital is its most valuable resource at any given time, and when a nation's human capital is well developed, it promotes rapid economic growth (Omodero, 2019). Education funding is usually at the forefront of misgivings for governmental lawmakers and the citizenry, such that schooling has overwhelming acceptance that permeates diplomatic, interpersonal, and institutional boundaries (Sim, 2004). In recent times, the poor funding of Nigeria's educational system has become an insurmountable mountain, sparking a long-term strike by the Academic Staff Union of Universities (ASUU). Although the collapse of all academic levels began in the 1980s and continued into the 1990s. The infrastructures were nearly destroyed, and motivational levels among educators and university lecturers was at a record-breaking downtrend. There was no suitable schooling and learning location. Due to the realities of the situation, the administration then under President Ibrahim Babangida, took steps to halt the blight. After Lord Ashby's Commission of 1959, the Federal Government set up a committee (the Gray Longe Commission) on the Overview of Higher and University Education in Nigeria in December 1990, to evaluate post-independence Nigerian advanced learning. The Longe Committee suggested, among several other things, that higher education be funded through a tax on businesses that conduct operations in Nigeria. An execution working group, chaired by Professor Olu O. Akinkugbe, was formed to carry out the proposals of the Grey Longe Committee report. On September 3, 1992, a contract on higher education funding was endorsed between the Federal Government and ASUU. The Education Tax Act No. 7 of 1993, along with other education-related Edicts, was formalized in January 1993. The Declaration foisted a 2% tax on all businesses' ascertainable earnings in Nigeria.

The Education Tax Act No. 7 of 1993 established the financing as an Interference Financing for all stages of public education at Federal, State and Local levels. Due to weaknesses and complexities in continuing to operate the Education Trust Fund, the ET statute was cancelled and overtaken by the Tertiary Education Trust Fund Act in May 2011, which reliably carried out this obligation. Among these flaws and challenges are: the ETF was heavily burdened and overloaded, and could only provide symptom management assistance to all tiers of Nigerian public schools. Dilution of operations and mandates of other Government entities established after the ETF, such as Universal Basic Education (UBE) and the Millennium Development Goals (MDGs). The decomposition, putrefaction, and lack of maintenance of amenities challenges in higher education have been vexing, as finances are scarce.

According to the Finance Act of 2021, the education tax has been raised from 2% to 2.5%. The tax is assessed and collected by the Federal Inland Revenue Service (FIRS) for educational funding in the country. The resources are used to raise standards in federal and state ancillary institutions, especially for the availability or upkeep of: facilities required for instruction and learning; educational tools and supplies; investigations and articles; scholarly training & development; and any other need considered important and necessary by the Board of Trustees for the advancement and preservation of norms in institutions of higher education. The TETfund aspires to be a world-class internationalist organization in Nigerian Educational Development. Through financing and careful planning, its objective is to deliver concentrated and life - changing interference in Nigerian public universities (Ugwuanyi, 2014).

The fund is overseen by an eleven-member board comprised of representatives from the country's six major geopolitical regions as well as the Federal Ministries of Education, Finance, and Inland Revenue Services. According to the act, the board has the following roles: checking and guaranteeing collection of taxes by the Federal Inland Revenue Service, as well as transmit to the Savings account; tax administration and distribution; collaborate with the relevant departments and authorities in charge of collecting taxes or safe custody. After carefully considering, acknowledge the request and endorse the concede table initiatives. Maintain funding for numerous public institutions of higher education in Nigeria; Contract should be monitored and evaluated. Make investments in suitable and secure financial products; in the event of routine interference, keep updating the Federal Government on its progress and accomplishments through audited financial reports among the

Federation's jurisdictions. Examine advancement and make suggestions for improvements within the framework of the Act and to undertake any other tasks assigned by the Federal Government that are necessary or incidental to the Fund's goal.

The Board of Trustees (BOT) is responsible for administering, managing, and disbursing the tax levied by this Act focusing on: all public institutions of higher education systems are funded. In the event of a special interference, fairness among the federal government's six geopolitical districts. In the event of routine involvement, fairness among the Federation's states Universities, Polytechnics, and the College of Education will be distributed in a 2:1:1 ratio. The BOT shall have the authority to take into account the unique characteristics of each region in the allocation and administration of the Taxes charged by this Act between the varying tiers of higher education. Ugwoke (2013) scrutinizes the management of the ETD of 1993 as modified by Act No 40 of 1988 in Education Tax Law and Management in Nigeria. It came to the conclusion that with enhanced openness and accountability, stringent instruction and retraining of the treasury's personnel in tax audit and monitoring of construction activities, and reassurance of the fund's recipients to abandon their existing permissive viewpoint toward obtaining and using Education Trust Fund money, the Education Tax Act will thrive the prevailing inundation by the structured private sector, which has lately really been vociferous about and also against multiple taxes.

Academic outlay is a subset of teaching financing that is concerned with how the money set aside for schools is invested. It can be employed not only as a tool for evaluating the budgetary aspects of teaching and learning, but also as a measurement for expressing an educational state's developments (Hallak, 1969). The present research's primary goal is to investigate the implication of the tertiary education tax and the information technology development levy on educational funding in Nigeria. The research is divided into five segments. Section 2 contains a review of the previous published studies, Section 3 describes the approach used for data gathering, characterization, and evaluation, Section 4 examines the empirical research results, and Section 5 sums up the entire research finding with necessary policy recommendations.

2. Literature Review

2.1 Conceptual explanation

Education. Education is a major determinant in eradicating economic inequality, and as such, the availability of education in many of the world's most impoverished countries has emerged as a crucial matter (Lyndon & Binaebi, 2019). Education broadens job prospects, raises economic status, and improves birth outcomes. States with strong school systems have better standards of living, higher economic growth, and better social programs. Schooling is regarded as the primary catalyst for transformation toward ecological sustainability. Learning not only provides skills such as technological and scientific competence, but it also motivates, justifies, and supports networks for pursuing and engaging those skills (Goel *et al.*, 2013). Given the value of schooling, the United Nations Scientific and Cultural Organization (UNESCO) endorses that economies, particularly underdeveloped and emerging ones, invest up to 25% of their spending plans on schools in order to promote long-term development that is productive (Evans-Obinna et al., 2017). Even so, the amount of money readily accessible for investments in education is heavily influenced by the taxation (Lyndon & Binaebi, 2019). The clamour for highly regarded educational programs in Nigeria is so intense because education is not just an expenditure in human resources, but also a basic requirement for economic and social development (Adeyemo 2000). The presumption that schooling is a growth catalyst is based on the amount and effectiveness of educational opportunities in any country (Afolayan, 2015).

Tertiary education. Higher education in Nigeria is classified as public or private, as well as university or non-university. The central and provincial governments own public universities, which control the system of higher learning. The non-university sector includes polytechnics, technical

institutes, and schools of education as well as professional bodies (Zabbey & Micah, 2019). In Nigeria, the higher educational system consists of universities, polytechnics, institutes of technology, and colleges of education that are part of or acquainted with universities and other professional specialized institutions (IAU, 2000). The universities are further classified as state or federal, as well as first, second, or third generation (Hartnett, 2000). The federal government owns and funds federal universities, whereas states own and fund state universities. However, budgetary extreme events put financial barriers on educational institutions, limiting their capacity to sustain public schools (Jones *et al.*, 2022).

Taxation and education financing. Taxation is a major fiscal tool that enables the government fulfill basic social obligations. Tax receipts not only guarantee the provision of essential products and services, but also reflect a cost of living in a socially advanced and harmonious society (Yepes-López & Gergerlioğlu, 2022). The government receives taxable income under the system of public schools and the income taxes are applied to fund education. The government funds education in the blended schooling policy (government and commercial) by gathering income tax, while the wealthiest families can achieve this training clandestinely for their wards through the private school (Arestoff & Jacques, 2017). For instance, the property tax is a vital source of funding for both primary and secondary education in the United States, nonetheless, the property tax is under constant attack with many jurisdictions lately attempting to decrease or eliminate it as an input of funding for education (Reschovsky, 2017). According to Reschovsky (2017), the laws to repeal the school property tax in Pennsylvania, was defeated in the state Legislature by a simple majority in 2016. Annette (2003) highlights the trade-off between financial and human capital improvements, as well as the preference for education and training. According to Annette (2003), a complete and accurate commensurate income tax serves as a tax incentive on human capital investment by bringing down the cost of academic achievement as a consumption good. Because tax receipts have historically been the most significant source of money for public education, the ability to responsibly enlarge educational funding without tax intervention become options that are highly restricted (Archer, 2020).

Information technology development levy. Information technology has proven to be a viable means of developing a nation's human capital in order to align with current global changes in data transformation and information transmission. Although the advancement of information technology has been viewed as a threat to the environment, its benefits in terms of educational development, funding, and human capacity building outweigh its potential negative effects. In Nigeria, this new move attracts some charges or levy on network operators, and the levy collected is used to fund teaching and learning activities.

2.2 *Theoretical framework*

The theory underpinning this work is Paul Romer's 1994 endogenous growth theory. According to endogenous growth theory, productivity recovery is largely the outcome of internal forces rather than foreign influences (Romer, 1994). Thus, investment in education, technology, and awareness all contribute significantly to economic expansion. The theory also emphasizes the indirect benefits and ripple effects of a knowledge-based economy on industrial prosperity. The theory of endogenous development primarily holds that a nation's economic long-term expansion rate is determined by legislative changes that factor in tax incentives for R&D or education, for example, boost growth rates in some endogenous growth models by increasing the incentive for innovation. According to Romer's theory of endogenous, changes in technology and the total number of individuals operating in the education sector are connected to the creation of novel innovations and wealth creation (Romer, 1994). Original technologies, which are non-rival and probably partly substitutable, are essential to progress because they increase the productivity of everybody generating educational and learning items and services. Endogenous growth model, created by Romer, emphasizes that technological innovation is the outcome of efforts by academics and innovators responding to incentive structures. Therefore, everything that tends to affect their endeavours, such as tax system, basic university funding, and public schooling, for instance, has the chance to affect the country's economic long-run future opportunities (Jones, 2019).

2.3 Empirical review

Ekundayo and Ajayi (2009) investigated the numerous issues that impede efficient governance of the Nigerian higher education system. Financial collapse, poor infrastructure, and intellect drain, deterioration of higher education in the country, graduate joblessness, turbulent and militaristic undergraduate left wing politics, hidden secret societies, assessment malfeasance, and molestation, according to their research. As a result, the investigation urged that the government revisit the issue of higher education funding, reevaluate instructors pay packages upward, grant university independency, and discuss arrangements and extrapolations on the nation's personnel necessities in order to incorporate this into university programs. Adeyemi (2011) investigated academic funding in Nigeria. An overview of the entire educational financial affairs since the introduction of formal schooling was conducted. The analysis proves the total income accruable to the Federal Government and the sum of money earmarked for education at varying times, denoting shortfalls in the system's finance. The analysis indicated that education spending has never reached 17% in any specified year, notwithstanding the UNESCO basic requirement of 26% of budgetary allocations. As a result, the author made recommendations on how to efficaciously finance schools in the country, as well as other ways of investing in education for continued expansion.

Agha (2014) investigated university education funding in Nigeria and its potential ramifications for strategy implementation. The African public policy framework was used to describe Nigerian universities' financial circumstances. The analysis indicated that, despite providing approximately 90% of the financing, the Federal Government has been unable to satisfactorily fund the scheme owing to economic, sociocultural, and governmental distress. This is apparent in poor research and classroom instruction effectiveness, poor working conditions, and inadequate attention to capacity building. As a result, the goals of university education in Nigeria have yet to be met. Ugwuanyi (2014) conducted an eleven-year survey of the operations of the Education Tax Fund (ETF) on Nigerian tertiary institutions with the goal of disclosing how or why the ETF had aided in the academic reform of Nigerian tertiary institutions. Numerous different statistical tools were used to appraise information recorded by the respective departments of the Education Tax Fund and other Federal Government news outlets. The study discovered that the ETF had had a substantial optimistic contribution to the Nigeria's education sector by building various intrusion initiatives and improving the teaching and learning conditions of both students and lecturers, and that each tertiary institution has its own criteria (subject to TETfund directives) for determining which lecturer becomes a beneficiary.

Afolayan (2015) investigated the general pattern in financing for higher education in Nigeria and its impact between 2009 and 2013. The paper discovered some revenue leakages and inefficient use of surplus resources. The research evaluated the federal government's response to the fact sheet of the needs analysis of Nigerian Universities initiated in 2012. The federal government set aside N1.3 trillion for special interference in Nigerian public universities over the following six (6) years, of which N200 billion had been launched. The article concludes with practical recommendations for dealing with the problems identified. Adegbite (2016) investigated the impact of schooling taxes on capacity building in Nigeria, both over the long and short-term. The analysis indicated that education taxes had a considerable beneficial effect on human capital advancement in Nigeria, both in the short and long terms. Inyiama and Nwankwo (2016) used a simple linear regression to assess the impact of organizational and higher education taxes on Nigeria's economic expansion from 2000 to 2015. The research indicated that corporate income tax and higher education tax had a major impact on Nigeria's GDP. In contexts of the design parameter settings' relationships, it was discovered that the explanatory variables had been heavily and significantly connected to Economic Output.

Oraka *et al.* (2017) investigated the impact of the Postsecondary Education Federal income financing on higher educational administration in Nigeria. The study discovered that ETF financing appropriations to Nigerian Higher Education had no connection with the admissions proportions of Nigerian College Of education according to the results. Caetano *et al.* (2017) established a link between public spending, self-collection of taxes, and the instructional index of cities and counties in

the state of Minas Gerais spanning from 2009 to 2013. Among the findings were a complete absence of relationship between the level of financial freedom and educational investments, as well as the fact that the sum of tax earnings and the additional proportion of funding had no effect on the education indicator. Brunner and Schwegman (2017) investigated the effect on local school budgetary consequences of Georgia's 1997 deployment of the Academic Special Purpose Municipal Alternative Taxation (ESPLOST), which permits precincts to levy a 1 cent selling tax to finance capital outlay initiatives or retire earlier accumulated loans. According to the research, ESPLOST implementation increased per-pupil asset and total spending while decreasing per-pupil liabilities and real estate tax bills in metro-area municipalities. The inquiry revealed that ESPLOST acceptance enhanced infrastructure investment in non-metro precincts, but there was conflicting evidence regarding whether it skyrocketed spending levels and no scientific proof that it whittled down long-term borrowing or real estate tax bills.

Ordu and Nkwoji (2019) examined the impact of education tax take on Nigeria's industrial prosperity from 2006 to 2017. The results suggested that government income from education tax had a major effect on economic expansion. When measured by GDP and HDI, education tax had a strong and positive connection with economic and social development. The study found that education tax receipts was an important source of governmental fundraising for industrial prosperity. Lyndon and Binaebi (2019) looked into the links between certain tax receipts constituents and academic advancement in Nigeria from 2010 to 2018. The findings showed a positive connection between the tax on value-added school levy, and knowledge acquisition. Notwithstanding, the correlation was not statistically meaningful, implying that the randomly chosen tax receipts elements had a minor influence on educational innovation. Zabbey and Micah (2019) assessed the relationship between post-secondary financial assets and higher institutions expansion in Nigeria between 2009 and 2017. The observations showed a favorable and significant relationship between tertiary trust funds and capacity building. Higher education trust funds, on the other hand, were positively correlated with program management, scientific studies and article publications in journals, and academic libraries improvement but did not exhibit a significant correlation.

Buerger and Harris (2021) tested the effect of government contracts on state education expenditure in New Orleans using a quasi-experimental methodological approach known as the synthesized control treatment strategy. Utilizing comprehensive spending data, the evidence based testing showed that outsourcing elevated operating expenditure. The surplus resources were applied to enhance managerial expenses, which included both the number of officials and their remuneration. Less funds were allocated to education. Whereas the number of instructors remained relatively constant, per-teacher salary and benefits decreased. Omodero (2021) investigated the impact of borrowed funds and tax receipts on educational improvement in Nigeria. According to the correlation data, educational financing had a significant positive relationship with external debt. There was also a significant positive relationship between funding for schools and tax revenue. The research also found that tax income had a significant and beneficial effect on academic reform, whereas foreign debt and borrowing costs had little implications on Nigeria's education sector.

In the study of Emudainohwo and Ndu (2022), it was revealed that in the long term, pre-e-tax schooling treasury cash flow boosted economic growth considerably but in the long haul, academic trust funds had a negligible impact on post-e-tax revenue. In the near term, education trust funds significantly reduce economic growth while in the post-e-tax, education trust tax had a significant negative impact on economic growth. Jones *et al.* (2022) looked into the contribution of fiscal resources in mitigating discretionary spending cuts in school districts in the United States. The article showed proof that Kentucky public schools exhausted fiscal reserve funds and cut expenses in reactions to cash flow declines from 2001-2002 to 2013-2014. Furthermore, high schools depleted financial resources to normalize fixed-cost non-instructional outlay. The analyses presented in the research added to the substantiation that school districts react quickly to fiscal constraints judiciously. Rothbart et al. (2022) researched the repercussions of a category of pork, committee member capital general fund investment in education voted on in a public participation financial

planning (PB) system, on New York City education funding and effectiveness. The study discovered that winning a PB electoral increased school pork spending bills by utilizing plausible effects of changes in discretionary spending caused by PB voting. However, there was no proof that these payments from members of the council augmented fiscal or performance outcomes. According to the study, Pork was found capable of interrupting the school financial planning.

3. Materials and Methods

The study examines the impact of tertiary education tax and information technology development levy on funding of the educational system in Nigeria. The study period spans from 2010 to 2021. The data are collected on government spending on education which stands as the dependent variable. The data source is the archive of the Central Bank of Nigeria. The data on the independent factors (which include Tertiary Education Tax and Information Technology Development Levy) are obtained from the Organization and Economic Co-operative Development and Federal Inland Revenue Service databases. Due to the fact that the data were uniformly collected in their local currency, there was no need for data transformation.

The following is the multiple regression formula used in this study:

$$Y = a + b_1 X_1 + b_2 X_2 + \ldots + b_k X_k + e$$

Where Y represents the dependent criterion and X represents the self-governing component. It is important to note that we have k independent parameters, each with its own gradient. One error variance and one decrypt remain. The objective is to determine 'a' and 'b' assumptions that mitigate the combined score of mean square uncertainties. For the two variables, the following formula is used:

$$b_1 = \frac{(\sum x_2^2)(\sum x_1 y) - (\sum x_1 x_2)(\sum x_2 y)}{(\sum x_1^2)(\sum x_2^2) - (\sum x_1 x_2)^2}$$

$$b_2 = \frac{(\sum x_1^2)(\sum x_2 y) - (\sum x_1 x_2)(\sum x_1 y)}{(\sum x_1^2)(\sum x_2^2) - (\sum x_1 x_2)^2}$$

The p-value is indicated to be substantial at 0.05. Consequently, the t-test outcome will be considerable at the 5% degree of significance, while results above this criterion will be deemed negligible. We use the multiple linear regression method and correlation analysis in this research to determine the impact of tertiary education tax on educational financing. The connection is clarified by connecting a very weak association with a correlational value of 00 - 19 percent, a weak interaction with a value of 20 - 39 percent, a modest correlation with a value of 40 - 59 percent, a significant link with a value of 60 - 79 percent, and a highly great connection with a value of 80 and above.

The variables are measure as shown in Table 1 below:

Table 1: Variable measurement and sources

Variable name	Variable meaning	Variable measurement	Source of data
Dependent Varaiable			
EDUF	Education funding	Obtained in billions of local currency	Central Bank Statistical Bulletin.
Independent Variables			
TEDT	Tertiary Education Tax	Formerly 2% but currently 2.5% following the provisions of the Finance Act of 2021. The tax is charged on the assessable income of businesses operating in the country	Organization for Economic Co-operation and Development (OECD) and Federal Inland Revenue Service (FIRS).
ITDL	National Information Technology Development Levy	This is a levy on all communication and internet operators with turnover of N100 million and above. The charge is 1% of their turnover.	Organization for Economic Co-operation and Development (OECD) and Federal Inland Revenue Service (FIRS).

Source: Study information, 2022

The National Innovation Bureau Act, CAP N156 LFN 2004 (as amended), governs the Tax. The charge is calculated at 1% of earnings before taxes. The surtax is levied on businesses with an attrition rate of N100 million or more. GSM Mobile Operators and all Communications Companies, Computer security Conglomerates and Network Operators, Retirement benefits Administrators and Retirement plan Affiliated Businesses, Banking institutions and other Investment Firms, and Insurance Providers are all required to pay the Levy.

4. Results and Interpretation

This section is used to present the study's empirical findings. Table 2 assesses the normality of the raw data, while Figure 1 explains the data movement for all variables. The study's results for unit result examination are shown in Table 3, and Table 4 shows the type of relationship that exists among the factors considered in this research. Following the study's goal of determining the role of the tertiary education tax and the information technology development levy in school funding in Nigeria, the impact analysis is shown in Table 5, which shows the effect of each explanatory variable on education funding.

Table 2: Descriptive statistics

	EDUF	TEDT	ITDL
Mean	415.29	186.82	11.41
Median	369.40	189.57	10.02
Maximum	646.75	279.36	19.31
Minimum	170.80	89.18	5.88
Std. Dev.	141.50	54.43	4.18
Skewness	0.33	-0.05	0.68
Kurtosis	2.33	2.43	2.43
Jarque-Bera	0.44	0.17	1.08
Probability	0.80	0.92	0.58
Sum	4983.55	2241.89	136.94
Sum Sq. Dev.	220250.7	32593.77	192.33
Observations	12	12	12

Source: Author's calculation, 2023

In Table 2, the maximum values for EDUF, TEDT and ITDL include 646.75, 279.36 and 19.31 respectively. Accordingly, EDUF, TEDT and ITDL have 170.80, 89.18 and 5.88 minimum values. Table 2 shows that the mean values for EDUF, TEDT, and ITDL are 415.29, 186.82, and 11.41, respectively. When these values are compared to the standard deviation values of 141.50, 54.43, and 4.18 for EDUF, TEDT, and ITDl, respectively, it appears that the dispersion is narrow and low, resulting in the convergence of all data around the mean region. Another important factor in confirming the presence of normal data distribution is kurtosis, which indicates that the variables' data are not above 3 but are greater than 2 and closer to 3. Jarque-Bera reaffirms normal distribution of data by having p-values greater than 0.05. There is a positive skewness for EDUF and ITDL while TEDT is negatively skewed. With thess facts, the researcher has confidently employed the data for all the variables required for this inquiry.

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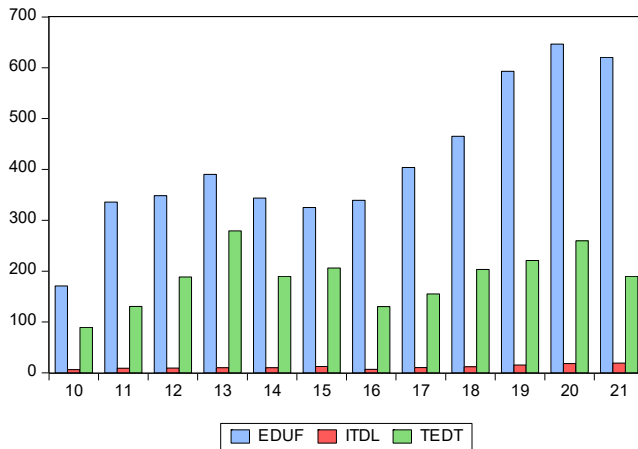*4.1   Trend analysis*

Figure 1: Trend of data from 2010 – 2021

Figure 1 depicts the movement of data from 2010 to 2021. The trend indicates that education funding is increasing, with a highpoint intended in 2020. During this time, the country was ravaged by the COVID-19 pandemic, which abruptly halted all physical academic activities. Throughout this time, the government was under pressure to provide alternative sources of learning, such as digital platforms that allow educators to easily interact with students at all levels. As a result of the setup and implementation phases, the cost of running online studies became extremely high. The tertiary education tax and the newly introduced information technology development levy are not commensurate with the high cost of running Nigeria's educational system. It is important to note that the TEDT and ITDL are insufficient education funding sources if the government is to shoulder this responsibility adequately. As a result, other efficient and effective sources of funding education in Nigeria must be introduced in order to avoid a crisis and the complete collapse of the country's educational system. Certain recurring expenditures can be reduced in order to fund education, and the annual budget can be structured in such a way that education becomes the primary expenditure head, receiving more fiscal attention. This study comes at a time when public universities have been on long-term strike due to inadequate university funding. As a result of this research, the government can confirm that the so-called "tertiary education tax" does not cover the enormous costs of running the country's educational system. As a result, other sources of funding for the academic process in Nigeria must be improved.

Table 3: Unit root test

Method	Statistic	Prob.	Order of integration
Levin, Lin & Chu t	-2.832	0.002	I(o)
Im, Pesaran and Shin W-stat	-3.074	0.001	I(o)
ADF - Fisher Chi-square	19.11	0.004	I(o)
PP - Fisher Chi-square	18.97	0.004	I(o)

Source: Authors' calculation, 2023

There is evidence of data stability as shown in Table 3. The implication is that if data is not stable, its application will lead to a misleading information which users might erroneously apply. Using the test in Table 3, our data for this study proves stable and its utilization produces a reliable information.

Table 4: Correlation matrix

Correlation	EDUF	TEDT	ITDL
EDUF	1.000000		
TEDT	0.625197	1.000000	
ITDL	0.922377	0.599643	1.000000

Source: Authors' calculation, 2023

Table 4 shows the type of relationship that exists between the three factors used in this investigation. ITDL appears to have a very strong positive relationship with EDUF, whereas TEDT appears to have a high correlation with EDUF. Both associations with EDUF indicate that education funding necessitates the use of all available sources of income to support the endeavor and improve the country's educational system. In other words, aside from the identified funding sources, additional funding is expected at this time.

Table 5: Results from Regression Analysis

Dependent Variable: EDUF				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ITDL	28.92906	0.294775	5.463700	0.0004***
TEDT	0.292657	0.406728	0.719541	0.4901
C	30.49159	04.85605	0.470142	0.6494
R-squared	0.859	Mean dependent var		415.3
Adjusted R-squared	0.827	S.D. dependent var		141.5
S.E. of regression	08.76	Akaike info criterion		11.19
Sum squared resid	31078.4	Schwarz criterion		11.32
Log likelihood	-64.18	Hannan-Quinn criter.		11.15
F-statistic	27.39	Durbin-Watson stat		2.006
Prob(F-statistic)	0.000	***		

*** Significant @ 1%

Source: Authors' calculation, 2023

Table 6: Test for multi-collinearity

	Tolerance	VIF
Correlation (R)		
Collinearity statistics: Variance Inflation Factor (VIF):		
- TEDT	0.64	1.56
- ITDL	0.64	1.56

Predictors: ITDL, TEDT; Dependent variable: EDUF

Table 6 displays multicollinearity result which reveals that the tolerance level of the multicollinearity test for the two predictors is 0.64 which is below the value of 1. This result shows an absolute absence of interrelationship between the predictors. Above all the Variance Inflation Analysis (VIF) has the value of 1.56 which signifies that there is no multicollinearity between the independent factors. Table 5 also has the result of the Durbin-Watson which is 2.0. This result confirms absence of autocorrelation or serial correlation. The F-statistic is 27.39(0.00), indicating that the explanatory variables jointly confirm that education funding is indeed a function of both income sources (TEDT and ITDL). However, the co-efficient of determination has it that TEDT and ITDL have 85.9% explanation of the changes in EDUF while the residual 4.1% is determined by other sources the study

did not recognize.

The t-statistic is used to determine the effect of each individual independent factor on the EDUF. With the t-statistic of 0.720 and p-value of 0.49, it is discovered that TEDT has an insignificant effect on EDUF. This result is harmonious with the studies of (Adeyemi, 2011; Oraka et al., 2017) but does not agree with the findings of (Adegbite, 2016; Ordu & Nkwoji, 2019; Zabbey & Micah, 2019). ITDL with the t-statistic of 5.46 and p-value of 0.00 exerts a significant positive effect on EDUF.

5. Conclusion

Tertiary education is the educational level obtained after secondary education in institutions of higher learning such as universities, polytechnics, colleges of education, and other educational establishments that offer course of study, graduate degrees, and diplomas. According to Ahmed (2011), the challenges confronting universities and colleges in Nigeria include funds and financial backing, the expansion of private universities and colleges, management problems, among other. The most severe challenge is that of tertiary institution lack of funding. According to Nwangwu (2005), the framework of schooling is physically weak when education is underfunded, and the products of such an underpinning are frail academics. This current study has examined the issue of funding sources by assessing the effect of tertiary education tax and information technology development levy on education investment. The outcome of this study is that there is a very positive strong correlation between education funding and information technology development levy and as such the impact of ITDL is weighty on EDUF. On the other hand, the relationship between TEDT and EDUF is strong and positive but the effect of TEDT on EDUF is immaterial.

Therefore, the policy implication and recommendation include improvement on fiscal planning for schools in Nigeria. The budgetary improvement on education funding is very necessary since a single source of income (TEDT) cannot match the expenditure in education. A proportion of other sources of income in the country should be earmarked for educational financing to prevent frequent striking of lecturers and academic staff of all cadres. This study also suggests a reduction of recurrent expenditure on items that have substitutes and other less pressing needs of government officials for the benefit of the country's educational funding. Since ASSU strike has become a recurring decimals due to poor welfare of academic staff, it is also important that the government pays attention to the ASSU grievances and address the situation comprehensively. The standard of education in Nigeria requires general update which requires a lot of capital investment to achieve.

However, this study did not consider other sources of government income which can be incorporated in future studies due to its primary focus. Therefore, other researcher are encourage to consider other areas not covered in this study.

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