

## Tax Computerization and Capital Gains Tax Revenue in Nigeria

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### **Abstract**

*This study examined the relationship between capital gains tax revenues and electronic tax registration and filing from 2016 to 2021 in Nigeria's post-electronic tax environment. In this study, survey research was used to gather data from 128 Federal Inland Revenue Service (FIRS) workers spread across Rivers State through the use of questionnaires. With the aid of SPSS version 25.0, analyses were carried out utilizing the spearman rank order correlation technique and descriptive statistics. The findings show a favorable and statistically significant correlation between capital gains tax income and electronic filing and registration. Based on the data, we draw the conclusion that, if successfully implemented, there is a chance that Nigeria's capital gains tax collection might be boosted by the computerized tax system. The research recommends that the Federal Inland Revenue Service launch additional educational campaigns to increase public awareness of the usage of all electronic services for capital gains tax registration and filing on their platform, given the aforementioned findings.*

**Keywords:** *Electronic Registration, Electronic Filing, Capital gains tax Revenue.*

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### **I. INTRODUCTION**

The fact that Nigeria's budget is now being funded by continuous borrowing, along with the high cost of debt financing, is concerning and presents a challenge for us to turn internally for a more sustainable source of funding for public spending. This is partially caused by an excessive reliance on oil income, which is decreasing in value as a result of the instability of the global oil markets. In order to facilitate tax compliance and payment for taxpayers, the government implemented electronic taxation, which will raise tax income. This clarifies why e-tax solutions are one of the main tactics used in Nigeria to increase tax income, as mentioned in a FIRS circular titled "FIRS and its drive to generate #10 trillion in 2022" that was published in August 2021. According to Naiyeju (1996),

referenced in Kiabel (2017), a tax is an obligatory charge imposed by the government on its people in order to fulfill its objectives.

The Nigerian government has kept investing in tax automation technology with the goal of increasing tax revenues, in accordance with the advice of the visiting teams of the International Monetary Fund (IMF) Fiscal Division in 2006 and particularly from 2015 when electronic taxation was first introduced in Nigeria.

The Companies Income Tax Order 2020 on Significant Economic Presence, which was signed into law by the Minister of Finance, Budget, and National Planning in May 2020, represented a significant advancement in the automation of Nigeria's tax system. It dealt with the determination of the profits of non-resident companies (NRCs) derived from Nigeria and introduced the concept of significant economic presence (SEP) as a basis for determining the profits of NRCs providing digital services in Nigeria. This is due to the country's e-commerce industry's explosive expansion, particularly the online sales of goods and services to NRCs (Non-Resident Companies) that are involved in Nigeria's digital economy (DE). (Etigwe and others, 2021).

Additionally, in accordance with the 2020 Finance Act's provisions, the Federal Inland Revenue Service (FIRS) introduced Tax Pro-Max, an integrated tax administration solution, to facilitate tax administration and tax compliance in Nigeria by automating the filing and payment of tax returns. The program is an online tax administration platform that manages tax procedures all in one place. Among other things, it facilitates easy registration, filing, payment of taxes, and automated crediting of withholding tax and other credits to the taxpayer's accounts. Additionally, Tax Pro-Max gives taxpayers a unified view of all of their interactions with the Service. In order to do this, the tax pro-max was made the official method for filing all tax returns denominated in naira as of June 7, 2021. It is therefore anticipated that the new platform will address some of the current problems with the original electronic tax websites. (FIRS, 2021)The internet, software, and computers that make up modern technology are all part of the electronic tax system. Such technology is only seen to be effective when operated by employees with the necessary training and integrated into the organization's workflow.

The time between 2020 and the end of 2021 was left open by other studies on this topic, which only took data up to 2019. This study aims to close that gap. This study aims to empirically test whether electronic tax filing has a statistically significant impact on companies' income tax revenue in Nigeria, given the efforts made by the government thus far through the Federal Inland Revenue Service (FIRS) to provide an automated platform for tax administration in Nigeria for improved revenues.

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical Framework**

The researcher used many pertinent baseline theories, some of which are listed below, to support her work and ideas.

#### **Innovation Diffusion Theory (IDT)**

In the literature on communications, Obara and Gabriel (2021) assert that IDT is a fundamental hypothesis that describes how innovations are embraced within a group of prospective adopters. Based on information from 508 diffusion investigations, Everette

Rogers developed the concept in 1962. Four key components of this paradigm are innovation, communication channels, time, and social structure. Innovations might be new practices, new technologies, or new ideas, and adopters can be individuals or groups. Invention diffusion is defined by IDT at the macro (population) level as a process of communication whereby members of a social system are persuaded to accept an invention after learning about it and its possible advantages through communication channels like the media or previous adopters. Diffusion is a temporal process that starts slowly with a small number of early adopters, picks up speed as more people accept the innovation, and then slows down as the adopter population reaches saturation. Adopters can be categorized according to when they adopt: innovators, early adopters, early majority, late majority, or laggards. The existence of opinion leaders—experts whose ideas are recognized by others—and change agents—those who alter the behavior of others—are two other social system characteristics that affect the rate of dissemination.

It is believed that five innovation features influence adopters' decisions when it comes to adopting new ideas.

1. The predicted benefits of an innovation in comparison to previous innovations are referred to as relative advantages.
2. Compatibility refers to how well the innovation fits into the adopter's work habits, values, and beliefs.
3. Complexity refers to how difficult it is to learn and apply an idea.
4. Observability-The amount to which the results of using the invention can be observed and
5. Triability -The extent to which the innovation can be tested on a trial basis(Obara & Gabriel, 2021).

### Fig 2.1 Innovation Adoption Process

Knowledge — Persuasion — Decision — Implementation — Confirmation

Considering that the electronic services offered by FIRS are an invention and that the adoption process described by the innovation diffusion theory is relevant, it is plausible to conclude that the innovation diffusion theory applies to this research endeavor as a whole. For the electronic services provided by FIRS, we have innovators, early adopters, early majority, late majority, and laggards based on when they were adopted and the innovative adoption process shown in Fig 2.1 above.

### Technology Acceptance Model (TAM) by Fred Davis

This idea is similar to the principle of spread of innovation. In 1989, Davis developed the technology acceptance model, which explains the user's intention when presented with a chance to adopt new technology. TAM was founded on the theory of reasoned action (TRA), a psychological theory that sought to explain behavior and comprised the dependent variable behavioral intention, which TRA assumed was closely linked to actual behavior, as well as two primary predictors: perceived usefulness and ease of use (Alade, B.J, 2018).

The goal of TAM was to create a model that could be used to analyze a variety of end-user computing technologies in order to better understand the elements that affect computer acceptance. The primary determinants are perceived usefulness and perceived ease of usage. The degree to which people think that utilizing a certain system would enhance their performance is known as perceived utility, while the degree to which they think it will be comfortable to use is known as perceived ease of use. Because the

perceived utility and ease of use of E-tax services vary among organizations, this research is pertinent to the work being done here. Therefore, it may be argued that businesses are more likely to fully adopt the innovation when they perceive the ease, convenience, and value of electronically registering, filing, and paying taxes.

## 2.2 Electronic Taxation

The use of computers and networks in the collection and payment of taxes is known as electronic taxation, or e-taxation. Known as e-payments and e-filing, it entails the use of computer techniques in the assessment, collection, and administration of taxes. Wasao (2014) defines an electronic tax system as an online platform that allows taxpayers to access all financial authority services via the internet, including obtaining a personal identification number, filing returns, paying taxes owed, and requesting a compliance certificate. The IRS initially tested electronic filing with five tax preparers, introducing e-taxation to the US market. However, the Internal Revenue Service Restructuring and Reform Act of 1998 solidified computerized taxation in the United States. By 2012, the IRS had accomplished more than 80% of tax returns filed electronically thanks to the steps it had taken to assure that all electronically prepared forms could be filed online. E-taxation originated in the US and has since expanded to other nations. As of 2016, ninety-two (92) economies had completely implemented electronic tax filing and payment systems, according to the Paying Taxes: 2018 Report. Most countries in the globe have steadily transitioned from manual tax procedures to electronic tax systems during the past 20 years.

When the Federal Inland Revenue Service (FIRS) and the Inter-bank Settlement System (NIBSS) integrated technology into the Nigerian tax system in 2015, Nigeria joined the trend (Okunowo, 2015). The Nigeria Tax Authority implemented the electronic tax system to enhance revenue collection and management, provide taxpayers with round-the-clock services from any location, lower compliance expenses, and enhance tax compliance. Paper-based tax reporting systems are quickly being replaced by it. These technologies, which offer numerous benefits over the conventional hard copy tax filing approach, include expedited processing, ease of use, precision, reduced expenses, reduced instances of tax avoidance, amplified income, and enhanced effectiveness. To help it accomplish its objectives of increasing revenue collection and enabling taxpayer voluntary compliance, FIRS has a centralized Information Communication Technology (ICT) department that offers support services for electronic systems to the entire business. (Alade, 2018).

## 2.3 Electronic Tax Registration

One must be properly registered in order to conduct business with FIRS. This portal allows new taxpayers to register for their individual tax identification numbers and gain access to all FIRS e-services.

Now, by going to the FIRS website at [www.firs.gov.ng](http://www.firs.gov.ng), one can register and authenticate themselves online.

According to the Quarterly Publication of the FIRS (2017), a taxpayer will take the following steps:

- ❖ Log in and proceed to the e-Services tab;
- ❖ Click on the log-in or register tab and input your Taxpayer Identification Number (TIN) or RC number;
- ❖ Choose a username and password upon successful registration;

- ❖ Click on Register and a PIN will be sent to your email for authentication to complete the process.
- ❖ For taxpayers who have been registered with the Corporate Affairs Commission (CAC) but have no TIN, the e-registration process is as follows:
- ❖ Log onto <https://apps.firs.gov.ng/tinverification/>
- ❖ Enter the CAC registration number (i.e your RC or BN number;
- ❖ Enter the Completely Automated Public Turing test to tell the Computers and Humans Apart (CAPTCHA) image that will be displayed:
- ❖ If your search is successful, you can input your email address and click on the send to my mail button to have the details sent to your mail:
- ❖ Finally, check your spam folder if you do not see the mail in your inbox.

Taxpayers can register for taxes online without having to go to any tax offices thanks to the electronic registration service platform. All they have to do is register by going to the FIRS website.

## 2.4 Electronic Tax Filing

Electronic filing (sometimes called e-tax filing) is the process of releasing taxpayers' returns to the tax authority via the Internet. This digitalized method of filing taxes is supposed to provide a number of benefits, including convenience and time savings. This method guarantees the taxpayer's independence and ability to compute the tax owed to the tax authority on their own (Monica et al., 2017 as referenced in Ajayi & Oyeniyi, 2021). This implies they will have to manually file their taxes in the event that their incompetence prevents them from using the electronic tax filing system. Electronic tax filing applies to both business and individual returns. It's a common method of collecting taxes, especially in developed nations. From its inception in the United States in 1986, the electronic filing of tax returns has spread to other countries, including Australia, Canada, Egypt, and Nigeria (Oforum, et al., 2018 as referenced in Ajayi & Oyeniyi). E-filing has many benefits in terms of tax collection. The main benefit it offers taxpayers is convenience in filing their taxes, which allows them to go about their everyday lives—especially for those who work—by filing from anywhere at any time. E-filing, according to Agrawal (2012), offers taxpayers privacy and anonymity during tax payments; these advantages would let owners of small and medium-sized businesses combine their tax payments. Consequently, electronic filing will help to increase tax compliance and decrease instances of tax evasion, enabling tax authorities to collect additional income for the government (Okauru, 2011; Wamathu, 2014 as referenced in Ajayi and Oyeniyi 2021). Electronic tax filing has drawbacks despite all of its benefits. Let's start with the fact that not everyone can purchase a computer or an Android phone—two electrical devices that are connected to the internet. This could deter taxpayers from filing their taxes online. In addition, not everybody knows how to use the internet or technology. By using e-filing, it is assumed that all taxpayers have some level of familiarity with the Internet and technological equipment operation. This might not be the case because issues with technology and the internet tend to affect older generations more than younger ones. The reason for this is that numerous technical innovations transpired subsequent to their optimal age. Therefore, making elderly people in a community's working population submit their taxes electronically presents more of a challenge. Moreover, electronically filing requires taxpayers to possess the unreasonable ability to calculate their taxes (Monica, et al., 2017 as referenced in Ajayi & Oyeniyi, 2021). These people would require the help of a tax expert, which would not be

cheap. Because of this, the purpose of e-filing—which is to improve tax compliance and raise government revenue—might not always be achieved.

#### **2.4 Capital Gains Tax Revenue**

After subtracting the cost of acquisition of the chargeable asset and any other incidental costs, capital gains tax is a tax levied on gains or profits from the sale of any capital or chargeable asset. That is, tax on the amount that, as a result of an asset's disposal, exceeds its cost. When any kind of property is disposed of, CGT is due (assets). Options, debt, incorporeal property, any currency other than Nigerian currency, and any other assets on which capital allowance has been claimed in accordance with the provisions of the Petroleum Profit Tax Act, the Companies Income Tax Act, and the Personal Income Tax Act are all considered chargeable assets. (Nwikipasi & Kiabel, 2019). An expense on benefit recognized on the offer of capital resources at a cost more than the price tag is capital gain tax. According to Jones (2003), referenced in Alade (2018), capital gain tax is an evaluation of capital gains, meaning that the amount acknowledged on the offer of a non-stock resource was less significant than the amount acknowledged on the transaction. The most well-known capital additions come from the provision of valuable metals, real estate, and government bonds. Countries have different rates. The majority of nations impose capital gains taxes on both people and businesses based on their yearly capital gains. 10% of the proceeds from the sale of the eligible assets are the fee in Nigeria (Ogbonna & Ebimobowei, 2012), as stated in Alade (2018).

#### **2.5 Empirical Review**

The research on the effect of electronic tax registration and filing on Nigerian tax revenue are listed below.

Olaoye and Atilola (2018) looked into how Nigeria's tax revenue was affected by electronic tax filing. The more current quarterly data from 2012 to 2018 was used in the study. The CBN Statistical Bulletin and the Federal Inland Revenue Services provided the data. The focus was on evaluating if there was a statistically significant difference in government revenue between the pre- and post-e-filing eras (2012–2014 and 2016–2018), with the t-test being used to produce statistical results. The study's findings on pre- and post-E filling government revenue generating showed no discernible differences. Thus, the study came to the conclusion that Nigerian government revenue is not primarily attributable to e-filing.

The influence of e-tax assessment on income production in Nigeria was also examined by Nnubia et al. (2019). The analysis used secondary data from the Quarterly Economic Reports and the CBN Statistical Release tax report from the Federal Inland Revenue Service. In other words, the pre-e-charge period is from the first quarter of 2012 to the first quarter of 2015, and the post-e-charge period is from the second quarter of 2015 to the second quarter of 2018. This time arrangement information covered periods from the first quarter of 2012 to the second quarter of 2018. The Ordinary Least Square Method was used to analyze the data that was collected. The results demonstrate an idealistic significant impact of value-added tax and company income tax prior to the e-tax assessment period on income generation in Nigeria, and an opposite insignificant impact of post-organization annual duty income and value-added assessment income on revenue generation in Nigeria subsequent to the e-tax collection period at the 5% critical level. This suggests that while pre- and post-capital gain charge income has an undesired, insignificant impact on income creation in Nigeria at the 5% level of significance, e-tax collection has not made a significant contribution to the country's value-added tax or

company income tax revenue generation. This suggests that the creation of capital gain charges in Nigeria has not been much influenced by E tax collection. According to the examination, among other things, in order to maximize the activity's anticipated benefits, the government, through Federal Inland Revenue Services, should devise strategies for the most effective way to teach businesses the principles of electronic tax collection.

Ajayi and Oyeniyi (2021) looked into how submitting electronically affected the country's ability to collect taxes. Three research objectives were established by the study: to analyze the effects of electronic tax filing on government tax income in Nigeria and to examine the effects of electronic tax filing on the growth of non-oil and oil tax revenue in Nigeria. The study essentially examined whether government tax revenue, non-oil tax revenue, and oil tax revenue in Nigeria differed significantly between the pre-e-tax filing (2011-2014) and post-e-tax filing (2016-2019) periods. The Federal Inland Revenue Service provided the quarterly data used in the study. As an analytical method, the one-way Analysis of Variance (ANOVA) was used. According to the study's findings, electronic tax filing only considerably affected Nigeria's oil tax revenue; non-oil tax revenue and overall government tax collection were not significantly impacted. Based on these findings, the report suggests that the government create a comprehensive database on taxpayers so that it can quickly determine each taxpayer's potential revenue source for filing taxes. Additionally, the study suggests that additional enlightenment programs be carried out nationwide by the Federal government's Federal Inland Revenue Services (FIRS) to raise public knowledge and awareness of the usage of all electronic services on their platform.

Chijioke, Leonard, Bossco, and Amaefule (2018) carried out a second study to look at how E-Taxation affected Nigeria's income and economic expansion. The goal of implementing an electronic tax system is to increase revenue collection, which will enhance economic growth in the nation. With that in mind, the study empirically examined the effects of implementing e-taxation in 2015 on tax revenue, federally collected revenue, and the tax-to-GDP ratio. The study used secondary data obtained every quarter from the Central Bank of Nigeria's Statistical and Economic Reports and the Federal Inland Revenue Service between the second quarter of 2013 and the fourth quarter of 2016. Pre- and post-e-tax periods included the two sets of data. The paired sample t-test was employed as a pre-post procedure to compare the means of the two sets of data. The study's conclusions showed that Nigeria's tax income, federally collected money, and tax-to-GDP ratio have not increased since electronic taxation was implemented. Nonetheless, research showed that the implementation of e-taxation resulted to a significant fall in both the tax-to-GDP ratio and federally collected revenue. Following implementation, tax revenue also declined, although the mean difference was not statistically significant. Among other things, it was suggested that the Federal Inland Revenue Services, a division of the federal government, hold additional educational seminars in each of the 36 states of the union to raise awareness of the usage of all electronic services on their platform.

Using the Ebonyi State Board of Internal Revenue as a case study, Oketa et al. (2021) investigated the impact of the electronic tax system on the domestically produced revenue in the Nigerian emergent economy. In order to accomplish this goal, electronic tax registration, electronic tax return filing, and electronic tax payment were utilized as stand-ins for the electronic tax system. The expediency theory of taxes and the technology acceptance model served as the foundation for this investigation. The final database used in the study's quantitative analysis was a quantitative cross-sectional survey based on 94 valid responses that

were taken from 124 qualified and experienced respondents from the Ebonyi State Board of Internal Revenue. Out of all the primary variables studied, the results show that electronic tax registration and electronic tax return filing have an impact on internally produced revenue in Ebonyi State, and consequently, on the Nigerian emergent economy. There is no statistically significant impact of electronic tax payment on the state's internally produced revenue. Therefore, the study suggests that the Ebonyi State Board of Internal Revenue, and therefore the Nigerian tax system, implement a user-friendly electronic tax system that would facilitate taxpayers' ability to file and pay electronically.

Alade (2018) looked at how Nigeria's use of e-taxation affected the country's ability to generate income. The study specifically evaluated how E-taxation affected Value Added Tax (VAT) and Company Income Tax (CIT). An expo facto research design was used, and Federal Inland Revenue Service data were used. From the first quarter of 2012 to the second quarter of 2018, a total of six (6) years and three (3) quarters were studied. The research was conducted every quarter; the pre-E-taxation period spanned thirteen quarters, from the first quarter of 2012 to the first quarter of 2015, and the post-E-taxation period covered thirteen quarters, from the second quarter of 2015 to the second quarter of 2018. A positive insignificant difference was found between pre and post-company income tax revenue, with t-statistics and p-values reported to be 0.833 and 0.421, respectively, according to the paired sampled t-test analysis. Similarly, there was a positive insignificant difference between pre and post-value-added tax revenue, with t-statistics and p-values reported to be 0.520 and 0.612, respectively. The conclusion reached was that Nigeria's revenue generation has not been greatly boosted by e-taxation. To maximize the anticipated benefits of the initiative, the study advised that the federal government, through Federal Inland Revenue Services, devise strategies for educating businesses about the specifics of E-tax payment. Additionally, the study mandated that Federal Inland Revenue Services make sure the website is user-friendly and of high quality.

### **3.0 METHODOLOGY**

The survey research design was chosen by the investigator. Since it may be applied to the study of non-observable events like opinions, attitudes, preferences, or dispositions, this approach is deemed appropriate (Soyombo, 2002 as referenced in Oladele, 2021). Because the researcher is looking for links and effects of changes in the independent factors on the dependent variables, this study design was chosen. The selected population comprises of the 299 employees who work for the Federal Inland Revenue Service (FIRS) in Rivers State, Nigeria. There are seven (7) tax offices in the state. The Taro Yamen formula was used to determine a sample size of 171. The primary data were gathered using a 5-point Likert scale questionnaire that asked respondents to rate their agreement or disagreement with the following concepts: electronic taxation and its proxy, electronic filing; tax revenue and its measures; and company income tax. The responses ranged from 1 = strongly disagree to 5 = strongly agree.

Experts assessed the questionnaire's content, and factor analysis was used to determine the construct validity.

Using the Statistical Package for Social Sciences (SPSS) version 25.0, Cronbach alpha coefficients were used to assess the survey instrument's reliability. In this case, reliability is defined as the extent to which an assessment tool produces consistent results after multiple trials. Consequently, only those elements yielding alpha values greater than 0.70 were taken into account. It is possible to express Cronbach's alpha as a function of both the average inter-correlation and the quantity of test items.

**Table 1 Summary of Cronbach's Alpha Reliability Result**

VARIABLES	PROXIES	NO. OF ITEMS	ALPHA COEFFICIENTS
Electronic taxation	Electronic tax filing	5	0.770
Tax revenue	Companies income tax	2	0.721

Strong levels of instrument repetition, consistency, clarity, and comprehension by the respondents are indicated by alpha coefficients. Significant Cronbach alpha values for all instruments are shown in the table, with the greatest coefficient at .770 and the lowest at .721. The results show high levels of instrument repeatability, clarity, and responder comprehension as well as significant levels of instrument reliability. The Spearman Rho correlation, which works best when analyzing ordinal data, was used to do the inferential study. A perfect positive correlation is represented by a value of  $r = 1$ , and a perfect negative correlation is represented by a value of  $-1$ . This non-parametric test is used to determine the degree of relationship between two variables.

#### 4.0 DATA ANALYSIS AND INTERPRETATION

**Table 2 Descriptive Statistics on variables Respondent's Opinion on Electronic Filing**

Statements	SA	A	UD	D	SD
Electronic filing saves time for the taxpayer when compared with the manual filing process.	85 53.8%	60 38.0%	7 4.4%	2 1.3%	2 1.3%
Electronic filing encourages taxpayer's compliance due to the convenience associated with its use as against manual filing methods.	73 46.2%	75 47.5%	6 3.8%	1 0.6%	1 0.6%
Electronic filing reduces the incidence of tax evasion and eventual increase in tax revenue.	61 38.6%	59 37.3%	20 12.7%	9 5.7%	6 3.8%
Electronic Tax Filing makes tax assessment and collection more efficient.	63 39.9%	73 46.2%	15 9.5%	3 1.9%	2 1.3%
Tax revenue has improved considerably since the introduction of electronic filing system (Tax ProMax)	89 56.3%	55 34.8%	8 5.1%	2 1.3%	2 1.3%

Table 2 is a breakdown of percentage responses on the 5-point Likert scale for electronic filing. The percentage analysis of the responses shows that majority of the respondents are of the opinion that electronic filing has a significant positive impact on tax revenue. Only about 1% to 4% disagree with this position while an average of about 10% are undecided.

**Table 3 Respondent’s Opinion on Companies Income Tax**

Statements	SA	A	UD	D	SD
Companies Income Tax (CIT) is tax on the profits of incorporated entities in Nigeria. It also includes the tax on the profits of non-resident companies carrying on business in Nigeria.	83 52.5%	57 36.1%	8 5.1%	4 2.5%	2 .3%
There is considerable improvement in Companies Income Tax Revenue after the introduction of electronic taxation.	65 41.1%	76 48.1%	11 7.0%	2 1.3%	2 .3%

Table 3 is a breakdown of percentage responses on the 5-point Likert scale regarding companies income tax collection as result of electronic taxation. The percentage analysis of the responses shows that majority of the respondents are of the opinion that companies income tax has improved considerably with electronic taxation. Only about 2% disagree with this position while an average of about 6% are undecided.

**Univariate Analyses**

The univariate analysis of the data to see how each variable is distributed. This is a measure of the central tendency, dispersion and the distribution of the variables

**Table 4**

		Electronic Filing	Company_Income_Tax
N	Valid	156	156
	Missing	2	2
Mean		4.3112	4.3333
Median		4.4000	4.5000
Std. Deviation		.59009	.63075
Variance		.348	.398
Skewness		-1.924	-1.809
Std. Error of Skewness		.194	.194
Kurtosis		7.493	6.360
Std. Error of Kurtosis		.386	.386

The median for electronic filing is 4.40, and the mean is 4.31. The variable distribution is not normal, as shown by a negatively skewed distribution with a positive kurtosis index of 7.493 and a negative skewness value. The data on company income tax indicates that the variable is not regularly distributed, as evidenced by the mean of 4.33 and median of 4.5, which deviate from one another. A non-normal distribution is indicated by a negative skewness value of -1.809 and a positive index of kurtosis of 6.36.

### Bivariate Analyses

After the univariate analysis was finished, bivariate analysis was performed to see if there was a statistically significant association between the variables. Statistical Package for Social Sciences (SPSS) software version 25 for Windows was utilized to evaluate the hypotheses utilizing the Spearman Correlation coefficient and linear regression technique. Therefore, the testing of the developed hypotheses is the focus of this phase of the study.

**Table 5 Range of Relationship and Descriptive Level of Association of Relationship**

Range of r values	Descriptive level of association of r
±0.80 – 1.00	Very strong
±0.60 – 0.79	Strong
±0.40 – 0.59	Moderate
±0.20 – 0.39	Weak
±0.00 – 0.19	Very weak

### Decision Rule

If the significant/Probability Value (PV) < 0.05 (level of Significance) = reject the null and conclude Significant Relationship. If the Significant Probability value (PV) > 0.05 (level of Significance) = Accept the null and Conclude an Insignificant Relationship.

### Test of Hypothesis Using SPEARMAN RANK CORRELATION

*H<sub>01</sub>: Electronic tax registration does not have any significant relationship with Capital Gains Tax revenue in Nigeria.*

**Table 4.3.2.1a : Correlation Analysis between Electronic tax registration and Capital Gains Tax revenue in Nigeria**

### Correlations

		Capital_Gains_Tax	Electronic_Registration
Spearman's rho	Capital_Gains_Tax	1.000	.284**
	Correlation Coefficient		
	Sig. (2-tailed)	.	.000
	N	156	155

Electronic_Registr ation	Correlation Coefficient	.284**	1.000
	Sig. (2-tailed)	.000	.
	N	155	155

\*\* . Correlation is significant at the 0.000 level (2-tailed).

**Source: SPSS Output Version 25.0**

The Spearman-Rho Correlation coefficient is 0.284, as shown in the above table. This suggests that the revenue from capital gains taxes and electronic registration have a weak but positive linear connection. The test is significant if the p-value is less than 0.05. Revenue from the capital gains tax and electronic registration are significantly correlated. The study concludes that there is a strong correlation between capital gain tax revenue and electronic registration after reaching this conclusion. Consequently, the null hypothesis is disproved.

**Test of Hypothesis Using Linear Regression**

**Model 1:  $CGT = \beta_0 + \beta_1 * \text{Electronic Registration} + \mu_1$**

**Table 4.3.2.1b Regression Analysis of the Effect of *Electronic Tax Registration* on *Capital Gain Tax revenue* in Nigeria**

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.859	.365		5.089	.000
	Electronic_Regist ration	.504	.083	.440	6.068	.000

a. Dependent Variable: Capital\_Gains\_Tax

**Source: SPSS Output Version 25.0**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.440 <sup>a</sup>	.194	.189	.63598

a. Predictors: (Constant), Electronic\_Registration

**Source: SPSS Output Version 25.0**

From the coefficient table, the constant  $\beta_0$  is 1.859 and the regression coefficient  $\beta_1$  is 0.504 with a p-value of 0.000. Since the p-value is less than 0.05, the null hypothesis is rejected. This implies that there is a significant relationship between electronic registration and capital gain tax. Electronic registration had a significant effect on capital gain tax. With a coefficient of regression of 0.504, it means that 1 unit change in electronic registration will result to 0.504 unit change in capital gain tax revenue in Nigeria.

From the model summary table, the R Square is given as 0.194 (19.4%). This represents the fitness of the regression model. It estimates the percentage of effect the independent variable had on the dependent variable. This means that 19.4% of the variation (changes) in capital gain tax revenue is accounted for by electronic registration. Electronic registration has 19.4% impact in the changes that occur in the capital gain tax of Nigeria.

**Test of Hypothesis Using SPEARMAN RANK CORRELATION**

*H<sub>02</sub>: Electronic tax filing does not have any significant relationship with Capital Gains Tax revenue in Nigeria.*

**Table 4.3.2.2a: Correlation Analysis between Electronic tax filing and Capital Gains Tax in Nigeria**

**Correlations**

		Capital_Gains_Tax	Electronic_Filing
Spearman's rho	Capital_Gains_Tax	1.000	.380**
	Correlation Coefficient		
x			
	Sig. (2-tailed)	.	.000
Electronic_Filing			
	N	156	156
	Electronic_Filing	.380**	1.000
	Correlation Coefficient		
	Sig. (2-tailed)	.000	.
	N	156	156

\*\* . Correlation is significant at the 0.000 level (2-tailed).

**Source: SPSS Output Version 25.0**

The Table above reveals that the Spearman-Rho Correlation coefficient is 0.380. This indicates a weak but positive linear relationship between capital gain tax revenue and electronic filing. The p-value is less than 0.05 means that the test is significant. A significant relationship exists between capital gain tax revenue and electronic filing. Following this finding, the study concludes that there is a significant relationship between capital gain tax revenue and electronic filing. Therefore, null hypothesis is rejected.

**Test of Hypothesis Using Linear Regression**

**Regression Model 2:  $CGT = \beta_0 + \beta_1 * \text{Electronic Filing} + \mu_1$**

**Table 4.3.2.2b Regression Analysis of the effect of Electronic Filing on Capital Gain Tax Revenue in Nigeria**

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.406	.359		3.911	.000
	Electronic_Filing	.615	.083	.514	7.446	.000

a. Dependent Variable: Capital\_Gains\_Tax

**Source: SPSS Output Version 25.0**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.514 <sup>a</sup>	.265	.260	.60692

a. Predictors: (Constant), Electronic\_Filing

**Source: SPSS Output Version 25.0**

The regression coefficient  $\beta_1$  is 0.615 with a p-value of 0.000, and the constant  $\beta_0$  is 1.406 according to the coefficient table. Rejecting the null hypothesis is necessary since the p-value is less than 0.05. This suggests that capital gain tax and electronic filing are significantly correlated. Capital gain tax was significantly impacted by electronic filing. With a coefficient of regression of 0.615, Nigeria's capital gain tax revenue will fluctuate by 0.615 units for every unit change in electronic filing.

According to Table 4.3.2.8c, the model summary table, the R Square is 0.265 (26.5%). This is an indication of the regression model's fitness. The proportion that the independent variable had an impact on the dependent variable is estimated. This indicates that the electronic filing accounts for 26.5% of the variation (changes) in capital gain tax revenue. The impact of electronic filing on modifications to Nigeria's capital gain tax is 26.5%.

## 5.0 DISCUSSION OF FINDINGS

The degree and direction of the association between the predictor variables (electronic registration and filing) and the measures of tax revenue (capital gains tax) were taken into consideration when testing the hypotheses. It is crucial to talk about the results and how they connect to the evaluated literature in the following ways:

### **Electronic Tax Registration and Capital Gains Tax in Nigeria**

As can be seen from Table 4.3.2.1g above, the Spearman Rho Correlation coefficient is 0.284. This suggests that the revenue from capital gains taxes and electronic registration have a weak but positive linear connection. The test is significant if the p-value is less than 0.05. Revenue from the capital gains tax and electronic registration are significantly correlated. The study comes to the conclusion that there is a strong correlation between capital gain tax revenue and electronic registration after reaching this conclusion. Consequently, the null hypothesis is disproved.

The constant  $\beta_0$  is 1.859 and the regression coefficient  $\beta_1$  is 0.504 with a p-value of 0.000, according to the coefficient table 4.3.2.2gi. Rejecting the null hypothesis is necessary since the p-value is less than 0.05. This suggests that capital gain tax and electronic registration are significantly correlated. Capital gain tax was significantly impacted by electronic registration. With a coefficient of regression of 0.504, Nigeria's capital gain tax income will change by 0.504 units for every unit change in electronic registration.

According to Table 4.3.2.2gii, the model summary table, the R Square is 0.194 (19.4%). This is an indication of the regression model's fitness. The proportion that the independent variable had an impact on the dependent variable is estimated. This indicates that electronic registration accounts for 19.4% of the variation (changes) in capital gain tax revenue. The impact of electronic registration on Nigeria's capital gain tax changes is 19.4%.

Therefore, this analysis concludes that capital gain tax and electronic registration have a substantial favorable relationship. This is consistent with the findings of Oketa et al. (2021), who used a quantitative cross-sectional survey to examine the impact of the electronic tax system on internally produced revenue in the Nigerian emerging economy. The study's findings indicate that Ebonyi State's internal revenue generation and, consequently, the Nigerian developing economy are impacted by electronic tax registration.

### **Electronic Tax Filing and Capital Gains Tax in Nigeria**

The Spearman Rho Correlation coefficient, as shown in Table 4.3.2.1h above, is 0.380. This suggests that the revenue from capital gains taxes and electronic filing have a weak but positive linear connection. The test is significant if the p-value is less than 0.05. There is a strong correlation between electronic filing and capital gain tax income. The study comes to

the conclusion that there is a substantial correlation between capital gain tax revenue and electronic filing after reaching this conclusion. Consequently, the null hypothesis is disproved. The constant  $\beta_0$  is 1.406 and the regression coefficient  $\beta_1$  is 0.615 with a p-value of 0.000, according to the coefficient table 4.3.2.2hi. Rejecting the null hypothesis is necessary since the p-value is less than 0.05. This suggests that capital gain tax and electronic filing are significantly correlated. Capital gain tax was significantly impacted by electronic filing. With a coefficient of regression of 0.615, Nigeria's capital gain tax revenue will fluctuate by 0.615 units for every unit change in electronic filing.

According to Table 4.3.2.2hii, the model summary table, the R Square is 0.265 (26.5%). The regression model's fitness is shown by the R square. The proportion that the independent variable had an impact on the dependent variable is estimated. This indicates that the electronic filing accounts for 26.5% of the variation (changes) in capital gain tax revenue. The impact of electronic filing on modifications to Nigeria's capital gain tax is 26.5%.

Based on these results, the study comes to the conclusion that value-added tax income and electronic tax filing have a substantial beneficial association.

This result is consistent with a research by Ajayi and Oyeniyi (2021) that used ANOVA for data analysis to examine the effects of electronic filing on the generation of tax revenue (tax revenue, oil revenue, and non-oil revenue) in Nigeria. The outcome demonstrates that oil tax revenue was significantly impacted by electronic tax filing.

## 6.0 CONCLUSION

The study draws the following conclusions from the test of hypotheses results:

Nigerian tax revenues are significantly positively correlated with electronic taxation.

If effectively utilized and executed, there is potential for computerized tax systems to increase tax collections in Nigeria.

## 7.0 RECOMMENDATIONS

Based on the conclusions enumerated above, the researcher hereby recommends as follows:

1. FIRS to engage in a more aggressive awareness campaign on the electronic tax system until a good percentage of taxpayers become aware of the existence and availability of online solutions.
2. This work especially the responses to the survey questionnaire has revealed that most staff of the service are not so knowledgeable about the use of electronic taxation for registration, filing, and payment of capital gains tax.
3. Based on the above, the service will need to do more training in the area of electronic taxation usage for capital gains tax administrative processes.
4. Proper training and educational programs on the electronic tax services and their operationalization should be carried out by the FIRS consistently both to taxpayers and staff of the service.
5. In addition, the FIRS should adopt strategies that will assist in minimizing the cost of compliance in the usage of the electronic solution by taxpayers as well as increase the ease of use of the electronic tax system.
6. The Electronic tax system introduced should have a mechanism for feedback from users to give room for improvements and subsequent upgrades.

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