



THE IMPACT OF ELECTRONIC TAX PAYMENT SYSTEM ON TAX REVENUE IN NIGERIA: THE MODERATING ROLE OF TECHNOLOGY

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Abstract: Government quest on how to come up with alternative ways of increasing public revenue in order to meet up with its expenditure bill as a result of the fluctuation in oil price globally cannot be over emphasized. This quest for alternative ways to increase public revenue necessitated this study. This study investigated the relationship between electronic tax payment system and tax revenue of the Federal Inland Revenue Service (FIRS) and Rivers State Internal Revenue Service (RIRS). The sample size for the study consist of two hundred and eighty (280) staff of FIRS and RIRS in Rivers State out of nine hundred and thirty eight (938) staff of the Revenue Services using Taro Yamane formula for sample size determination of 1967. Primary data on electronic tax payment system and tax revenue were collected from respondents using the questionnaire instruments. Data were analyzed using descriptive and Pearson Correlation Coefficient Statistical tools with the aid of Statistical Package for Social Sciences (SPSS) version 23.0. The findings at 0.05 level of significance reveals that e – payment system has a positive and a moderate relationship with companies income tax yield ($r = 0.586^{**}$) and capital gains tax yield ($r = 0.545^{**}$). Based on the findings, it was concluded that electronic tax payment system has significant relationship with tax revenue. Therefore, it was recommended that the tax authorities should put in place measures as to increase the number of people using electronic tax payment system as this will enhance tax compliance. The tax authorities should ensure that the challenges facing electronic tax payment system are handled as to increase tax revenue for both the state and federal government. Finally, improvement in technology is recommended because technology was identified to have moderating influence between electronic tax payment system and tax revenue.

Keywords: Electronic Tax payment System, Companies Income Tax, Capital Gains Tax, Tax Revenue

I. Introduction

The political, economic and social development of any country depends on the amount of revenue generated for the provision of infrastructure in that given country. The Nigerian tax system is lopsided and dominated by oil revenue. Oil and gas are critical to Nigeria's economic and social performance. Oil alone accounts for 40 percent of the country's GDP, 70 percent of budget revenues, and 95 percent of foreign exchange earnings. Nigeria's

dependence on petroleum is much greater than that of many other major producing countries. According to Statistics from the Central Bank of Nigeria (2000), oil and gas exports accounted for more than 98 percent of export earnings and about 83 percent of federal government revenue, as well as generating more than 40 percent of its GDP. It also provides 95 percent foreign exchange earnings. Sylva (2021), in his lecture states that oil and gas

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sector accounts for about 10 per cent of Nigeria's Gross Domestic Product (GDP) and crude oil exports represents about 86 per cent of total export earnings, while the actual government revenue from the sector is 40 per cent. He further stated that oil and gas occupied a central place in Nigeria's development equation, being a big producer and marketer of the products. While Akintayo (2022), assert that the oil and gas sector still accounts for 80 percent of Nigeria's total national revenue despite crude oil theft. All these points to the fact that Nigeria's economy is skewed and can do more through tax revenue. Therefore, a highly lucrative means of generating the amount of revenue needed for providing the necessary infrastructure for our country and to defray its expenditure through tax is no doubt through a well-structured tax payment system. According to Azubike (2009), tax is a major player in every society of the world. The Presidential Committee on National tax policy (2008), assert that, the central objective of the Nigerian tax system is to contribute to the well-being of all Nigerians directly through improved policy formulation and indirectly through appropriate utilization of tax revenue generated for the benefit of the people. Inadequate tax payer stewardship, a multiplicity of taxes, a complicated tax payment system and tax offsetting, a lack of technological exposure, tax evasion, corruption, unstable governments that encourage noncompliance with pertinent tax laws, a lack of information base and poor record keeping, among other problems, have prevented our tax system from achieving these alleged objectives over time. The way we live is being impacted by technology, which is changing everything from normal, everyday tasks to more complicated ones. Every aspect of our lives, including education, entertainment, communication, and business (including taxation), is impacted by technology.

Information technology (IT) is a very important part of tax administration reform because it makes it possible for tax administrators to more effectively gather and analyze data, manage workload and resources pro-actively, encourage cooperative engagement with taxpayers, and standardize the treatment of taxpayers, which makes it easier to apply the law consistently (USAID leadership in public financial management). The effort that gave rise to the now-famous E-tax system today was the use of IT to assist tax administration. As it provides information, education, and support to tax payers, as well as facilitating compliance and administration, the incorporation of information technology in tax administration, also known as E-tax or electronic taxation system, has proven to be a master tool in overcoming the challenges of any tax system. Essentially, it entails automating essential tax procedures. E-tax systems are frequently only considered to be an IT support for taxpayer services. However, it should be evident that E-tax systems go beyond simply informing, educating, and helping taxpayers because of their distinctive features like electronic registration and filing, automatic updates of taxpayer information, etc. Additionally, it ensures lower tax administration expenses. Sixty-six economies had fully adopted electronic tax filing and payment as of 2010 according to the World Bank and PwC Paying Taxes Report 2013. Twenty of them have also embraced the method in the previous seven years. Tax administration at the federal, state, and local levels is the responsibility of the Federal Inland Revenue Board, the State Board of Internal Revenue, as well as Local Government Revenue Committees. The Nigerian government has worked to reform the tax system in a well-organized and coordinated manner through the use of these public boards. One of these is the implementation of the integrated tax administration system, a system for



electronic tax payments that, if done correctly, would improve compliance and solve the tax information and statistics problem. With this new reform, the government hopes to include more businesses and people in the tax system, which will boost tax income and stabilize the economy. However, it is anticipated that the E-tax system will encourage effectiveness, accountability, compliance, as well as stop leaks in the Nigerian tax system. The method will significantly lessen operational costs and the work strain of tax payers. If implemented, e-tax will have a net positive effect on the tax code. It is based on the foregoing, that this study is aimed at investigating the impact of electronic tax payment system on tax revenue in Nigeria. Hypothesizing electronic tax payment system with the measures of tax revenue as companies' income tax yield and capital gains tax yield with technology as moderator variable gave rise to the following hypotheses.

H₀₁ There is no significant relationship between electronic tax payment system and companies income tax yield in Nigeria.

H₀₂ There is no significant relationship between electronic tax payment system and capital gains tax yield in Nigeria.

H₀₃ Technology does not significantly moderate the relationship between electronic tax payment system and tax revenue in Rivers State.

II. Theoretical Underpinning

The study considers theory of planned behaviour to underpin the objective of the study. It assumes both knowledge and acceptance of the theory that this study leverage on.

Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) (Ajzen, 1985, 1991) was developed from the earlier Theory of Reasoned Action (Fishbein & Ajzen, 1975). The two theories share

the assumption that intentions are the immediate antecedents to behaviour. The theory of planned behavior (TPB) is a psychological theory that links beliefs to behavior. According to the theory, an individual's behavioral intentions are shaped by three fundamental factors: attitude, subjective norms, and perceived behavioral control. Additionally developed as an enhancement to the technology acceptance model is the theory of planned behavior (TPB) (TAM). According to the idea, one's attitude, which indicates positive feelings toward engaging in an action, and subjective norms, which represent the belief that other people want the individual to behave in a particular way, together determine behavioral intention. According to the hypothesis, a taxpayer is more likely to file taxes electronically if they have a good attitude about doing so or feel obligated to follow others' views on adopting new technology, especially if they have the appropriate tools, training, and opportunities available to them. The notion of planned behavior, however, has not been deemed adequate by prior researchers as a reliable explanation or forecast for behavior. In relation to the research at hand, the government's decision to adopt the tax payment system could be seen as the result of their positive attitude towards the system, probably due to perceived benefits as well as their perception that other developed countries require them to be a part of the advanced technology in light of their perception that other developed countries require them to be part of the advanced technology in light of their perception that other developed countries require them to be part of the global business. Taxpayers will accept the payment system provided the appropriate resources and facilities, such as internet accessibility, computer instruction, etc., are made available to them, according to another theory used to explain tax payer response.

Conceptual Review



Electronic Tax Payment System

Electronic tax payment system is a system provided by Federal Inland Revenue Service (FIRS) that allows taxpayers to make tax payments either by telephone or online. This system is accessible every day of the week, 24 hours a day. In order to improve tax administration in Nigeria and move away from the current manual method, which is time-consuming and bureaucratic, the FIRS adopted ITAS in 2013 (FIRS, 2015). The project's goal is to fully automate the registration, payment, assessment, debt and credit management, audit and investigation, case management, and return filing operations.

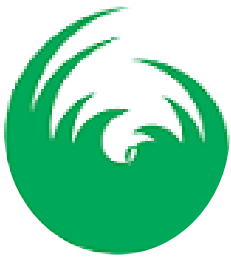
According to Okoye and Ezejiofor (2014), the development of information technology has drawn significant attention to the online tax system, which has an impact on the tax administration system. Since most taxpayers are unaware of their tax structure due to the development of information technologies (IT), tax administrators now have the opportunity to improve the tax administration system. In order to achieve good revenue generation, having a functional self-assessment tax framework and e-taxation are deemed to be acceptable approaches. The government will implement particular steps to ensure compliance in order to make this achievable. The e-taxation system's goal is to give the tax authority access to a database that contains information about taxpayers and their transactions. This would reduce the issue of tax evasion and hence an increase in government tax revenue (Kiabel and Nwikipasi, 2009).

The benefits of an integrated computerized system for taxation in Tanzania were studied by Seelmann, Lerche, Kiefer, and Lucante (2011). They made the case that taxes are frequently the most significant source of state revenue. There have been numerous studies about electronic tax payments around the world. However, adequate tax administration structures and procedures are lacking in

many developing nations. Technology advancements have not impacted the day-to-day operations of tax officers. They came to the conclusion that computerizing tax and revenue authority can help achieve the objective of sound (financial) governance. It enhances the revenue authorities' transparency and accountability. Nevertheless, while reforming and modernizing the tax system is an essential part of improving domestic resource mobilization, such a reform will be sustainable only in conjunction with more profound changes in the administrative and political structure of a state.

Sagas, Nelimalyani and Kimaiyo (2015), did an assessment of the impact of electronic tax register on revenue collection by Kenya Revenue Authority western region, Kenya. Findings from their study indicated that 75% of the respondents were of the opinion that ETR machines have helped to curb cases of tax evasion, 86% of the respondents were of the opinion that ETRs have helped increase revenue collection due to their efficient nature.

Lastly, Ayodeji (2014) looked at the Impact of electronic tax systems on Tax Administration in Nigeria. He added that the government and other important stakeholders in Nigeria turned their attention to the cash earned locally as a result of the declining global fortune caused by the decline in the price of crude oil, the country's main source of wealth. However, the difficult task of increasing internally generated revenue necessitates the adoption of electronic tax systems technologies to drive Tax administration. Researchers found that by ensuring compliance, electronic tax systems play a significant role in the growth of internally generated revenue in Nigeria, which in turn increases productivity and economic activity in the nation. It is a driving force behind increased prosperity and the eradication of poverty in Nigeria and the entire African continent. Their study's main recommendation was that the requisite laws and



regulations be implemented by the relevant authorities in order to lower or eliminate import duties on gear used in information technology, including computers, servers, printers, biometric scanners, and other devices.

Tax Revenue

Tax is the imposition of compulsory levies on individuals or entities by governments. Taxes are levied in almost every country of the world, primarily to raise revenue to defray government expenditures. Ohaka and Agundu (2012) noted that taxation in most countries dates back to primitive society, when members of different societies organized themselves to render free services to their communities, such as cleaning of the environment, clearing of bushes, digging of wells, building barns for the storage of farm produce or the clearing of village centres and vigilante services. These services constituted a form of tax required from every member of the society, and it was compulsory that everyone participated. Property of those who failed to participate were seized and only returned to the owners (defaulters) on payment of agreed fine. Income tax was first introduced in Nigeria in 1904, and this was charged on the income of individuals, not on incomes of incorporated and unincorporated bodies. Tax revenue therefore, is the revenues collected from taxes on income and profits of both individuals and companies, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property etc.

Oladimeji (2017) assert that tax revenue has been in existence even before the amalgamation of Nigeria as a political entity in 1914. Direct Taxes, which were first introduced into the northern part of Nigeria, were successfully administered because the citizens were already used to one form of tax or another before the direct taxes were introduced. The efficient administration of the emirate was a crucial role in the success of the taxes under

the emirate system. Direct tax revenue was introduced to the western territories in 1916 and the eastern provinces around 1927 as a result of the amalgamation of the north and the south in 1914. The enabling legislation and rules were modeled after British law (Ariyo, 1998).

According to Adegbe (2010), taxes are a legal system that has been approved by the government body to collect charges, have direction, manage, and provide policies; laws and regulations for the tax system are then used to ensure that all applicable taxes are collected and paid to the proper authorities. The administration of policy is thus one of the key indicators of a tax system's effectiveness.

Companies Income Tax (CIT)

Companies Income Tax is a source of tax revenue. 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 (Fowler, 2016). The tax is paid by limited liability companies inclusive of the public limited liability companies. Companies Income Tax Act (CITA), Cap C21, LFN 2004 (as amended) is the current enabling law that governs the collection of taxes on profits made by companies operating in Nigeria excluding companies engaged in Petroleum exploration activities. This Tax is payable for each year of assessment of the profits of any company at a rate of 30% (Oladimeji, 2017). It is therefore commonly referred to as corporate tax. CIT was created by the Companies Income Tax Act (CITA) 1979 and has its root from the Income Tax Management Act of 1961. It is one of the taxes administered and collected by the Federal Inland Revenue Service ('FIRS' or 'the Service'). The tax contributes significantly to the revenue profile of the Service.

Nigeria generated a total of N714.40 billion from Company Income Tax (CIT) in the second quarter of 2022, according to data from the National Bureau of Statistics



(NBS). This is Nigeria's highest CIT revenue since 2018 and reflects a growth rate of 29.53% compared to the N551.53 billion earned in Q1 2022 (NBS, 2022). In filing for Companies Income Tax, audited financial statement is statutorily required (Fowler, 2016). This necessitates the engagement of External Auditors to prepare and/or certify the accounts to be submitted. The returns should mandatorily be accompanied by the tax computations and capital allowances computations on qualifying assets of the company. The requirement for filing does not discriminate between small, medium or large taxpayers. Too many taxpayers therefore, CIT is a complicated kind of tax, difficult to understand and to comply with.

Capital Gains Tax

Capital gains tax is also one of the sources of tax revenue in Nigeria. It is a tax chargeable on capital gains arising from the disposal of chargeable assets. According to Obaje (2012), Capital gains tax is a tax chargeable from income derivable from the sale of a capital asset. Gain, in this context, is defined by him as rises in the market worth of assets to a person who neither routinely offers them for sale nor holds them as stock in trade. When an asset increases in value while still in the owner's possession, capital gains may result. Alternatively, capital gains may be realized when an asset is sold or otherwise disposed of. Stocks, shares, securities, real estate, buildings, equipment, and other corporate assets including goodwill and trade secrets are all subject to capital gains tax (Obaje, 2012).

Capital gains tax was introduced in Nigeria through the Capital Gains Tax Act of 1967 and it became effective on 1st April 1967 just before the Nigerian civil war. The provisions of this Act apply to business transactions in the same way as they do to business transactions involving persons. The subject of capital gains tax in Nigeria has recently gained attention. As part of the ongoing fiscal strategy with the aim of achieving certain goals, the

government is periodically tasked with examining the tax position. According to Obaje (2012), the justification for the capital gains tax is that an individual's ability to spend or save money grows as a result of capital gains on assets. A bigger proportional burden is placed on those who pay income taxes and do not pay capital gains tax, particularly those in the higher income brackets (Ayua, 1999).

According to Ojo (2015), a capital asset's difference between its cost price (purchase price plus acquisition costs) and the price at which it is sold indicates whether a capital gain or loss has occurred. When the sales price exceeds the cost of sales, a capital gain results. Furthermore, a capital loss is considered to have happened when the cost of disposal is greater than the selling price. As a result, Kumai (2020) further stated that capital gains tax is only applicable when a gain or profit is realized from the sale of a capital asset.

In the same vein, Oserogho (2014) claims that capital gains tax is a tax owed by the owner of a capital asset on the profit he received from selling the asset over the cost of initially buying and keeping the asset as well as the cost incurred during the asset's disposal. He interprets this to suggest that, in accordance with the provisions of the Capital Gains Tax Act of 2004, capital gains tax is only levied on capital assets. Kumai (2020) defines a capital asset as any type of property, whether it is fixed, circulating, moveable, immovable, tangible, or intangible, and whether or not it is used for a trade or profession.

III. Empirical Review

Monica, Makokha & Namusonge (2017) studied Effects of Electronic Tax System on Tax Collection Efficiency in Domestic Taxes Department of Kenya Revenue Authority (KRA). The main data collection tools were questionnaires that were administered to 130 respondents who included employees of KRA and tax payers. Descriptive & inferential statistics were employed as data analysis



technique. Findings from the study revealed that most tax payers strongly agreed that they were able to fully access and operate iTax system. Employee competence (X3) was a significant predictor of the tax collection efficiency (Y) with the results as ($t = -2.243$, $P = .154 > 5\%$). Taxpayers seeking clarifications on tax issues online is minimal. This study differs from the current study in that it was conducted in Kenya while the current study is on electronic tax payment system and tax revenue in Nigeria.

Owino, Otieno & Odoyo (2017) studied the Influence of Information and Communication Technology on Revenue Collection in County Governments in Kenya. The target population was 864 consisting of 848 revenue clerks and 16 revenue officers from which a Sample size of 86 respondents were selected using stratified random sampling technique. Primary data were collected with the use of questionnaire, and analyzed using percentages, means and regression techniques. The findings showed that a strong and almost a perfect association existed between ICT systems adopted in County Governments and the revenue collection; the application of the information communication technology systems explain up to 91.9% variation in revenue collection efficiency in the county governments. This study differ from the current study because it was carried out in Kenya while, the current study focuses on electronic tax payment system and tax revenue in Nigeria using personal income tax yield and capital gains tax yield as measures of tax revenue.

Rasheed (2017) studied tax administration and revenue generation: A perspective of Ogun State internal revenue service. The study employed a survey research design. The population of the study was the entire staff of the Ogun State Internal Revenue Service which totaled 93 in number. A sample size of 70 staff was selected using a systematic sampling technique. A primary method of data collection was sought for in eliciting information from the

respondents. The collected data was analyzed by both descriptive and inferential statistics. The result revealed that, in Ogun state, tax administration did not significantly relate with the amount of revenue generated ($r = 0.165$). Furthermore, this research work showed that tax evasion and avoidance significantly affected the revenue generation in Ogun State ($t = -2.474$, $sig < 0.05$). In view of the findings, the study concluded that there is no significant relationship between the tax administration and revenue generation in Ogun State. Therefore, it is recommended that the tax administration in Ogun State should be reviewed and all possible measures should be put in place to reduce tax evasion and avoidance. The current study differs from this study because it focuses on electronic tax system and tax revenue and not tax administration and revenue collection.

Enejo & Gabriel (2014) in their study “Taxation and Revenue Generation: An Empirical Investigation of Selected States in Nigeria”. The study employed both primary and secondary sources of data. Using a survey research design, both descriptive and regression analysis were carried out on the data. Findings from the study revealed that taxation has a significant contribution on revenue generation, taxation has a significant contribution on Gross Domestic Product (GDP) and tax evasion and tax avoidance have a significant effect on revenue generation in Nigeria. The study focused on taxation and revenue generation unlike the current study.

Alake & Olatunji (2012) carried out a study on the Impact of Electronic Taxation on Tax Evasion and Avoidance (A Case Study of Nigerian Banks). The study examined the impacts of electronic taxation on tax avoidance and evasion in Nigeria. The sample for their study was taken from Ekiti State of Nigeria focusing on some banks and the Board of Internal Revenue of the state. They administered well-structured questionnaires to get responses from the



target respondents and they used standard deviation to test the research hypotheses. The results of their findings led to the rejection of the hypotheses that electronic taxation does not have significant impact on tax avoidance and evasion in Nigeria and consequently the alternative hypothesis was accepted and the study concluded that embracing electronic taxation in tax administration in Nigeria will significantly reduce the incidences of tax evasion and avoidance in the Country.

IV. Methodology

This study investigates the impact of electronic tax payment system on tax revenue in Nigeria: The moderating effects of technology. The study adopted the survey research design. This method was considered appropriate as it is useful for the study of non-observable events such as opinions, attitudes, preferences or dispositions. The population of the study consists of the twenty six (26) branches of both Federal Inland Revenue Service (FIRS) and Rivers State Internal Revenue Service (RIRS) (FIRS

11 & RIRS 15) operating in Rivers State with nine hundred and thirty eight (938) staff as respondents. The sample size of two hundred and eighty (280) was determined using Taro Yamane’s formula of 1967 for sample size determination as adopted by Baridam (2001). Primary data collection method were adopted in this study. Primary data involves the administration of questionnaire instruments to the respondents. The method of collecting data in this study could be done through administering questionnaires through mail, personally, online, researchers representative etc. In this case the researcher opted to administer questionnaires personally with the aid of two (2) research assistants. Thus the primary source in this study was the administration of questionnaire to the staff of FIRS and RIRS under study. Pearson Product Moment Correlation Coefficient analytical technique was used and facilitated by Statistical Package for Social Sciences (SPSS) version 23.0.

V. Results and Findings

Table 1: Analysis of the Response of the Sample Respondent

Numbers	Questionnaire	Percentage (%)
No. Sent out	280	100%
No. Returned	228	81.4%
No. Not Returned	52	18.6%

Table 1 shows the distribution and collection of questionnaire sent to the respondents. It was shown that 280 copies of questionnaires were distributed to the respondents representing 100%. 228 copies of questionnaires representing 81.4% were correctly filled and successfully collected from the respondents; however, 52 copies of questionnaires representing 18.6% were

wrongly filled and therefore not collected. However, the researcher used the 228 copies correctly filled questionnaires to represent 100% as a basis for the analysis.

The range/levels of association as well as analytical extent and direction of relationship are presented in Tables 2, 3, 4 and 5

Table 2: Relationship/ Descriptive Levels of Relationship

Range of r values	Descriptive Level of r
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±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

Test of Hypotheses 1

Ho₁ There is no significant relationship between electronic tax payment system and companies income tax yield in Nigeria.

Table 3: Correlation Analysis on the Extent and Direction of the Relationship between Electronic Tax Payment System and Companies Income Tax

Correlations

			Electronic Tax Companies	Tax Companies
			Payment System	Income Tax Yield
Electronic Tax Payment System	Pearson Correlation		1	.586**
	Sig. (2-tailed)			.000
	N		228	228
Companies Income Tax Yield	Pearson Correlation		.586**	1
	Sig. (2-tailed)		.000	
	N		228	228

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the correlation analysis on the extent and direction of the relationship between electronic tax payment system and companies income tax yield. It showed the correlation coefficient of $r = 0.586^{**}$ with the significant/probability value = 0.00 less than 0.05 level of significant. From the classification in table 2, the value is moderate indicating a strong relationship between electronic tax payment systems and companies income tax yield. Also, the correlation coefficient is positive which

indicates that increase in companies’ income tax yield is associated with an increase in electronic tax payment system. Therefore, the researcher concludes that there is a significant relationship between electronic tax payment system and companies income tax yield in Nigeria.

Test of Hypotheses 2

Ho₂ There is no significant relationship between electronic tax payment system and capital gains tax yield in Nigeria.



Table 4: Correlation Analysis on the Extent and Direction of the Relationship between Electronic Tax Payment System and Capital Gains Tax Yield

		Electronic Tax Payment System	Capital Gains Tax Yield
Electronic Tax Payment System	Pearson Correlation	1	.545**
	Sig. (2-tailed)		.000
	N	228	228
Capital Gains Tax Yield	Pearson Correlation	.545**	1
	Sig. (2-tailed)	.000	
	N	228	228

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the correlation analysis on the extent and direction of the relationship between electronic tax payment system and capital gains tax yield. The table showed a correlation coefficient of $r = 0.545^{**}$ with a correspondent significant/probability value of 0.000, from the classification of r value in table 2, the value is moderate. Also the correlation coefficient is positive which indicate that an increase in capital gains tax yield is

associated with an increase in electronic tax system. Thus the analysis from table 2 shows that there is a moderate positive relationship between electronic tax payment system and capital gains tax yield.

Test of Hypotheses 3

Ho₃ Technology does not significantly moderate the relationship between electronic tax payment system and tax revenue in Nigeria.

Table 5: Partial Correlation Analysis on the Impact of Technology on the Relationship between Electronic Tax Payment System and Tax Revenue

		Electronic Tax Payment System	Tax Revenue	Technology
-none ^a	Electronic Tax Payment Correlation	1.000	.714	.620
	System Significance (2-tailed)	.	.000	.000
	Df	0	226	226
Tax Revenue	Correlation	.714	1.000	.533



		Significance (2-tailed)	.000	.	.000
		Df	226	0	226
	Technology	Correlation	.620	.533	1.000
		Significance (2-tailed)	.000	.000	.
		Df	226	226	0
Tech.	Electronic Tax Payment System	Correlation	1.000	.577	
		Significance (2-tailed)	.	.000	
		Df	0	225	
	Tax Revenue	Correlation	.577	1.000	
		Significance (2-tailed)	.000	.	
		Df	225	0	

a. Cells contain zero-order (Pearson) correlations.

Table 5 shows the partial correlation analysis on the impact of technology on the relationship between electronic tax payment system and tax revenue. It was shown that a strong, positive significant relationship exist between electronic tax payment system and tax revenue ($r = 0.714$, $PV = 0.000 < 0.05$). Analysis in table 5 also show that technology had a significant and direct positive relationship with electronic tax payment system ($r = 0.620$ $PV = 0.000 < 0.05$) and with tax revenue ($r = 0.533$, $PV = 0.000$). The positive r values indicate that: tax revenue improves as the electronic tax payment system improves; also tax revenue increases with an increase in technology.

Decision Rule for Partial Correlation

The difference between the Zero Order Partial Correlation (ZPC) and the Controlled Partial Correlation (CPC) > 0.01 , conclude a significant moderating influence.

Zero Order Partial Correlation (ZPC) = 0.714, Controlled Partial Correlation (CPC) = 0.577. The difference between the Zero Order Partial Correlation (ZPC) and the Controlled Partial Correlation (CPC) ($0.714 - 0.577$) = $0.137 > 0.01$ therefore the researcher rejects the null hypothesis and conclude that technology significantly moderate the relationship between electronic tax payment system and tax revenue.

VI. Discussion of Findings

The test of hypotheses was done using primary data obtained from the respondents of the staff of the sampled FIRS and RIRS. The extent and direction of the



relationship between the predictor variables electronic tax payment system and the measures of tax revenue (companies' income tax and capital gains tax) were determined. Thus it is imperative to discuss the findings and relate them to the literature reviewed as follows.

The test of hypotheses one (H_{01}), found that there is a positive moderate relationship between e – tax payment system and companies income tax yield as shown in table 3 with the correlation coefficient value of $r = 0.586^{**}$ significant at $p_v = 0.00 < 0.05$. Hence the conclusion that there is a significant relationship between e – tax payment system and companies income tax yield. This finding is in line with the study of Monica, Makokha & Namusonge (2017) who studied the effects of electronic tax system on tax collection efficiency in domestic taxes department of Kenya Revenue Authority (KRA). Findings from the study revealed that most tax payers strongly agreed that they were able to fully access and operate iTax system.

The test of hypotheses two (H_{02}), found that there is a moderate relationship between e – tax payment system and capital gains tax yield as shown in table 4 with the correlation coefficient value of $r = 0.545^{**}$ significant at $p_v = 0.00 < 0.05$. Hence, the conclusion that there is a significant relationship between e – tax payment system and capital gains tax yield. This is in line with the study of Enejo & Gabriel (2014) whose study is on Taxation and Revenue Generation: An Empirical Investigation of Selected States in Nigeria". Findings from the study revealed that taxation has a significant contribution on revenue generation, taxation has a significant contribution on Gross Domestic Product (GDP) and tax evasion and tax avoidance have a significant effect on revenue generation in Nigeria.

VII. Conclusion and Recommendations

The study empirically examined the impact of electronic tax payment system and tax revenue in Nigeria using a

sample size of two hundred and eighty (280) respondents determined using Taro Yamane's formula of 1967 out of nine hundred and thirty eight (938) staff of FIRS and RIRS in Rivers State, Nigeria. The dependent variable was measured by companies' income tax and capital gains tax, while the independent variable is the electronic tax payment system. The study was anchored on the Theory of Planned Behaviour (TPB) to underpin the objective of the study. It assumes both knowledge and acceptance of the theory that this study depend upon. Three hypotheses were postulated in this study. Based on the test of the hypotheses, the following conclusion were drawn:

That there is a significant relationship between electronic tax payment system and tax revenue in Nigeria. Based on the foregoing, the study makes the following recommendations:

1. The tax authorities should put in place measures as to increase the number of people using electronic tax payment system as this will enhance tax compliance.
2. The authorities should ensure that the challenges facing electronic tax payment system are handled as to increase tax revenue for both the state and federal government.
3. Improvement in technology is recommended because technology was identified to have moderating influence between electronic tax payment system and tax revenue.



REFERENCE

Adegbe, F. F. (2010): Customs and excise duties contribution towards the development and growth of Nigerian economy II. *European Journal of Economics, Finance and Administrative Sciences*, 29, 14 -18

Akintayo O. (2022). Oil exports account for 80% total national revenue. Retrieved from www.punchng.com

Alake, S.F. & Olatunji, V. A. (2012). Impact of electronic taxation on tax evasion and avoidance. (A Case Study of Nigerian Banks). *International Journal of Current Research in Multidisciplinary (IJCRM)*, 2(2), 19-26

Ariyo, A. (1998): Productivity of the Nigerian Tax System: 1970 to 1990, *African Economic Research Consortium*, Regal Press Kenya Ltd, Nairobi, Kenya.

Ayodeji, O. E (2014). Impact of ICT on Tax Administration in Nigeria Computer Engineering and Intelligent Systems, 5(8), 26-29

Ayua, I. A. (1999). *The Nigerian Tax Law*. Ibadan: Spectrum Law Publishing.

Azubike, J.U.B., 2009. *Challenges of tax authorities, taxpayers in the management of tax reform processes*. Niger, Account. 42(2): 36-42. Books Ltd.

Baridam, D. M. (2001) *Research methods in administrative sciences*, Port Harcourt: Sherbrooke Associate Revised Edition).

Central Bank of Nigeria Statistical Bulletin 2017 (www.cbn.gov.ng).

Enejojo, S.S. & Gabriel, T. (2014). Taxation and revenue generation: An empirical investigation of selected States in Nigeria. *Journal of Poverty, Investment and Development*, 4, 102-115.

Federal Inland Revenue Services (2015)

Fowler B. (2016). Understanding Companies Income Tax. *The Guardian Nigeria News, September, 01*

Kiabel, B.D. & Nwipasi, N.N. (2009). *Selected Aspects of Nigerian Taxes*. Springfield Publishers Ltd, Owerri.

Kumai N.G. (2020). Effects of Capital Gains Tax on Total Tax Revenue and Economic Growth in Nigeria. *International Journal of Advanced Academic Research, Social and Management Sciences* 6 (4)

Monica, F.W., Makokha E.N. & Namusonge, G.S. (2017). Effects of electronic tax system on tax collection efficiency in domestic taxes department of Kenya Revenue Authority (KRA), Rift Valley Region. *European Journal of Business and Management*. 9(17).

51-19 National Bureau of Statistic (2022): www.nigerianstat.gov.ng.

Obaje E. E. (2012). Capital Gains Tax in Nigeria. *Canadian Social Science*, 8(3) 87-93

Ohaka J. and Agundu P.U.C. (2012). Tax Incentives for Industry Synergy in Nigeria: A Pragmatic Proprietary System Advocacy. *An International Multidisciplinary Journal, Ethiopia*, 6(3),

Ojo, O.V. (2015). Contractual Option Interests and Capital Gains Tax in Nigeria. Retrieved from Capital%20Gains%20Tax/CONTRACTUAL%20OPTION%20INTERESTS%20AND%20CAPITAL%20GAINS%20TAX%20IN%20NIGERIA%20_%20Viyonlaw%20Blog.htm

Oladimeji, O.J. (2017). *Tax Revenue and Economic Growth in Nigeria*. Being an M.Sc. Dissertation Submitted to the Department of Accounting, Banking and Finance, Faculty of Management Sciences, Delta State University, Asaba Campus.

Okoye, P.V.C., & Ezejiolor, R. (2014). The impact of e-taxation on revenue generation in Enugu, Nigeria. *International Journal of Advanced Research*, 2(2), 449-458.



Oserogho, E.O. (2014). Capital Gains Tax and You. *An online Article Retrieved from* [Capital%20Gains%20Tax/108-capital-gains-tax-you.htm](http://www.cirdjournal.com/Capital%20Gains%20Tax/108-capital-gains-tax-you.htm).

Owino H.O.D., Otieno S. & Odoyo F.S. (2017). Influence of Information and Communication Technology on Revenue Collection in County Governments in Kenya: A Comparative Study of Migori and Homa Bay County Governments. *International Journal of Recent Research in Commerce Economics and Management*, 4(1), 66 - 96

Presidential Committee on National Tax Policy (2008) “Draft Document on the National Tax Policy”. Available on: <http://www.scribd.com/doc/10063735/National-Tax-Policy>- Draft Updated. Accessed 25/09/22.

Rasheed O. A. (2017). Tax Administration and Revenue Generation: A Perspective of Ogun State Internal Revenue Service. *International Journal of Innovative Finance and Economics Research*, 5(1):11-21

Sagas C. C., Nelimalyani M. & Kimaiyo E. K (2015). An assessment of the impact of electronic tax register on revenue collection by Kenya Revenue Authority Western Region, Kenya. *Zenith International Journal of Business Economics & Management Research*, 5(4), 111 - 118

Seelmann, J., Lerche, D., Kiefer, A. & Lucante, P. (2011). Benefits of a computerized integrated system for taxation: iTax case study. A handbook for practitioners based on GIZ tax sector experience in Tanzania and the Philippines http://www.taxcompact.net/documents/ITC_iTax-case-study.pdf

Sylvia T. (2021). Enhancing Digital Technology in Oil and Gas Sector of Nigeria for national Development. The Graduation Lecture of the National College Course 29. *The Guardian News Paper*.