

Electronic Tax System and Tax Compliance in Nigeria

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Abstract: The inadequacies in Nigeria's traditional tax administration system have posed significant challenges to tax revenue generation, including inefficiencies, corruption, and lack of transparency, ultimately resulting in low tax revenue generation. This study was therefore conducted to examine the effect of E-tax system on tax compliance cum revenue generation in Nigeria. The study was anchored on three electronic tax system variables, namely e-filing of tax returns, online TIN registration, online tax clearance certificate processing. The study adopted a survey research design, while data were obtained through questionnaires administered to selected personnel of the Federal Inland Revenue Service now known as the Nigerian Revenue Service and relevant tax practitioners. Out of one hundred and fifty (150) questionnaires administered, one hundred and forty-four (144) respondents correctly completed and returned for analysis. Descriptive statistics, model summary, analysis of variance and multiple regression analysis were employed for analysis with the aid of SPSS. The findings revealed that e-filing of returns and online TIN registration had positive but non-significant relationships with tax revenue generation, while online tax clearance certificate processing, had positive and significant relationships with tax revenue generation in Nigeria. The study concluded that E-tax system jointly enhance tax compliance and tax revenue generation in Nigeria. It was recommended that the Nigerian Revenue Service should strengthen digital tax platforms, improve user support and awareness, expand secure e-payment channels, automate VAT and PAYE return processing and simplify electronic personal assessment systems in order to improve voluntary compliance and revenue collection.

Keywords: *Electronic Tax System, Tax Compliance, E-Filing Of Returns, Online TIN Registration Online Tax Clearance Certificate Processing, Nigeria.*

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Introduction

The challenges of tax administration is as old as man. This has made various governments to devise different means of implementing tax policies. Due to complexities and dynamics of the system of government all over the world, different approaches have been adopted to ensure maximum compliance to tax rules and regulations. The advent of information technology has added to the challenge of tax compliance on one hand, and has aided the tax administration on the other hand. Consequently, Nigeria like every other developing nation cannot afford to be left behind in the implementation of technologies in the administration of taxes. The advent of digital technologies has revolutionized tax administration in Nigeria, transforming it into a more efficient, transparent, and effective system. Nigeria's traditional tax administration system was plagued by inefficiencies, corruption and tax evasion, resulting in low tax revenue generation (Adegbite & Fasina, 2019). The manual and paper-based processes were time-consuming, prone to errors, and often led to delays in tax compliance and revenue generation (Etale et al.,2021). The importance of electronic tax system such as Electronic-tax (E-tax) in administration of taxes in Nigeria cannot be emphasized. The use of digital tax platforms has been a significant factor in this improvement . These platforms provide taxpayers with easy-to-use interfaces for filing and paying taxes, reducing the complexity and burden of tax compliances and improving transparency in tax administration.

The implementation of Taxpayers' Identification Number (TIN) has also been a crucial innovation in tax administration in Nigeria (Akinleye et al., 2019). TIN helps to track taxpayer activities, reducing the risk of tax evasion and improving compliance. The use of TIN has been shown to improve revenue generation in Nigeria (Abdul et al., 2021). Tax revenue generation which is a function of tax compliance, refers to the process by which governments collect taxes from individuals, businesses, and other entities to fund public goods and services, playing a vital role in supporting economic development, social welfare and public infrastructure (Adegbite & Fasina,2019) . It involves various aspects, including tax base, tax rates, tax compliance, and tax administration, all of which are critical for effective revenue

These arise as a result of different challenges and limitations which need to be addressed. It becomes necessary to examine whether electronic tax system has any significant effect on tax compliance .This study therefore investigates the relationship between E-tax system and tax compliance in Nigeria.

Statement of the Problem

The inadequacies in Nigeria's traditional tax administration system have posed significant challenges to tax revenue generation, including inefficiencies, corruption, and lack of transparency, ultimately resulting in low tax revenue generation. (Nnubia et al., 2020: Adegbite & Fasina, 2019). According to

Ajero et al., (2025) over the years, revenue generation has always been generally manually administered with the inherent challenges of corruption, tax compliance and evasion, which adversely affected tax revenue for the economy. Despite the potential benefits of E-tax systems, there is doubt whether the expected tax compliance cum revenue targets have been met by the Federal Inland Revenue Service (FIRS) now known as Nigerian Revenue Service (NRS). This stems from the various reports by the authority and tax experts that there is still shortfall in tax collection despite the government efforts to enhance tax administration according to Olumo (2025), Nigeria still faces a significant tax gap, which hampers the government's ability to generate sufficient revenue and achieve its development objectives. This raises the fundamental question of whether the adoption of E-tax systems have not actually produced the result that was being expected. This identified gap has engendered this study which seeks to explore whether the introduction E-tax systems has any effect on tax compliance, which is measured by tax revenue generation in Nigeria. This study was carried out to examine the effect of electronic tax system and tax compliance in Nigeria.

Objectives of the Study

The main objective of this study was to examine the relationship between E- tax system and tax compliance in Nigeria.

The specific objectives were to:

- Determine the relationship between e-filing of tax returns and tax revenue generation in Nigeria.
- Ascertain the relationship between online TIN registration and tax revenue generation in Nigeria.
- .Investigate the relationship between online tax clearance certificate processing and tax revenue generation in Nigeria.

Research Questions

In order to meet the objectives of this study, the following research questions were raised;

- What is the relationship between thee-filing of returns and tax revenue generation Nigeria?
- To what extent does online TIN registration relate with tax revenue generation in Nigeria?
- What is the relationship between online tax clearance certificate and tax revenue generation in Nigeria?

Research Hypotheses

To achieve the earlier stated objectives and answer the research questions listed above, the following null hypotheses were formulated and tested in the study:

- H01: E-filing of returns has no significant relationship with tax revenue generation in Nigeria.
- H02: Online TIN registration has no significant relationship with tax revenue generation in Nigeria.
- H03: Online tax clearance certificate has no relationship with tax revenue generation in Nigeria.

E-filing of tax returns

The concept of E-filing of tax returns refers to the electronic preparation, submission, and processing of tax returns through internet-based platforms provided by tax authorities. It is one of the most widely adopted components of electronic tax systems and represents a significant innovation in modern tax

administration. E-filing enables taxpayers to submit tax information electronically without the need for physical documentation or visits to tax offices. The system is designed to improve administrative efficiency, reduce compliance costs, enhance accuracy in tax reporting, and facilitate timely tax compliance (Nasir, 2015; OECD, 2023).

This emerged as governments sought to modernize tax administration and address challenges associated with traditional paper-based tax systems. Conventional tax filing processes are often characterized by cumbersome documentation procedures, lengthy processing periods, high administrative costs, and increased opportunities for human error. E-filing addresses these challenges by automating tax return submission, record management, and verification processes, thereby improving the overall effectiveness of tax administration (Allahverd et al., 2017; Okunogbe& Santoro, 2022). E-filing is generally viewed as a technology-driven mechanism that simplifies taxpayers' interactions with tax authorities. Through secure online platforms, taxpayers can complete tax returns, upload supporting documents, calculate tax liabilities, and submit returns electronically. Tax authorities can simultaneously receive, process, verify, and store tax information in centralized databases. According to Nugroho and Tambunan (2020), e-filing systems significantly improve taxpayer compliance by making tax filing procedures more convenient, accessible, and less time-consuming.

E-processing of tax clearance certificate

The concept of E-processing of Tax Clearance Certificates (TCCs) refers to the use of electronic platforms and digital technologies for the application, verification, approval, issuance, renewal, and validation of tax clearance certificates by tax authorities. A Tax Clearance Certificate is an official document issued by a tax authority certifying that a taxpayer has fulfilled all tax obligations for a specified period in accordance with applicable tax laws. In Nigeria, tax clearance certificates are often required for government contracts, business transactions, loan applications, immigration processes, and other official purposes. The digitalization of the tax clearance certificate process represents an important component of electronic tax administration aimed at improving efficiency, transparency, accountability, and tax compliance (Olumoh, 2024; OECD, 2023). Traditionally, obtaining a tax clearance certificate involved cumbersome manual procedures requiring taxpayers to physically visit tax offices, submit numerous documents, and wait extended periods for verification and approval. These manual processes were often associated with administrative delays, excessive paperwork, bureaucratic bottlenecks, and opportunities for corruption and document manipulation. The introduction of electronic processing systems seeks to address these challenges by automating certificate applications, taxpayer verification, approval workflows, and certificate issuance processes (Etale et al., 2021; Tivde, 2024). E-processing of tax clearance certificates operates through integrated tax administration platforms that maintain electronic taxpayer records and facilitate real-time verification of tax compliance status.

E-processing of tax identification number (TIN) registration

The concept of E-processing of Tax Identification Number (TIN) registration refers to the use of electronic platforms and digital technologies for the registration, issuance, validation, and management of Tax Identification Numbers by tax authorities. A Tax Identification Number (TIN) is a unique numerical identifier

assigned to individuals, businesses, and other taxable entities for tax administration purposes. The TIN serves as a primary tool for taxpayer identification, tax assessment, monitoring, and compliance enforcement. The electronic processing of TIN registration constitutes a fundamental component of modern tax administration systems because it facilitates the creation of comprehensive taxpayer databases and supports efficient tax collection and compliance monitoring (Abdul et al., 2021; OECD, 2023). The concept of TIN registration emerged from the need to establish an effective taxpayer identification system capable of reducing tax evasion, broadening the tax base, and improving revenue generation. Traditionally, taxpayer registration processes were largely manual, involving extensive paperwork, physical verification procedures, and prolonged processing periods. These manual systems often resulted in inaccurate taxpayer records, duplication of registrations, administrative inefficiencies, and difficulties in tracking taxable persons. The adoption of electronic TIN registration systems has transformed taxpayer registration processes by enabling online applications, automated verification, electronic record management, and real-time taxpayer

Electronic filing of returns and revenue generation

The relationship between electronic filing of returns and revenue generation is rooted in the ability of digital tax systems to improve taxpayer compliance and strengthen tax administration processes. Traditional paper-based filing systems are often characterized by delays, processing errors, document losses, and opportunities for tax evasion. Electronic filing addresses these challenges by automating return submission, facilitating real-time data validation, and improving the accuracy of taxpayer records (Nugroho & Tambunan, 2020). Consequently, tax authorities are better positioned to monitor taxpayers, identify non compliance, and ensure timely collection of tax liabilities, thereby enhancing revenue generation. One of the primary channels through which e-filing influences revenue generation is through improved tax compliance. Electronic filing systems simplify tax procedures and reduce the complexity associated with filing tax returns.

Empirical evidence from both developed and developing countries supports the positive relationship between e-filing and revenue generation. Li et al. (2020) found that the adoption of advanced information technology in China's tax administration significantly improved tax compliance and tax collection efficiency. Likewise, Nguyen et al. (2024) reported that electronic tax systems enhanced compliance among small and medium enterprises by simplifying filing procedures and improving taxpayer interactions with tax authorities.

In Nigeria, several studies have documented the contribution of e-filing and electronic tax administration to revenue generation. Nnubia et al. (2020) found that the introduction of e-taxation significantly improved revenue collection performance in Nigeria by increasing transparency and reducing administrative inefficiencies.

Online tax clearance certificate and revenue generation

Online processing of tax clearance certificates improves revenue generation by reducing bureaucratic bottlenecks associated with manual issuance. Digital platforms enable taxpayers to submit applications electronically, verify tax records automatically, and receive certificates within a shorter timeframe. This increased efficiency encourages voluntary tax compliance and reduces the likelihood of taxpayers avoiding or delaying tax payments due to administrative inconveniences (Olumoh, 2024). As compliance

improves, government revenue increases through expanded tax remittances. The relationship between online tax clearance certificates and revenue generation is primarily anchored on the role of tax clearance certificates as compliance enforcement mechanisms. In many jurisdictions, including Nigeria, possession of a valid tax clearance certificate is often required for access to government contracts, business licenses, bank loans, foreign exchange transactions, and other official services. Consequently, taxpayers are incentivized to fulfill their tax obligations in order to obtain and maintain valid tax clearance certificates (Kiabel, 2021). This compliance motivation contributes significantly to increased tax collections and enhanced revenue generation.

Online TIN registration and revenue generation

The Taxpayer Identification Number serves as a unique identifier that enables tax authorities to track taxpayers, monitor compliance, facilitate tax collection, and maintain accurate taxpayer records. The digitalization of TIN registration has become an integral component of modern tax administration reforms aimed at broadening the tax base, improving compliance, and enhancing revenue generation (Adeyemo et al., 2024; OECD, 2023). The relationship between online TIN registration and revenue generation is founded on the role of taxpayer identification systems in expanding tax coverage and strengthening tax administration. Effective tax revenue mobilization depends largely on the ability of tax authorities to identify taxable persons and monitor their economic activities. Online TIN registration facilitates this process by providing a centralized and accessible platform through which taxpayers can easily register and become part of the formal tax system (Iheduru&Ajaero, 2018). By increasing the number of registered taxpayers, governments are able to expand the tax base and generate higher tax revenues. TIN registration contributes to revenue generation by reducing barriers to taxpayer registration.

Technology Acceptance model

Technology Acceptance Model (TAM), proposed by Davis in 1989, explains how users adopt and accept new technology. The model suggests that perceived usefulness and perceived ease of use influence users' attitude towards technology, which in turn affects their intention to use and actual use of the technology (Davis, 1989). In the context of tax compliance, TAM suggests that taxpayers' adoption of digital tax systems depends on their perception of the system's usefulness and ease of use. If taxpayers perceive the system as useful, easy to use, and beneficial, they are more likely to adopt it and comply with tax regulations (Kamil, 2022; Inegbedion, 2025). In Nigeria, taxpayers are more likely to use digital tax systems if they perceive them as useful in simplifying tax compliance, reducing costs, and increasing convenience (Akinyosoye et al., 2025; Alahira et al., 2024). The ease of use of these systems, including factors like user-friendly interfaces and clear instructions, also plays a crucial role in determining adoption rates.

Diffusion of innovation theory

This theory which was propounded by Everest Rogers in 1962 seeks to explain the how, why and when, and at what rate new ideas, and technology spreads through a population. The theory stipulates that innovation doesn't happen spontaneously across the population. Rather innovation adoption follows a specific and predictable pattern. This pattern is distributed, or diffused across different groups, and multiple stages, where each group is attracted to and adopts an innovation at a specific stage.

Various factors influence the pattern, including the characteristics of the innovation itself, the nature of the social system and the communication channels used to spread information about innovation. This theory is used to explain the relationship between tax revenue generation and innovative based technology from the point of view of the fact innovative based technology being a new idea allows IFRS to explore different ways of improving its dwindling revenues from various sources. The application of this theory stems from the fact that the revenue generating agency has consistency being innovative in an attempt to improve its service delivery to Nigerians. This has led to introduction of new technologies such as e-filing, online TIN registration and electronic processing of tax clearance certificate.

Studies have consistently shown that E-tax systems, such as e-taxation, online TIN registration, and digital tax administration, positively impact tax compliance. Research has found that e-taxation systems can increase tax compliance, reduce tax evasion, and improve revenue collection (Babatunde & Akinsanmi, 2021; Tivde, 2024). Online TIN registration has also been linked to improved revenue generation, with studies showing that TIN registration can improve tax compliance and increase revenue generation in Nigeria (Akinleye et al., 2019; Olaoye & Akadi, 2024).

Methodology

Research design

The study adopted a survey research design, and this design was suitable for this study because the data used were obtained from primary sources. The data for both the independent variable (E-tax) and dependent variable were obtained from primary sources through questionnaires administered on selected personnel of FIRS and some tax practitioners in Akwalbom State, Abia State and Rivers States.

Population of the study

The population of this study comprised all staff of Federal Inland Revenue Service (FIRS) now known as Nigerian Revenue Service (NRS) office in Akwalbom, Abia and Rivers state in Nigeria. According to the information from the Human Resource Department of Nigerian Revenue Service, there are 240 staff members in the three states as at 2024 financial year

Sample size and sample size determination

The sample size of this study was one hundred and fifty (150) FIRS officials across different sections of the office in Akwalbom, Abia and Rivers States. This was obtained using Taro Yaman formula as given below;

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

Where:

(n) = sample size

(N) = population size

(e) = level of precision (sampling error), usually 0.05 for 95% confidence n = 240

$$\{1+240(0.05)^2\}$$

$$n = \frac{240}{\{1+0.6\}}$$

$$n = 150$$

Sampling technique

The study adopted a proportionate stratified sampling technique to ensure adequate representation of respondents from the three states. The population of 240 respondents comprised 84 from Akwalbom State, 65 from Abia State, and 91 from Rivers State. A sample size of 150 was determined and proportionately allocated to each stratum using:

$$nh = \frac{Nh}{N} \times n$$

Where:

(nh) = sample size for each stratum

(Nh) = population of each stratum

(N) = total population (240)

(n) = total sample size (150)

The proportional allocation yielded 53 respondents from Akwalbom State, 41 respondents from Abia State, and 56 respondents from Rivers State, giving a total sample size of 150 respondents. This approach ensured that each state was represented in the sample according to its proportion in the population. This is presented in table 3.1 below.

Table 1: Sample size

State	Population	Calculation	Sample Size
Akwalbom	84	(84/240 x 150)	53
Abia	65	(65/240 x 150)	41
Rivers	91	(91/240 x 150)	56
Total	240		150

Source: Author's computation (2026)

Sources of data and method of data collection

The study adopted a primary source of data, through structured questionnaire based on a 5-point Likert scale. The questionnaire was developed using Google Forms and the survey link was electronically distributed to the respondents through appropriate online platforms, including email and social media channels. The online administration enabled respondents from the selected offices of the Nigeria Revenue Service (NRS) in

Akwalbom, Abia, and Rivers States to complete the questionnaire conveniently and anonymously. Responses submitted through Google Forms were automatically captured in a spreadsheet and subsequently exported to Microsoft Excel for coding and preliminary data cleaning before being imported into the appropriate statistical software for analysis

A total of 150 Google Form questionnaire links were distributed electronically to the targeted respondents emails across the selected NRS offices in Akwalbom, Abia, and Rivers States.

The emails of the respondents were gotten from the Director, Human Resources Department. Completed responses received within the stipulated data collection period constituted the dataset used for the analysis.

Validity and Reliability of Data

Validity of the research instrument was ensured through content validity and construct validity. Content validity was established by subjecting the questionnaire to expert review by supervisors and scholars in accounting and tax experts to confirm alignment with the study objectives. Their comments and suggestions were incorporated to ensure that all dimensions of E-taxation and tax compliance are sufficiently covered and appropriately represented. Construct validity was ensured by adapting measurement items from established literature and ensuring that each item reflects the theoretical meaning of the construct it represents..

Reliability of the research instrument was assessed to ensure consistency and stability in the measurement of the study variables. Given that the study relies on multi-item Likert-scaled constructs to measure strategic inventory management practices and operational performance, internal consistency reliability was considered most appropriate. To achieve this, the researcher conducted a preliminary pilot test of the questionnaire prior to the main survey administration. Data obtained from the pilot test were subjected to Cronbach's Alpha reliability analysis, a Cronbach's Alpha coefficient of 0.70 and above was considered acceptable for the study, indicating satisfactory internal consistency. This procedure ensured that the research instrument is reliable and suitable for generating valid empirical evidence for the study.

Method of data analysis

The primary data collected were analyzed using descriptive statistics tools of percentages, mean and standard deviation while inferential statistics to be used in conducting the data analysis will be multiple regressions. This was conducted using Statistical Package for Social Sciences software (SPSS) and presented by use of tables.

Model specification

The model for this study was adapted from Akinyosoye et al. (2025) but modified to suit the content of this present study. The simple regression models for the different variables based on the hypotheses are stated as shown thus:

$$TRG = \beta_0 + \beta_1 EFR + \varepsilon \dots \dots \dots (1)$$

$$TRG = \beta_0 + \beta_1 OTR + \varepsilon \dots \dots \dots (2)$$

$$TRG = \beta_0 + \beta_1 OTCC + \varepsilon \dots \dots \dots (3)$$

However, the econometric model that incorporates all the variables based on the model of Akinyosoye et al. (2025) which was adapted to suit the purpose of this study is as presented thus:

$$TRG = \beta_0 + \beta_1 EFR + \beta_2 OTR + \beta_3 OTCC + \varepsilon \dots \dots \dots (4) \text{ Where:}$$

TRG = Tax Revenue Generation (Measure of tax compliance)

EFR = E-filing of Returns

OTR = Online TIN Registration

OTCC = Online Tax Clearance Certificate

β_0 = Intercept or Constant

$\beta_1, \beta_2, \beta_3$ = Coefficients of the independent variables which were obtained from the results of data analysis.

ε = Error term

Decision criterion

The hypotheses were tested at the 5% level of significance ($\alpha = 0.05$). The null hypotheses (H_0) were rejected if the p-values were less than 0.05 ($p < 0.05$) and the absolute calculated t-value ($|t\text{-cal}|$) was greater than the critical t-value of 1.96 ($|t| > 1.96$). Conversely, the null hypothesis failed to be rejected if the p-value is greater than or equal to 0.05 and the absolute calculated t-value ($|t\text{-cal}|$) was less than the critical t-value of 1.96 ($|t| < 1.96$).

Data Presentation, Analysis And Discussion Of Findings

Data presentation

The questionnaires were administered to the respondents identified and the summary is as shown in table 1;

Table 1: Summary of questionnaire administered

Questionnaire	Number of questionnaires	Percentage (%)
Administered	150	100.00
Completed and returned	144	96.00
Not completed and returned	4	2.68
Rejected	2	1.32
Total	150	100.00

Source: Field survey (2026)

Table 1 shows that a total of 150 questionnaires were administered to selected personnel of FIRS in the course of the study. Out of the administered questionnaire, 144(96%) were correctly completed and returned, 4(2.64%) were not completed and returned while 2(1.32%) were not correctly completed, hence, were rejected.

Data Analysis

Analysis of respondents' demographics

Respondents' demographics were the focus of data collection in the first section of the research questionnaire administered.

Table 2: Gender of respondents

		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
	MALE	67	43.1	43.1	43.1
VALID	FEMALE	77	56.9	56.9	100
	TOTAL	144	100.0	100.0	

Source: Researcher's computation (2026)

Table 2 shows that the respondents were made up of 217(63.1%) male and 127(36.9%) female.

Table 3: Gender of respondents

		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
	MALE	67	43.1	43.1	43.1
VALID	FEMALE	77	56.9	56.9	100
	TOTAL	144	100.0	100.0	

Source: Researcher's computation (2026)

The result in table.3 shows that 57(31.1%), 46(39.5%), 28(16.9%) of the respondents were between the ages of 21-30years, 31-40 years and 41-50 years while 13(12.5%) were above 50 years of age respectively.

Table 4 : Highest educational qualification of respondents

		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
VALID	SSCE	10	5.8	27.9	27.9
	ND/NCE	19	20.1	20.1	48.0
	HND/B.SC	59	46.2	46.2	94.2
	MASTERS & ABOVE	56	27.9	5.8	100.0
	TOTAL	144	100.0	100.0	

Source: Researcher's computation (2026)

The results in table 4 shows that 10(5.8%) and 19(20.1%) of the respondents were SSCE and ND/NCE holders while 59(46.2%) and 56(27.9%) had HND/B.Sc and Masters' Degree/above respectively.

Descriptive statistics of variables

The descriptive statistics result is as presented in table 4.14 below;

Table 5: Descriptive statistics results

	N STATISTIC	MEAN STATISTIC	STD DEVIATION STATISTIC	SKEWNESS STATISTIC	STD ERROR	KURTOSIS STATISTIC	ST ERROR
Tax Revenue Generation	144	4.2914	.90286	-1.740	.131	3.437	.262
E-filing of Returns	144	4.2414	.68107	-.968	.131	.795	.262
Online TIN Registration	144	4.2951	.68336	-1.230	.131	1.271	.262
Online Tax Clearance Certificate	144	4.1410	1.08281	-1.486	.131	1.579	.262

Source: Researcher's computation (2026) using SPSS 25.0

Table 4 shows that for the independent variables- e-filing of returns, online TIN registration, online tax clearance certificate, the mean values obtained for all the responses were 4.2414, 4.2951 and 4.1410, respectively. This shows the average scores of all the responses regarding these variables and indicates that respondents generally agreed that the three technology-based innovation variables are relevant to tax revenue generation in Nigeria.

Analysis of Variance

Table 6: ANOVA

MODEL	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG
Repression	207.461	7	29.637	55.8	
Residual	72.136	136	.530	72	.0006
TOTAL	279.597	143			

a. Dependent Variable: TAX_REVENUE_GENERATION

b. Predictors: (Constant),

ONLINE_TAX_CLEARANCE_CERTIFICATE,

E FILING_OF_RETURNS,

ONLINE_TIN_REGISTRATION

Source: Researcher's computation (2026) using SPSS 25.0

The results in table 6 shows F-statistic and probability values of 55.872 and 0.000 respectively. This indicates that the independent variables- e-filing of returns, online TIN registration, and online tax clearance certificate have a combined significant effect on tax revenue generation by FIRS in Nigeria.

Test of Hypotheses

This analysis was conducted to test the relationship between the dependent variables and the independent variable in this study. In line with this, each hypothesis was tested based on the regression results obtained.

Table 7: Coefficients

MODEL	UNSTANDARDIZED COEFFICIENTS		UNSTANDARDIZED COEFFICIENTS		SIG
	B	STD ERROR	BETA	T	
CONSTANT					
E-filing of Returns	1.065	.244		4.358	.000
Online TIN Registration	.053	.046	.040	1.161	.246
Online TAX Clearance Certificate	.111	.077	.084	1.447	.149

a. Dependent Variable: REVENUE_GENERATION

Source: Researchers computation (2026) using SPSS 25.0

The T-statistics and p-values as revealed in table 4.17 above were employed in the test of hypotheses stated in the previous section at 5% significance level.

Hypothesis one

The hypothesis one of this study was stated as follows:

- Ho: E-filing of returns has no significant effect on tax revenue generation in Nigeria

In line with the decision rule of the study, the null hypothesis one of this study failed to be rejected because the p-value of 0.246 shown in table 4.17 is greater than 0.05 ($p > 0.05$). The null hypothesis is further accepted because the t-cal value of 1.161 is less than the critical value of 1.96. This implies that e-filing of returns has no significant effect on tax revenue generation in Nigeria.

Hypothesis two

The hypothesis two of this study was stated as follows:

- Ho: Online TIN registration has no significant effect on tax revenue generation in Nigeria

In line with the decision rule of the study, the null hypothesis two of this study is accepted and the alternate rejected because the p-value of 0.149 shown in table 4.17 is greater than

0.05 ($p > 0.05$). The null hypothesis is further accepted because the t-cal value of 1.447 is less than the critical value of 1.96. This implies that online TIN registration has no significant effect on tax revenue generation in Nigeria.

Hypothesis three

The hypothesis three of this study was stated as follows:

- Ho: Online tax clearance certificate has no significant effect on tax revenue generation in Nigeria

In line with the decision rule of the study, the null hypothesis three of this study was rejected and the alternate accepted because the p-value of 0.000 shown in table 4.17 is less than 0.05 ($p < 0.05$). The null hypothesis is further rejected because the t-cal value of 12.061 is greater than the critical value of 1.96. This implies that online tax clearance certificate has significant effect on tax revenue generation in Nigeria.

Discussion of findings

E-filing of returns and tax revenue generation

The study found that e-filing of returns has a positive but non-significant effect on tax revenue generation in Nigeria, with a coefficient of 0.053 and a p-value of 0.246. This means that e-filing of returns moves in the expected positive direction, but its individual contribution to tax revenue generation was not strong

enough to be statistically significant when the other technology-based innovation variables were included in the model. In the grouping of findings, e-filing falls under foundational access innovations because it mainly provides a digital channel for submitting returns and reducing manual filing burdens.

Online TIN registration and tax revenue generation

The study found that online TIN registration has a positive but non-significant effect on tax revenue generation in Nigeria, with a coefficient of 0.111 and a p-value of 0.149. This result also belongs to the foundational access and identification grouping. Online TIN registration improves taxpayer identification, expands the taxpayer database and makes it easier for the tax authority to trace taxpayers, but registration alone does not guarantee immediate tax payment or increased revenue collection.

Online tax clearance certificate and tax revenue generation

The study found that online tax clearance certificate processing has a significant positive effect on tax revenue generation in Nigeria, with a coefficient of 0.610 and a p-value of 0.000. This is the strongest individual effect recorded among the technology-based innovation variables. In the grouping of findings, online tax clearance certificate belongs to the compliance-verification innovation group because it provides verifiable evidence that a taxpayer has fulfilled relevant tax obligations

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Summary of findings

This study found that e-filing of returns has a positive but statistically non significant effect on tax revenue generation in Nigeria ($\beta = 0.053$, $p = 0.246$). This finding implies that although electronic filing of tax returns may improve convenience and administrative efficiency, its contribution to revenue generation remains limited

The study revealed that online TIN registration has a positive but statistically nonsignificant effect on tax revenue generation ($\beta = 0.111$, $p = 0.149$). This indicates that while the online registration of taxpayers may facilitate the expansion of the tax database and improve taxpayer identification, its current implementation has not significantly enhanced revenue generation.

The study established that online tax clearance certificate processing has a significant positive effect on tax revenue generation ($\beta = 0.610$, $p = 0.000$). This finding implies that the digitization of tax clearance certificate issuance significantly improves taxpayer compliance and encourages tax remittances. Since tax clearance certificates are often required for business transactions, government contracts, and financial dealings, their electronic processing serves as an effective mechanism for promoting tax compliance and boosting government revenue.

Conclusion

The findings of study have shown that E-tax systems jointly enhance tax revenue generation in Nigeria. Although e-filing of returns and online TIN registration had positive but non-significant individual effects, online tax clearance certificate, significantly enhance tax revenue generation in

Nigeria. Therefore, it was concluded that E-tax system enhances tax revenue generation and strengthens tax compliance when the various digital tax administration platforms are implemented together and supported by adequate taxpayer awareness, infrastructure and enforcement mechanisms.

Recommendations

Arising from the outcomes of the study and the conclusion drawn thereto, the following recommendations were proffered:

To enhance the effectiveness of e-filing systems, the Federal Inland Revenue Service (FIRS) now Nigerian Revenue Service (NRS) should invest in improving the user interface, reducing technical issues, and increasing awareness among taxpayers.

The NRS should launch public awareness campaigns to educate taxpayers about the benefits of online TIN registration and encourage its adoption across formal and informal sectors of the Nigerian economy.

The NRS should consider expanding the use of online tax clearance certificates to other areas of tax administration, such as value-added tax (VAT), withholding tax and business registration verification.

Suggestions for further studies

Considering findings of this study, it was recommended that further research should be conducted in the following areas:

- Investigate the challenges faced by taxpayers in adopting e-filing systems, online TIN registration and online tax clearance certificates
- Explore the impact of the three technology-based innovation variables on tax revenue generation in the informal sector.
- Examine the effectiveness of technology-based innovations in tax administration across different countries and different tiers of government in Nigeria

Contributions to knowledge

This study contributes to knowledge in several ways.

- This study provides empirical evidence on the relationship between the three technology-based innovation variables and tax revenue generation in Nigeria.
- The study demonstrates that online tax clearance certificate processing have significant relationship with tax compliance and revenue generation in Nigeria.
- The study further shows that e-filing of returns and online TIN registration are positive but non-significant predictors of tax revenue generation when considered alongside other digital tax administration tools.

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