Faculty of Vocational and Technology Education,
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Journal of Occupation and Training (JOT)
Volume 9, Number 1 April, 2025
Print ISSN: 3446 - 6290
Electronic ISSN: 2354 2756

DOI: 10.48028/iiprds/jot.v9.i1.12

Tertiary Education Tax and Knowledge Development: Nigerian Experience (2003- 2022)

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Abstract

The study examined effect of Tertiary Education Tax (TEDT) on knowledge development in Nigeria for the period 2003-2022. Specifically, the purpose was to evaluate effect of TEDT revenue on government funding of education (GFUED), Education Index (EDI) and Human Development Index (HDI). Secondary data were used and analysis were carried out with Econometric package, E-View10. Test statistics used was the Vector Error Correction Model (VECM). Results revealed that Tertiary Education Tax has significant effect on government funding of education but has insignificant effect on Education Index and Human Development Index. The study concludes that TEDT has impacted on public funding of education significantly but has not translated into significant knowledge development indices as proxied by Education Index and Human Development Index for the period in view. The research recommends that there should be a developed federal fiscal system that will guarantee full potential of TEDT in achieving knowledge developmental targets.

Keywords: *Education, Tax, Development, Funding, Governance*

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Background to the Study

The dependence on intangible assets which in this instance is knowledge continues to gain ground to the extent that economic growth is premised on the ability to harness and exploit knowledge. This has become the focus of the economic development plan of most forward-thinking countries. Ugo (2020) posit that we now live in a global knowledge economy and that the government ought to create condition that will help people to become knowledge-based workers and entrepreneurs that are knowledge driven. Abd-Khalig (2019) observed that the two barometers to gauge the development of human are education and health. Hanushek et al (2010) in Grant (2017) opined that without improving school quality, developing countries will find it difficult to improve their long run economic performance. No country can achieve sustainable economic development without substantial investment in human capital or human training (InfoGuide.com).

Adedayo (2023) identified some contributions of Tertiary Education Tax revenue in Nigerian which include provision of fund for: investment in quality education: expanding access and encouraging research and development, transparency and accountability, national development. Tertiary Education Tax is imposed on every Nigerian company at the rate of 3% of the assessable profit for each year of assessment. The trend of Tertiary Education Tax revenue for four-year period as detailed in the Federal Inland Revenue Service (FIRS) statistics are: 2019 N221.0558, 2020 N259.5634, 2021 N189.54, and 2022 N328.6744 respectively (FIRS Tax Statistics 2022). The Tertiary Education Trust Fund (TETFUND) administers the tax imposed by the act and disburses the amounts to the educational institutions at federal, state and local government levels. It also monitors the projects executed with the funds allocated to beneficiaries. Tertiary Education Tax is shared between universities, polytechnics and colleges of education in the ratio of 2:1:1, 50% (for university education); 25% (for polytechnics) and 25% (for colleges of education) with emphasis placed on science and technology due to the expensive nature of training within the country. In the year 2022, total value of TETFund disbursement made to beneficiary institutions under various interventions projects and payment made under the general overhead of funds amounted to a sum of N248,991,247,836.63, this was disbursed as follows: Universities N135,576,307,102.61, Polytechnics N57,781,087,140.79, Colleges of Education N55,633, 853,593.23 (TETFund published audited annual report 2022).

Dissou, Didic, and Yakautsava, (2016) maintained that government spending on education is considered as human capital investment and they also opined that the increasing number of skilled labors will lead to increase in income of the society and also increase in aggregate spending and demand. Obi and Obi (2014) identified that some of the most prevalent challenges confronting public tertiary institutions in Nigeria are funding, management problems, obsolete equipment, poor learning facilities and infrastructure. In Nigeria as in many other developing countries, funding quality education has been a pivotal challenge.

In general, Education Index (EDI) is a vital component of a country's Human Development Index (HDI). It is an index that is based on the weighted components of knowledge measured by adult literacy and number of years children enrolled in school. Human Development Index

on the other hand is a composite index measuring achievement in three basic dimensions of human development, long and healthy life, knowledge, and decent standard of living. The statistical update in the National Bureau of Statistics (NBS 2022) and the United Nations Development Programme (UNDP 2022) documented the Nigerian Education Index as 0.52 in 2022. The Index ranges from 1-0, the index of 1 indicates most developed while an index of 0.5 – 0.69 means medium development. It is widely accepted that education creates improved citizens and helps to upgrade the general standard of living in a society. Therefore, positive social change is associated with the production of qualitative citizenry. The present study therefor sharply focused on assessment of effect of Tertiary Education Tax on governmental funding of education and variables of knowledge development in Nigeria.

Statement of the Problem

The primary purpose of the Tertiary Education Tax revenue is to generate revenue for the government which is used for tertiary education funding. The dilapidated state of higher educational institutions in the country despite the increases in the Tertiary Education Tax rate with associate increases in the annual revenue generation has become a recurring subject matter for enquiry. The most pressing problem of Nigerian educational system remains underfunding. There are conflicting prepositions on effect of Tertiary Education Tax on the national development and knowledge. Research of Lyndon and Binaebi (2019) has revealed that the contributions of Tertiary Education Tax revenue to the development of the educational sector is not having the desired effect. Obi and Obi (2014) in their view opined that most of the public tertiary institutions in the country are grossly underfunded. Omedoro, Adeyome, Ekundayo, Omesue (2023) in their research empirically revealed that education in Nigeria requires more funds as the Tertiary Education Tax lacks the capacity to adequately fund academic activities in the country. However, Ordu and Nkwoji (2019) in their findings revealed that Tertiary Education Tax revenue has positive and strong relationship with economic development when measured on the Gross Domestic Product as well as Human Development Index. The present study therefore contributes to the existing researches in the context.

Objective of the Study

The study sought to investigate effect of Tertiary Education Tax on variables of Knowledge development in Nigeria. Specifically, the study investigates:

i. The effect of Tertiary Education Tax revenue on public funding of the education in Nigeria
ii. The effect of Tertiary Education Tax revenue on Education Index in Nigeria.
iii. The effect of Tertiary Education Tax revenue on Human Development Index Nigeria

Research Questions

The following research questions are developed for the study.

i. What is the relationship between Tertiary Education Tax revenue and public funding of education in Nigeria
ii. To what extent does Tertiary Education Tax revenue affect Education Index in Nigeria
iii. To what extent does Tertiary Education Tax revenue affect Human Development Index in Nigeria

Research Hypotheses

The following hypotheses are developed to guide the study

$H0_1$ There is no significant effect of Tertiary Education Tax revenue on public funding of educational in Nigeria

$H0_2$. There is no significant effect of Tertiary Education Tax revenue on Education Index in Nigeria

$H0_3$. There is no significant effect of Tertiary Education Tax revenue on Human Development index in Nigeria

Literature

Tertiary Education Tax Revenue and its Relevance to the Educational Sector

The Federal Inland Revenue Service (FIRS) is empowered by the Education Act to assess and collect the Tertiary Education Tax in Nigeria. Nigeria, as in many other nations, funding quality education has been a pivotal challenge. To address this issue, Nigeria introduced the Education Tax Fund Act in 1993, which later became the Tertiary Education Trust Fund (TETFund) Act in 2011. This initiative represents a significant stride towards ensuring that education remains accessible and of high quality in the country. The TETFund was established to impose a tax on the assessable profit of companies registered in Nigeria. This tax is meant to provide intervention funds for public tertiary institutions to enhance their infrastructure, teaching, and research capabilities (Adedayo 2023).

Tertiary Education Trust Fund (TETFUND) administers the tax imposed by the act and disburses the fund to educational institutions at federal, state and local government levels. It also monitors the projects executed with the funds allocated to beneficiaries. The distribution for tertiary education is shared between universities, polytechnics and colleges of education in the ratio of 2:1:1,50% (for tertiary education); 25% (for polytechnics) and 25% (for colleges of education) with emphasis placed on science and technology due to the expensive nature of training within the country. The fund is managed by an 11-member board of trustees with members drawn from the six geo-political zones of the country as well as representatives of the Federal Ministry of Education, Federal Ministry of Finance and the Federal Inland Revenue Service. It is disbursed for the general improvement of education in federal and state tertiary education institutions in form of annual and special interventions specifically for the provision and/or maintenance of essential physical infrastructure for teaching and learning, institutional materials and equipment, research and publications, academic staff training and development and any other need which in the opinion of the board of trustees is critical and essential for the improvement and maintenance of standards in the higher educational institutions. The tax is payable within two months of an assessment notice from the FIRS. In practice, many companies pay the tax on self-assessment basis along with their Company Income Tax (CIT). For companies subject to Petroleum Profit Tax (PPT) under Petroleum Profit Tax Act (PPTA), tertiary education tax is to be treated as an allowable deduction. For other companies, income/profit taxes are not deductible in arriving at taxable income (World tax summaries, pwc 2024).

The Tertiary Education Tax (TEDT) rate had undergone some changes in the recent time, Tertiary Education Tax payable by Nigerian companies was increased from 2% to 2.5% by the finance Act 2021. Sequent to the Act the Finance Act 2023 (FA2023), which the former Nigerian President Muhammadu Buhari signed into law on 28th May 2023, introduced significant changes to the existing tax laws and regulatory framework, aiming to foster economic growth, enhance fiscal stability and promote sustainable development. By the amendments to Section 1(2) of the TEDT Act, the rate of TEDT was increased from 2.5% to 3% of assessable profits of companies (Finance Act 2023). Failure to pay Education Tax comes with a penalty. For a first offence, the fine is N10,000 or imprisonment for a term of three years while for a second or subsequent offence, the fine is N20,000 or imprisonment for a term of five years or it could be both fine and imprisonment (Finance Act 2021). It is worrisome to note that in 2021 total TEDT collected was 189.54 billion naira, out of the 323.29-billion-naira annual target of the year. In the year 2022, the revenue performance improved from 306-billion-naira annual tax target to annual total tax collection of 328.674 billion naira (FIRS Revenue Statistics 2022). The most important index that measures performance of service is revenue collection.

Education Tax is collectible in pursuant to the provisions of:

i. Tertiary Education Trust Fund (Establishment Etc) Act 2011 (as amended),
ii. Federal Inland Revenue Service (Establishment) Act, No. 13, 2007 (as amended),
iii. Companies Income Tax Act (CITA), Cap. C21, LFN 2004 (as amended),
iv. Petroleum Profit Tax Act (PPTA) as amended and Petroleum Industry Act (PIA) 2021.

Tertiary Education Tax Revenue and Variables of knowledge development

Quality education is a cornerstone of national development. By investing in education, Nigeria is investing in a brighter future with a skilled and knowledgeable workforce capable of driving economic growth and social progress. It is widely accepted that education creates improved citizens and helps to upgrade the general standard of living in a society. Therefore, positive social change is likely to be associated with the production of qualitative citizenry. One of the most pressing problems of Nigeria's higher education system remains severe underfunding of its universities. It is worrisome that virtually all tertiary institutions in Nigeria lack basic facilities for teaching and learning such as, well-equipped laboratories, lecture halls, security and healthcare for both students and lecturers (Adetula, Adesina, Owolabi and Ojeka (2017).

Dissou, Didic, and Yakautsava, 2016 therefor maintained that government spending on education is considered as a human capital investment. The increasing number of skilled labors will lead to increase in income of the society and increase in aggregate spending and demand. Education enriches people's understanding of themselves and the world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition, it plays a very crucial role in securing economic and social progress and improving income distribution. A country that seeks to experience rapid

economic growth must give high preference to ensuring that a high percentage of its population is entitled to quality education.

The educational sector is one that ensures an increase in output per worker and this can transcend into economic growth (InfoGuide.com). According to Adedayo (2023), some key contributions of Tertiary Education Tax fund in Nigeria include the following:

i. **Investment in Quality Education:** The primary aim of the TETFund is to improve the quality of education in Nigeria's public tertiary institutions. By providing financial support for infrastructure development, research, and staff training, the fund contributes to a more conducive learning environment.
ii. **Expanding Access:** TETFund also focuses on expanding access to higher education. It provides sponsorship for indigent students which makes higher education attainable for more young Nigerians.
iii. **Encouraging Research and Development:** The fund allocates resources to promote research and development in public universities, polytechnics, and colleges of education. This enhances the nation's research capabilities and encourages innovative thinking.
iv. **Transparency and Accountability:** The TETFund operates with a high level of transparency and accountability. It ensures that allocated funds are used for their intended purposes and conducts periodic audits to maintain integrity.
v. **Contributing to National Development:** Nigeria's education tax, administered through the TETFund, is a vital instrument for improving the nation's education system. It demonstrates the government's commitment to providing quality education, expanding access, and fostering research and development. By investing in education, Nigeria is paving the way for a more prosperous and educated society, ultimately contributing to the nation's growth and development (Adedayo 2023).
vi. **Human development index (HDI):** Ordu and Nkwoji (2019) in their findings revealed that Tertiary Education Tax revenue has positive and strong relationship with economic development when measured on the Gross Domestic Product as well as Human Development Index. Human Development Index was created to re-emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth. Human development index is a composite index measuring achievement in three basic dimensions of human development, a long and healthy life, knowledge and decent standard of living.

The index is equally based on three weighted components:

i. Longevity, measured by life expectancy at birth.
ii. Knowledge, measured by adult literacy and number of years children enrolled at school.
iii. Standard of living, measured by real GDP per capita at purchasing power parity.

The Index ranges from 1-0, the index of 1 indicates most developed while 0 index indicate no development (UNDP 2022).

i. An index of 0 – 0.49 means low development.

ii. An index of 0.5 – 0.69 means medium development.
iii. An index of 0.7 to 0.79 means high development.
iv. Above 0.8 means very high development.

In 2022 Nigeria HDI is indexed at 0.535 (UNDP 2022), this posit Nigerian HDI in medium development range. (0.5-0.69).

Education Index: Education Index (EDI) is a component of Human development index. While the Human development index is a composite index measuring achievement in three basic dimensions of human development, a long and healthy life, knowledge and decent standard of living. Education index is based on the weighted components of Knowledge and is measured by adult literacy and number of years children enrolled at school. In general, education is a critical component of a country's Human Development Index, it increases the efficiency of each individual worker and helps economies to move up the value chain beyond manual tasks or simple production processes. According to the statistical update of UNDP, the Nigerian Education Index for the period of five-year trend is as follows: 0.5 in 2018, 0.52 in 2019 and also 0.52 in 2020, 2021, 2023 respectively. This posits Nigerian in medium education development index range. (which lies in the range of 0.5-0.69)

Theoretical Review

i. **Laffer Curve Theory:** The theory was propounded by professor Arthur Laffer created in 1974. Theory of Laffer Curve considers the amount of tax revenue raised at the extreme tax rate of 0% and 100%. The Laffer Curve theory advocates that a 100% tax rate raises no revenue in the way that a 0% rate raises revenue stating that at 100% rate there is no longer incentive for a rational taxpayer to earn any more income, thus the revenue raised will be 100% of nothing while at the extreme end of 0% no tax revenue is generated to the government. It follows that there must be at least one rate in between where a tax revenue would be at maximum.

ii. **Relevance of the Theories to the Current Research:** The theory explained the relationship between government revenue raised by taxation and all possible rates of taxation and is very relevant to the study. The theory is intended to guide the revenue authorities in tax laws amendment, especially in changing tax rate of any tax revenue source. Tertiary Education Tax has undergone changes in tax rates concurrently. The 2021 Finance Act changed the Tertiary Education Tax rate from 2% to 2.5%, by the amendments to Section 1(2) of the TEDT Act, the rate was increased from 2.5% to 3% of assessable profits by the Finance Act 2023. At a certain rate of tax, productive sectors of the economy that pays Tertiary Education Tax may not be motivated to increase their productive capacity because of cost-benefit effect through high taxation rate which in turn reduces tax revenue for public funding with resultant effect of retarded development on the educational sector and Human Development Index. Policy makers ought to leverage on the theory in making tax policies on tax rates.

Empirical Review

Adetula, Owolabi and Ojeka (2017) in a study examined investment in education and economic development of Nigeria. The result showed that education sector contributes significantly to economic development. The study recommends that the government at all levels should invest more in education and also collaborate with private sector through private public partnership initiative to accumulate the much-needed funding that will pave way for technological development in the educational sector.

Ordu and Nkwoji (2019) examined the impact of Tertiary Education Tax revenue on economic development of Nigeria within the period of 2006-2017. Regression analysis and thematic analysis were employed for the analysis of the data. Findings indicated that Tertiary Education Tax has positive and strong relationship with economic development when measured on the Gross Domestic Product as well as Human Development Index.

Lyndon and Bernabei (2019) investigated on the selected components of tax revenue and educational development in Nigeria for the period 2010 to 2018. The study adopted Tertiary Education Tax and Value Added Tax as the independent variables, while educational development was proxied by government spending on education and was used as the dependent variable. Results revealed that effect of the selected tax revenue components on educational development was weak. It was there for concluded that contribution of Tertiary Education Tax to the development of the education sector is not having the desired effect on the sector.

Omodero and Dandago (2019) investigated on tax revenue and public service delivery in Nigeria and employed ordinary least squares technique for the period 1981 to 2017. The findings reveal that tax revenue impacts positively and significantly on education and health care services. The study therefore recommends among others that government should exploit all tax revenue sources and use same to maintain the health sector in the country and provide adequate education including skill acquisition and entrepreneurship development programmes for the citizens.

Omedoro, Adeyome, Ekundayo, and Omesue (2023) in their study assessed the effectiveness of Tertiary Education Tax and Information Technology Development Levy in providing the needed funds for schools. Secondary data were employed for the period of 2010 to 2021 and multiple regression model was applied for the analysis. The result revealed that education in Nigeria requires more funds as the Tertiary Education Tax lacks the capacity to adequately fund academic activities in the country. Information Technology Development Levy exerts a considerable impact on education financing. In their study they proposed among others, that government should exploit other funding opportunities from other national income sources to augment the Tertiary Education Tax.

Methodology

Research Design

The study adopted Ex-post facto research design. It examined how Tertiary Education Tax affected the Nigerian Education Index, Government Funding of Educational and Human Development Index for the period 2001-2022. carried out a research work on Tertiary Education Tax, Information Technology Development Levy and Funding of Educational System in Nigeria. 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.

Collection of Data

Secondary data which were employed in analysis were obtained from 2022 online publications of the Central Bank of Nigeria statistics, Federal Inland Tax Revenue Statistics and the National Bureau Statistics update.

Model Specification

Multiple regression analytical techniques were adopted to examine the relationship between the independent variable, Tertiary Education Tax and the dependent variables which include Government funding of the educational sector (GFEDU), Education Index o (EDI) and Human Development Index (HDI). The model is specified thus:

$TEDT = f(EDI, GFEDU, HDI)$,

$TEDT = \beta_0 + \beta_1 EDI + \beta_2 GFEDU + \beta_3 HDIU_t$

Where**:**

β_0 = Intercept of the model,

β_1, β_2, = Parameter Estimates,

TEDT = Tertiary Education Tax revenue.,

EDI = Education Index of Development,

GFEDU = Government funding of the educational sector,

HDI = Human Development Index

Method of Data Analysis

Unit Root Test.

To ensure that the data set employed in analysis is stationary, unit root test were carried out through Augmented Dickey Fuller (ADF) test statistics. The stationarity test was carried out so as to avoid spurious relationship.

Vector Error Correction Model (VECM)

The Vector Error Correction model, in theory, is a representation of cointegrated Vector Autoregression (VAR) model (Engle and Granger, 1987). Thus, estimating the long run

effects of one time series on another, we adopt the Error Correction Model approach. The test of hypothesis in a VECM model is done using the joint test (F-test) in the series of equations in determination of the significance of each of the variables.

Decision Rule: If the calculated F-statistics value is greater than the F- tabulated value, we reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1) on the ground that the result is significant. Otherwise, we accept the null hypothesis and conclude that it is insignificant

Standardization of the Variables

Since the variables are in different unit of measurement, we further standardize the variables by taking the natural logarithm of the variables and specify a log-linear model as follows

.LOG TEDT = $\beta_0 + \beta_1$LOGEDI + β_2LOGGFEDU + β_3LOGHDI$_{Ut}$

Analytical Tool

In data analysis, the analytical tool employed is E-view 10

Results

Unit Root Test

Table 1: Augmented Dickey Fuller (ADF) Test

Variables	ADF STAT	Critical value at 5%	Order of integration	Probability	Remark
TEDT	-4.044669	-3.065585	1(1)	0.0079	Stationary
EDI	-3.882013	-3.052169	1(1)	0.0101	Stationary
HDI	-4.582606	-3.052169	1(1)	0.0025	Stationary
GFEDS	-3.636664	-3.040391	1(1)	0.0156	Stationary

ADF unit root test results of the model presented in the table 1 above showed that all the variables were integrated at order one, 1(1). The conclusion was drawn by considering the ADF statistics probability values of the variable Tertiary Education Tax (TEDT) 0.0079, Education Index (EDI) 0.0101, Human Development Index (HDI) 0.0025, Government Funding of the Education Sector (GFEDS) 0.0156 which were less than 0.05. Findings from the unit root reveals that data set of the model were stationary at first difference.

Table 2: Vector Error Correction Regression Result

Error Correction:	**D(TEDT)**	**D(HDI)**	**D(GFUED)**	**D(EDI)**
CointEq1	-0.312303	0.001988	-0.037736	-0.002940
	(0.14115)	(0.00087)	(0.01120)	(0.00206)
	[-2.21260]	[2.29762]	[-3.36952]	[-1.42683]
F- statistics	**1.503972**	**2.011420**	**3.465866**	**0.812565**

Source: Extracted from E-view 10

The VECM result of the model in table 2 showed that the error correction from the Tertiary Education Tax is appropriately signed with a negative coefficient value of -0.312303. This showed that about 31.23% disequilibrium in the short run is adjusted every year by changes in the explanatory variables of the model.

Table 3: Summary of the F-Statistics in VECM Regression

Variables	One period coefficient	F- statistics	F- statistics critical	Decision
HDI	-123.7020	2.011420	2.5	Accept H_0
EDI	25.07794	0.812565	2.5	Accept H_0
GFUED	-2.782542	3.465866	2.5	Reject H_0

Source: Extracted from E-view 10

Table 3 above shows the summary of the F- statistics test of significance for each of the variables in the model. The joint test examines the collective impact of the variables in each sub-model of the vector. If the calculated F-statistics is greater than the F-critical value of 2.530 at 5% level of significance, we reject the null hypothesis (H_0) and conclude that the variables in the equation have joint impact on the dependent variable. The Vector Error Correction estimates show the F-statistics for each of the explanatory variable's D(HDI), D(EDI), D(GFUE) and the results are stated below.

Government Funding of Education (GFUED) in the model has an F-statistics value of 3.465866 which is greater than F-critical value of 2.530 (F-stat 3.465866 > F-critical of 2.530). We therefor reject the null hypothesis one and conclude that, there is significant effect of Tertiary Education Tax revenue on Government Funding of Education for the period in view. Education Index (EDI) in the model also has an insignificant F-statistics value of 0.812565 which is lower than F-critical value of 2.530 at 5% level of significance (F-stat: 0.812565 < F-critical: 2.530). We therefor accept the null hypothesis two ($H0_2$) and conclude that there is insignificant effect of Tertiary Education Tax revenue on Education Index for the period in view. Human Development Index (HDI) in the model has an F-statistics value of 2.011420 which is lower than F-critical value of 2.530 (F-stat 2.011420 < F-critical of 2.530). We further accept the null hypothesis three ($H0_3$) and conclude that there exists an insignificant effect of Tertiary Education Tax revenue on the Human Development Index for the period in view.

Diagnostics Test

Table 4: Heteroskedasticity Tests

Chi-sq	Degree of Freedom	Probability.
104.4245	100	0.3612

Source: Extracted from E-view 10

Results of the diagnostic test is presented in table 4 with the Heteroskedasticity. The study reveal that the model passes the diagnostics tests against serial correlation, functional form misspecification, this is considering the fact that the probability value is 0.3612 and is greater than 5%.

Summary of the Findings

The findings of the model are hereby summarized below:

The Unit Root test was carried out with Augmented Dickey Fuller (ADF) Test statistics. Findings revealed that above showed that all the variables of the model were stationary at first difference. This finding validates that the data set can be relied upon for estimation.

The test of hypothesis in the VECM model is done using the joint test (F-test) in the series of equations in determination of the significance of each of the variables. Findings revealed that: Government Funding of Educational Sector (GFUED) in the model has significant F-statistics value which led to the conclusion that Tertiary Education Tax revenue has significant on the government funding of education. Education Index (EDI) in the model has an insignificant F-statistics value which consolidates that Tertiary Education Tax revenue has insignificant effect on the Nigerian Education Index and also Human Development Index (HDI) in the model has an insignificant F-statistics value which further lead to the conclusion that, there is an insignificant effect of Tertiary Education Tax revenue on the Human Development Index for the period in view.

Discussion of Findings

Olufunso and Oluwatobi (2022) is of the view that education is not only essential but a necessity for human advancement. The study therefor examined effect of Tertiary Education Tax revenue on variables of knowledge development proxied by Public Funding of Educational in Nigeria Education Index (EDI) and Human Development Index for the period 2003-2022. The null hypothesis one states that TEDT revenue has insignificant effect on Public Funding of Education in Nigeria. Results led to rejection of the null hypothesis with the conclusion that there is significant effect of Tertiary Education Tax revenue on the Public Funding of the Educational sector in Nigeria. By investing in education, Nigeria is paving the way for a more prosperous and educated society, ultimately contributing to the nation's growth and development (Adedayo 2023).

Null hypothesis two states that Tertiary Education Tax has insignificant effect on Education Index and also null hypothesis three was stated thus: Tertiary Education Tax has insignificant effect on Human Development Index, and results therefor led to acceptance of the two null hypotheses. The finding is consistent with Lyndon and Binaebi (2019) who's in their empirical findings concluded that the contribution of Education Tax to the development of the education sector is not having the desired effect. Research of Omedoro, Adeyome, Ekundayo, and Omesue (2023) revealed that education in Nigeria requires more funds as the Tertiary Education Tax lacks the capacity to adequately fund academic activities in the country. They posit that 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. Increasing the weighted components of Knowledge as measured by Education Index and Human Development Index requires not only public disbursement of fund but prudent management of the disbursed funds on the priority needs of the educational sector. The research reveals that Public Funding of Education has not translated into significant level of knowledge development for the period in view. The nation is premised in a global knowledge-based economy, this posit that the government has to create the conditions that will empower the masses to become knowledge-driven and knowledge-based youths, adults, workers and entrepreneurs.

Conclusion

The study investigated effect of Tertiary Education Tax revenue on the variables of knowledge development which were proxied by Public Funding of Education, Education Index and Human Development Index in Nigeria. Specifically, the objectives were stated to access the effect of the Tertiary Education Tax revenue on each of the variables of knowledge development as stated. Based on the findings of the study, the study concludes that Tertiary Education Tax revenue is significantly related to Public Funding of the Educational sector in Nigeria but has not translated into significant knowledge development indices captured in the current research work.

Recommendation

i. Tertiary Education Tax Fund approved for funding education should be prudently managed.
ii. Policy makers should revisit their tax administrative governance strategy and redesign their approach in managing TEDT revenue effectively for knowledge development.
iii. There should be a developed federal fiscal system that could guarantee the full potential of Tertiary Education Tax in achieving knowledge developmental targets

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Appendixes

Appendix i: Variables of the Research Work for the Years 2003-2024

YEAR	Tertiary Education Tax (In Billions of naira)	Education Index of Development (In Index)	Human Development Index (HDI in Index)	Government Fund on Education Sector (in Billions of naira)
2003	0	0.38	0.45	64.78
2004	0	0.41	0.452	76.5
2005	21800	0.42	0.469	82.8
2006	28400	0.42	0.46	119.02
2007	59600	0.42	0.45	150.78
2008	59500	0.41	0.452	163.98
2009	139500	0.41	0.469	137.12
2010	89180	0.4	0.477	170.8
2011	130740	0.42	0.48	335.8
2012	188435	0.43	0.484	348.4
2013	279359	0.44	0.484	390.40
2014	189613	0.47	0.482	343.75
2015	199824	0.47	0.492	325.19
2016	130.12	0.47	0.499	339.28
2017	154.95	0.48	0.506	403.96
2018	579.9	0.5	0.514	465.30
2019	221.0558	0.52	0.516	593.13
2020	259.5634	0.52	0.521	646.79
2021	189.54	0.52	0.532	620.59
2022	328.6744	0.52	0.538	702.98

Source: FIRS Tax Statistics, CBN Statictics Bulletin and NBS statistical update 2022,

Appendix ii: Results

Vector Error Correction Estimates
Date: 01/01/80 Time: 00:18
Sample (adjusted): 2007 2021
Included observations: 15 after adjustments
Standard errors in () & t-statistics in [ ]

Cointegrating Eq:	CointEq1
TEDT (-1)	1.000000
HDI (-1)	-269.6780
	(21.9123)
	[-12.3072]
GFEDS (-1)	7.295961
	(1.20242)
	[6.06773]
EDI (-1)	128.9837
	(8.59440)
	[15.0079]
C	-143.0361

Error Correction:	D(TEDT)	D(HDI)	D(GFEDS)	D(EDI)
CointEq1	-0.312303	0.001988	-0.037736	-0.002940
	(0.14115)	(0.00087)	(0.01120)	(0.00206)
	[-2.21260]	[2.29762]	[-3.36952]	[-1.42683]
D(TEDT(-1))	0.017507	-0.001487	0.013487	0.000140
	(0.25857)	(0.00159)	(0.02052)	(0.00377)
	[0.06771]	[-0.93780]	[0.65738]	[0.03703]
D(HDI(-1))	-123.7020	0.879616	-6.609663	-0.370740
	(56.9499)	(0.34916)	(4.51865)	(0.83127)
	[-2.17212]	[2.51927]	[-1.46275]	[-0.44599]
D(GFEDS(-1))	-2.782542	0.016391	-0.312043	-0.004529
	(3.55720)	(0.02181)	(0.28224)	(0.05192)
	[-0.78223]	[0.75155]	[-1.10558]	[-0.08722]
D(EDI(-1))	25.07794	-0.159064	0.508377	0.362737
	(21.8108)	(0.13372)	(1.73057)	(0.31836)
	[1.14979]	[-1.18952]	[0.29376]	[1.13939]
C	0.562529	0.003109	0.195929	0.012334
	(0.91887)	(0.00563)	(0.07291)	(0.01341)
	[0.61220]	[0.55180]	[2.68738]	[0.91960]
R-squared	0.455201	0.527735	0.658176	0.311022
Adj. R-squared	0.152535	0.265366	0.468274	-0.071744
Sum sq. resides	31.07820	0.001168	0.195654	0.006621
S.E. equation	1.858261	0.011393	0.147443	0.027124
F-statistic	1.503972	2.011420	3.465866	0.812565
Log likelihood	-26.74750	49.66862	11.26186	36.65708
Akaike AIC	4.366334	-5.822483	-0.701582	-4.087611
Schwarz SC	4.649554	-5.539263	-0.418362	-3.804391
Mean dependent	-0.333969	0.009695	0.110092	0.014238
S.D. dependent	2.018580	0.013292	0.202199	0.026201

Determinant resid covariance (dof adj.)	9.71E-10
Determinant resid covariance	1.26E-10
Log likelihood	85.83349
Akaike information criterion	-7.711132
Schwarz criterion	-6.389439
Number of coefficients	28