

# An empirical investigation into the relationship between electronic tax management system and tax revenue collection efficiency in selected states in southwest, Nigeria

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## ABSTRACT

Tax revenue generation in Nigeria has received contemporary discuss and debate in accounting literature and this has aroused great concern for the attainment of sustainable development. The attainment of revenue goals have been adduced to the fact that many issues and challenges faced are multiplicity of taxes, non-availability of database, difficulty in keeping proper track records of tax payers or defaulters, complexity in tax compliance and collection and non-payment of tax refunds amongst others. The study investigated the effect of electronic tax management system on tax revenue collection efficiency. The survey research design was adopted for the study and total enumeration sampling technique was adopted. A total of 2670 copies of structured questionnaires were distributed to respondents across the three selected states to illicit responses while 2199 copies were retrieved back which accounted for 82.4% response rate. Reliability ranged between 0.7 and 0.9. Data were obtained through the use of a well-structured questionnaire. Descriptive and inferential (multiple regression) statistics were used for data analysis. The findings revealed that electronic tax management system measured by Perceived ease of use, internet payment system, mobile payment system and electronic billing machine had a significant impact on the simplicity of filing tax return of tax payers (Adj R<sup>2</sup> = 0.113, F-stat = 68.343, p < 0.005). The study concluded that electronic tax management system impacted tax revenue collection efficiency. The study recommended that tax policy makers should ensure that the electronic tax system is designed in such a way that it will make the filing of tax return very simple and will motivate tax payers to pay their taxes and skillful personnel should be made to be in charge of the tax management system.

## ARTICLE INFO

### Keywords:

Electronic Tax Management System, Simplicity of Filing Tax Returns, Tax Revenue Collection Efficiency, Tax Revenue Generation

### Article History:

Received: 21 Apr 2022

Accepted: 18 May 2022

Available Online: 05 Jun 2022



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## 1. INTRODUCTION

The world all over is becoming automated and as such, there is need for improvement of tax administration. The manual system of revenue collection has been faulted because it makes the process cumbersome to have an audit trail of the efficiency of revenue collection received by the Tax Authorities (Federal Inland Revenue Service (FIRS) and State Internal Revenue Services (SIRS)). The unprecedented advancement in computer technology over the last 30 years has resulted in computer taking over several roles that were once occupied by humans. Many people, businesses, government parastatal and agencies of the government have since adopted the use of computer systems and internet in their business transactions in order for them to stay abreast of the competition and reduce the prevalent human drudgery. In Nigeria, tax administration is confronted with complex multidimensional problems. Ola (2001) explained that revenue collected from income tax of individual and entities tend to be too low because of low tax literacy, poor relationship between tax authorities and taxpayers, insufficient number of qualified and competent accountant amongst the staff of tax authorities. The use of tax personnel who are untrained and also unqualified, lack required skills on how to utilize information available for the assessment and calculating tax in a best suitable manner (Ayodeji, 2014). The dysfunction in collection system and tax administration, multifaceted statute and apathy of taxpayers because of absence of utilities enjoyed in turn for their tax collected. The general opinion of the taxpayers is that the rich and wealthy individuals in the country do not pay tax; this has made the situation grave. Generally speaking, it is very hard to distinguish between tax matters from financial issues since the problem was typically borne under a single consistent caption. It is also viewed as a process of determining the legitimate position laborious and difficult (Ola, 2001).

Ajayi and Yidiat (2021) opined that electronic tax filing have a great impact on revenue generation. The potentials that are associated with this system are great and should be harnessed to improve tax revenue generation. They submitted that for taxes to be generated to finance some of the economic activities in the Nation that will bring about growth and development, then a possible way to achieve this is by exploring the electronic tax filing system which had not been given

much attention to in the past. The problem of tax administration as well as collection can be said to be as a result of; Poor staffing system, dysfunctional legal framework (obsolete laws), absence of the necessary infrastructure to enhanced revenue generation by tax collectors as well as administrators, often fraught with leakages, manual nature of tax collection processes (Hassan, 2014). The identified problems are responsible for low revenue generation to the country and it reduces the government's ability to provide infrastructure for the public. If these problems continue to exists, the standard of living in the country will continue to decrease. Tax evasion will become more prominent in the country and non-compliance from tax payers will reach a greater level. Furthermore, misused of tax collected, bribery and corruption, incompetent tax personnel and poor proper accounting record will increase noncompliance attitude and facilitate low tax return to the government. The situation led to an act of tax evasion as well as tax avoidance (Soyode & Kajola, 2006). Electronic tax management system is the use of computer systems and networks in the process of tax assessment, collection and administration. This systems allows tax payers to pay their taxes through their banks' online payment portals from the comfort of their homes or work environment since it is an online self-service system. This is a Federal Inland Revenue Service (FIRS) initiative in collaboration with the Nigerian Inter-bank Settlement System (Abdallah, 2006) as also supported by Olaoye & Atilola (2019).

The IMF has long played a lead role in supporting developing countries' efforts to improve their revenue mobilization. Requirements for relieving poverty and improving infrastructure are substantial: achieving the Millennium Development Goals, for instance, may require low income countries to raise their tax-to-GDP ratios by around 4 percentage points. But the quality of measures also matters: increasing revenue by further taxing readily compliant taxpayers can worsen distortions and perceived inequities. Also, reducing reliance on trade taxes can bring real structural gains that outweigh short-term revenue difficulties. More fundamentally still, the centrality of taxation in the exercise of state power means that more efficient, fairer and less corrupt tax systems can spearhead improvement in wider governance relations (Daniel, Keen & McPherson, 2010). E-taxation as it is referred to have come to replace the cumbersome, manual and error prone offline system with an

efficient, secure and an almost error-free online delivery system (Amaefule, Okonya & Amaefule 2012 & Arya, 2012). The role of the electronic system is not only about the ease of assessment, collection and administration but also to improve the efficiency with which revenue is collected. The electronic tax management system has replaced the paper-based tax reporting systems and this promises many benefits but most importantly an increased efficiency of revenue collection (Muwonge, 2011). Despite all the benefits associated with electronic tax management system, there has been a heightened concern over the proceeds from taxation not meeting the target placed by Federal Inland Revenue Service (FIRS) and State Internal Revenue Services (SIRS) and thus the need to investigate the effect of electronic tax management system on tax revenue collection efficiency in south west, Nigeria.

From literature it was observed that the simplicity of filing tax returns was found to be cumbersome and as a result tax payers find it difficult to file their tax returns as and when due. Furthermore, tax evasion was also discovered to be on the increase because tax payers' evaded tax without proper sanctions meted on them which would serve as a deterrent to other erring offenders. This was also highlighted by Obert et al. (2018) when they tried to address the challenges affecting tax collection in the Nigerian Informal Economy and also submitted that it was high time the electronic tax management system be explored. The level of tax compliance that is the level at which tax payers comply with the existing tax laws was seen to be low. It was discovered that voluntary compliance was extremely low and authorities had to enforce compliance with some level of coercion to get to an appreciable level of compliance. The bureaucracy in the administrative ease of tax revenue collection was found to be very difficult as there are no properly laid down administrative processes for the collection of these taxes (Emmanuel & Jaya, 2016). However, the existence of technology has been instrumental in liberating people's lives including work and operations. The challenges that the tax system has battled are mostly due to the nature of tax collection system. This brings about the need for a revolution in the system by going digital. An electronic tax system eases the tax administration process as can be seen evidently in countries that have embraced its use (Awai & Oboh, 2020).

It has been observed that in most countries where tax revenues significantly constitute a major part of the economy's revenue, they have been using Electronic Tax system for years. E-taxation is an electronic self-service platform that enables taxpayers to file their tax returns and conduct other tax services online at their convenience irrespective of their locations once internet is available. According to the World Bank and PWC (2013), 66 economies had fully implemented electronic filing for payment of taxes as at 2010, 20 of them adopted the system in the past 7 years. World Bank and PWC (2015) Paying Taxes Survey in 2005 revealed that taxpayers are able to file tax returns electronically in about 45% of the countries that were surveyed. In 83% of the surveyed countries, taxpayers are able to complete at least one aspect of their tax compliance process electronically. In 2014, more than 24 countries instituted reforms that made it easier or less costly for firms to file returns and pay taxes and the most common feature of tax reforms globally was the introduction of, or enhancement of electronic filing system. Such changes were implemented in 18 countries including Costa Rica, Cyprus, Mozambique, Spain, Vietnam, Serbia, and Zambia, amongst others. Businesses in these countries now file returns electronically thus spending less time on compliance. The system also increased transparency and limited the opportunity for corruption and bribery (Ezomike, 2016).

From the aforementioned the study seeks to investigate empirically the relationship between electronic tax management system and tax revenue collection efficiency with specific objective to look at the relationship between electronic tax management system and simplicity of filing tax returns.

### 1.1 Research Question

To what extent does electronic tax management system impact the simplicity of filing tax returns in South West, Nigeria?

### 1.2 Research Hypothesis

H<sub>01</sub>: There is no significant impact of electronic tax management system on the simplicity of filing tax returns in South West, Nigeria

## 2. LITERATURE REVIEW

### 2.1 Conceptual Model

#### 2.1.1 Tax Revenue Collection Efficiency

Tax collection and administration can be improved through measures such as; shifting towards an electronic taxpayer registration system where a uniform Tax Identification Number (TIN) would apply regardless of whether a tax payer is registering for Personal Income Tax (PIT), Company Income Tax (CIT) or Value Added Tax (VAT), simplify the tax code, since CIT and VAT rates are punitive and lack in-built mechanisms that would enhance self-assessment, there is need to simplify tax laws, forms and procedures developing systems that can enhance access to third party sources of information (Flossy, Elizabeth & Gregory, 2017). Effective and efficient utilization of the collected revenue from the taxes will allowed the government to provide adequate infrastructure that may boost and improved the life quality of its citizen. Tax administration and collection should be efficient and supported to safeguard required tax collection via creating awareness and enlightenment campaign on the important of paying tax, training and retraining of tax personnel and computerization of tax process. Forceful action particularly should be deployed to table the leak of revenue especially on minor goods or services and as well as unpacked items (Emmanuel & Jaya, 2016, Akande & Awe, 2020, Ofurum, Amaefule, Okonya & Amaefule, 2018, Olaoye & Atiloba, 2018, Awai & Oboh, 2020, Maisiba & Atambo, 2016).

#### 2.1.2 Simplicity of filing Tax Return

Governments around the world are increasing the use of information and communication technologies to improve the delivery of public services and the dissemination of public administration information to the public. Thus, the success of e-government depends on the importance that citizen's place on factors such as convenience and usefulness of such services. One prominent type of e-government is the introduction of the e-filing system for income tax. Through this system, taxpayers are able to submit their tax returns electronically to the tax authorities (Azmi & Kamarulzaman, 2010). However, this system is slow in gaining acceptance by taxpayers. For example, in the US, which introduced e-filing in 1986, it is reported that only 52% of its taxpayers used e-filing in 2007 (The Internal Revenue Service, 2007). E-filing is one of the most important and advanced e-government services in providing convenience to taxpayers for tax assessments and payment. E-filing provides many aspects of 'convenience' to taxpayers (that is time to file, place to conduct the filing, ease of use, information searching and online transactions) at a degree that is not available through traditional channels. E-filing also offers flexibility of time and reduces calculation error on the tax return form to the taxpayers. The Federal Inland Revenue Service (FIRS) embarked on an Integrated Tax Administration System (ITAS) project in 2013. It was aimed to improve tax administration in Nigeria and transform the tax compliance process away from the current manual system which is tedious and bureaucratic. The main aim of the project was to automate all core processes around registration, payment, assessment, debt and credit management, audit and investigation, case management, and returns filing. In 2021, the ITAS was replaced with an internally developed tax software called TAXPROMAX.

The e-tax filing system has various features. One of the features of the e-filing system is online submission of tax returns which enables taxpayers to submit their tax returns for different taxes such as Petroleum Profits Tax (PPT), Companies Income Tax (CIT), etc. Once registered, a taxpayer's e-filing account will be created based on the type of taxes and also enable tax payers file returns for the registered taxes. Another feature of the e-filing system is the Electronic Tax Clearance Certificate (e-TCC) processing. Taxpayers can apply for a TCC online, which will be generated by the system. Although hard copies will still be available for collection. A system generated TCC will be just as tenable as the hard copy. Either way, the software allows for TCC verification by third parties online using the TCC number (PWC, 2015).

#### 2.1.3 Electronic Tax Management system

Taxation is the process of assessing, collecting and administering of tax procedure through an electronic medium. According to Che-Azmi and Kamarulzaman (2014), E-tax payment system is one of the ways through which governments globally make use of information and communication technologies to enhance the provision of public services and the circulation of public administration information to the society. Wasao (2014) describes electronic tax system as an online system or channel where taxpayers are able to have access or permit to the platform through the use of internet in order to have access to all the services provided by the tax authority such as the registration for a tax identification number, electronic tax filing of tax returns and application for compliance

certificate, a perfect example of such system is the Electronic taxation system that was rolled out by Federal Inland Revenue Service in Nigeria.

E-taxation was first introduced in 1986 in the U.S.A. In 1987, E-tax Filing was introduced in Australia through its modernization programme by 1993, Canadian taxpayers commenced electronic Filing of tax returns through the E-fills. Also, in 2009, Malaysia, Netherlands & Uganda all introduced e-tax to their taxpayers. In March 2013, Egypt launched electronic payment of tax for its taxpayers, to keep pace with the international trades towards automated payments systems, especially for government services. Nigeria introduced E-tax in 2015 when Federal Inland Revenue Service (FIRS) in collaboration with Inter – bank settlement System (NIBSS) implemented the technology in the Nigeria tax system (Okunowo, 2015). Electronic tax system was introduced by Nigeria Tax Authority to increase revenue collection, tax administration, grant services to the tax payers, reduce costs of compliance and improve tax compliance. It is increasingly replacing paper-based tax system. These systems brought about advantages through faster process, lower costs and increased efficiency. FIRS have a centralized Information Communication Technology (ICT) department that provides support services to try and achieve its goals for achieving increased revenue collection and bring about voluntary compliance by taxpayers (Alade, 2018). Waweru (2013) stated that electronic tax system a web-enabled and secure application system that provides a fully-integrated and automated solution for administration of domestic taxes. Atika (2012) explained that electronic tax system became part of the revenue collection reforms by Kenya Revenue Authority with the objective to improve tax collections and tax efficiency and as a result, tax revenues have been increasing rapidly due to the country's economic development accelerated by the new systems. This thereby brought about the planning and formulation phase of an effective electronic system strategy was done in the Kenya Revenue Authority Corporate plan of 2003 and was implemented in the fourth corporate plan of 2009. Kenya Revenue Authority has a centralized Information Communication Technology (ICT) department that provides support services to try and achieve its goals for achieving increased revenue collection and bring about voluntary compliance by taxpayers (Atika, 2012).

#### 2.1.4 Perceived Ease of Use

Perceived ease of use is the degree to which a person believes that using a technology will be free from effort. In the context of this study, PEOU refers to the extent to which users believe that their continued use of e-government is free of effort. If a system is relatively easy to use, individuals will be more willing to learn about its features and finally intend to continue using it. Studies indicate that perceived ease of use is positively associated with continuance intention in the context of Web-based learning (Chiu & Wang, 2019). Perceived ease of use is different from perceived usefulness. Perceived usefulness refers to the extent to which a person believes that using a particular technology will enhance his/her job performance. In TAM framework, PU is hypothesized to be the direct predictor of behavioral intention to use (BI) of the technology of interest (Park, 2019). Previous studies indicate that PU is positively associated with continuance intention in the context of e-text, instant messaging, mobile service provider, online travel services, e-learning, blog learning, knowledge creation (Chou, Min, Chang, & Lin, 2019).

#### 2.1.5 Internet Payment System

An internet payment system is a way of making transactions or paying for goods and services through an electronic medium, without the use of checks or cash. It's also called an electronic payment system or online payment system. The electronic payment system has grown increasingly over the last decades due to the growing spread of internet-based banking and shopping. As the world advances more with technology development, we can see the rise of electronic payment systems and payment processing devices. As these increase, improve, and provide ever more secure online payment transactions the percentage of cheques and cash transactions will decrease (Sandra, 2021).

#### 2.1.6 Mobile Payment System

A mobile payment is a money payment made for a product or service through a portable electronic device such as a tablet or cell phone. Mobile payment technology can also be used to send money to friends or family members, such as with the applications PayPal and Venmo (Grant, 2021). Many banks have recently adopted technology into their banking apps that allow customers to send money instantly to friends and family members directly from their bank accounts.

Mobile payments are also made on site at stores by scanning a barcode on an app on your phone, accepting payments from convenience stores to large, multi-national retailers. The cost of the purchase may be deducted from a pre-loaded value on the account associated with the particular store, or paid by credit or debit card. Payment information is encrypted during transmission, so it is thought of as being a safer payment method than paying with a debit or credit card. Mobile payments first became popular in Asia and Europe before becoming more common in the United States and Canada. Early on, mobile payments were sent by text message. Later, technology allowed for pictures of cheques to be taken via cell phone camera and sent to the payment recipient. This technology eventually morphed into mobile cheque deposit capabilities for banking apps (Grant, 2021).

#### 2.1.7 Electronic Billing Machine

Electronic Billing Machines (EBMs) enable revenue authorities to monitor formal business transactions and thus offer the potential to improve tax compliance. However, because firms can choose not to issue receipts or issue false receipts, EBMs do not offer truly objective tax reporting and have thus offered limited benefits to tax collection (Steenbergen, 2018). Electronic billing is a bill payment method in which a customer can pay bills electronically over the Internet to an entity or organization. It is widely accepted by many government entities and other organizations. Due to multiple benefits provided by electronic billing, it is one of the most preferred methods of bill payment. There are two approaches used in electronic billing, namely biller direct and bank aggregator. In biller direct, the consumer makes direct payment to the biller, who issues the bills on the website requested. Most biller sites make use of electronic billing providers specialized in electronic billing technology and processes in the payment service. In the bank-aggregator approach, the customer makes payments to the different billers from the conciliator or aggregator site. Most banks provide this model to users (Cowell, 2020). There are many advantages associated with electronic billing. The paperless mode of transaction is an environmentally friendly and less expensive form of bill payment. It is clutter free for both sender and receiver. Unlike traditional billing systems, it is more customer friendly and provides saving of time and effort. Billers only have to focus on the effective dispatch of bills rather than mode of payment. For customers, electronic payment is available 24/7 for access. Ease of tracking past activities or payments is easier with electronic payment for both customers and billers.

#### 2.2 Theoretical Review/Framework

##### 2.2.1 Technology Acceptance Model (TAM)

This theory was developed by Fred Davies in 1989. It was later supported by Bagozzi and Warshaw in 1992. TAM replaces many of TRA's attitude measures with the two technology acceptance measures i.e. ease of use and usefulness. According to Davies (1989), TAM states that an individual's intention towards using a new system is jointly determined by perceived usefulness, the users' "subjective probability that using a specific application system will increase his or her job performance and efficiency" and perceived ease of use (PEOU), "the degree to which the user expects the target system to be free of effort." The effects of external variables (e.g., system design characteristics) on behavioral intention (BI) are mediated by these beliefs. Accordingly, the perceived ease of use also has a direct effect on predicting usage. TAM models might be useful within and across organizations for evaluating applications or technologies, or to make comparisons between user groups or applications. However, TAM has limitations in being applied beyond the work place because its fundamental constructs do not fully reflect the variety of user task environment and constraints. Despite the plethora of literature on TAM, the empirical tests have so far produced mixed and inconclusive results, which vary considerably in terms of statistical significance, direction, or magnitude. Although they are not uncommon in social sciences where human behavior is difficult and complex to explain, the mixed finding not only undermine the precision of TAM, but also complicate efforts for IT practitioners and academicians to identify the antecedents to user acceptance behavior (Ma & Liu, 2004). Accordingly, potential users of technology may not necessarily base their acceptance of and willingness to use new technology on their perceptions of the usefulness of IT and how easy it is to use, although the model does suggest that there may be other external factors which could be responsible for their acceptance of the technology (Ajibade, 2018).

### 2.3 Empirical Review

In Tanzania, Kimathi, Zhang and Hu (2019) researched on the E-tax Filing and payment system using variables such as system quality and perceived security, as well as decomposing important variables like social influence and perceived behaviour control. This study integrates Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) to explain the factors motivating the acceptance of ETFPS in Tanzania. A quantitative method of data analysis was employed. Empirical outcomes of the variables signified the influence of perceived usefulness and perceived ease of use of ETFPS. Perceived usefulness and perceived ease of use significantly influence the users' attitude towards accepting ETFPS, which further affects their behavioural intention. In the study perceived security, mass media influence, and external facilitating condition have a significant impact on the users' behavioural intention. Similar study was conducted in Malaysia by Sritharan and Salawati, (2019), who examined the moderating effect of tax knowledge on the relationship between individual factors and income tax compliance in Malaysia using correlation analysis, multiple regression analysis and hierarchical regression analysis and the study found that individual financial position, referral group, political influence, religiosity and cultural influence have a positive effect on tax compliance behaviour. Besides, tax knowledge has moderated the relationship between individual factor and compliance.

Sarkar, (2019) reviewed the adoption of digital payment system with the aim of developing in Delta Municipality the specific factors which have an impact on users' payment choices and also the discovery of a relation probably between those choices and those of sex, age, level of income or level of education. The study found that show the general dominations of debit cards in all ages and level of income, for each kind of transaction (natural or digital), confirming the raise of plastic money in Greece after capital controls' arrival. Speed, directness and convenience are the characteristics which are necessary to be fulfilled by a means of payment, but also another modern reason and necessity of plastic money is the new tax-free builder regime. Furthermore, loyalty programs that cards provide most of the time are really tempting. A research conducted in Spain by Liébana-Cabanillas, Molinillo and Japutra, (2021) explored the determinants of intention to use peer to peer mobile payment. The research contributed to the body of knowledge on technology by proposing a conceptual model based on the theory of reasoned action, extended with additional mobile payment constructs identified in the study. The study, however, revealed that usefulness, subjective norms, and personal innovativeness have a particularly strong, direct influence on intention to use. The study of Serem, Robert and Phillip (2017) used a quantitative method of analysis to investigate the effect of tax system simplicity on tax compliance among rental income earners in Kenya using Eldoret central business district by adopting an explanatory design, and found that level of income of the rental income earners influenced their level of tax compliance.

### 3. METHODOLOGY

The study made use of both primary and secondary sources of data. Primary source of data employed the survey research design. Primary data used in the study was sourced from respondents that were selected from Lagos State Board of Internal Revenue Service, Oyo State Board of Internal Revenue Service and Ogun State Board of Internal Revenue Service. The secondary source of data was gotten from National Bureau of Statistics Bulletin and this data was used to analyze the trend before and after introduction of electronic tax management (2008 – 2020) for 13 years.

**Table 1.** Population of the study (Questionnaire)

S/N	States	Population of Staff
1	LAGOS	2259
2	OGUN	126
3	OYO	285
	TOTAL	2670

Source: Researcher's Computation as at December, 2021

**Table 2.** Population of the study (Internally Generated Revenue)

S/N	State/Ye	Lagos	Ogun	Oyo
o.	ar			
1	2008	156,093,785,351	5,354,583,416	8,801,537,120

2	2009	177,876,699,849	6,743,458,697	14,430,614,262
3	2010	149,966,383,196	7,917,662,341	10,488,362,233
4	2011	202,761,061,679	10,838,698,403	8,915,603,182
5	2012	219,202,426,843	12,438,765,025	14,598,808,723
6	2013	384,259,410,959	13,777,026,969	15,251,369,563
7	2014	276,163,978,675	17,497,620,787	16,307,233,700
8	2015	268,224,782,435	34,596,446,519	15,663,514,824
9	2016	302,425,091,964	72,983,120,003	18,879,084,132
10	2017	333,967,978,880	74,835,979,001	22,448,338,825
11	2018	382,181,548,627	84,554,199,593	24,635,074,074
12	2019	398,732,246,493	70,922,590,496	26,746,460,236
13	2020	<u>418,988,587,897</u>	<u>50,749,595,850</u>	<u>38,042,733,036</u>
		<u>3,336,873,497,649</u>	<u>451,111,704,986</u>	<u>211,976,582,528</u>

Source: National Bureau of Statistics Bulletin

### 3.1 Model Specification

### 3.2 Operationalization of Variables

$$Y = f(X)$$

$$TRCE = f(ETMS)$$

Where; TRCE= Tax Revenue Collection Efficiency  
ETMS= Electronic Tax Management System

X = ETMS (independent variable)

Y = TRCE (dependent variable)

$$Y = y_1$$

$y_1$  = Simplicity of filing tax returns (SFTR)

$x_1$  = Perceived Ease of Use (PEU)

$x_2$  = Internet Payment System (IPU)

$x_3$  = Mobile Payment System (MPS)

$x_4$  = Electronic Billing Machine (EBM)

$$y_1 = f(x_1, x_2, x_3, x_4)$$

Therefore,

$$SFTR = f(PEU, IPS, MPS, EBM)$$

$$SFTR_i = \beta_0 + \beta_1 PEU_i + \beta_2 IPS_i + \beta_3 MPS_i + \beta_4 EBM_i + \mu_i$$

### 4. RESULTS AND DISCUSSION

The Table presents respondents perception on simplicity of filing tax returns. Majority of the respondents believes that Taxpayers can avoid a maze of taxes, forms and Filing requirement as 48.2% agreed and 50.6% strongly agreed to the assertion. 64.2% agreed that the simplicity of Filing tax helps the taxpayers to better understand the system and reduces the cost of compliance while 35.2% strongly agreed and attested to the fact that it will reduce the compliance cost. Electronic tax filing system affords the tax payers ease, convenience and fast paced filing of returns compared to the old manual system as 42.1% agreed and 57.2% strongly agreed because the manual system was stressful and not easy when compared to the new system of filing tax return that is associated with its simplicity. Tax can be paid from the comfort of the tax payer's home using the electronic tax filing system as 61.3% agreed and supported that fact as it will help them paying taxes from their comfort zones without them going physically to the office to file their tax returns and 38.3% strongly agreed and approved of it. Tax obligations can be assessed accurately using the electronic tax filing system as 52.2% and 46.6% agreed and strongly agreed respectively. On the average respondents were of the view and opinion that electronic tax management system will assist the simplicity of filing tax returns without any hassle.

**Table 3.** Descriptive Response on Simplicity of Filing Tax Return

Simplicity of Filing tax return	SD		D		U		A		SA		Total		
	F	%	F	%	F	%	F	%	F	%	Count	SD	Mean
Taxpayers can avoid a maze of taxes, forms and Filing requirement	2	0.1%	5	0.2%	20	0.9%	1056	48.2%	1110	50.6%	2193	4.49	0.54
The simplicity of Filing tax helps the taxpayers to better understand the system and reduces the cost of compliance	3	0.1%	2	0.1%	9	0.4%	1410	64.2%	773	35.2%	2197	4.34	.51
Electronic tax filing system affords the tax payers ease, convenience and fast paced filing of returns compared to the old manual system	1	0.0%	4	0.2%	10	0.5%	923	42.1%	1255	57.2%	2193	4.56	.52
Tax can be paid from the comfort of the tax payer's home using the electronic tax filing system	2	0.1%	2	0.1%	6	0.3%	1346	61.3%	841	38.3%	2197	4.38	.51
Tax obligations can be assessed accurately using the electronic tax filing system	2	0.1%	11	0.5%	14	0.6%	1145	52.2%	1023	46.6%	2195	4.45	.55

Source: Field Survey, 2022

Note: SDV = Standard Deviation, SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.

#### 4.1 Regression Analysis

**Table 5.** Electronic Tax Management System and Simplicity of Filing tax returnDependent Variable:  
SFTR

Variable	Coefficient	Standard Error	t-test	Prob
Coefficients: Constant	2.072	0.149	13.948	0.000*
PEU	0.136	0.023	5.883	0.000*
IPS	0.127	0.022	5.902	0.000*
MPS	0.144	0.020	7.294	0.000*
EBM	0.128	0.018	7.183	0.000*
R-square	0.113			
Adj- R-square	0.111			
Prob F-stat	0.000			
F-statistic	68.343			

Notes: \*\* and \*\*\* indicates statistical significance at 5 and 1 per cent respectively.

$$SFTR_i = \beta_0 + \beta_1 PEU_{it} + \beta_2 IPS_{it} + \beta_3 MPS_{it} + \beta_4 EBM_{it} + \mu_{it}$$

$$SFTR_i = 2.072 + 0.136_{it} + 0.127_{it} + 0.144_{it} + 0.128_{it} + \mu_{it}$$

The regression analysis results presented showed the causality between Electronic Tax Management System and Simplicity of Filing tax return. The result revealed that all the proxy of Electronic Management System (Perceived Ease of Use (PEU); Internet Payment System (IPS); Mobile Payment System (MPS) and Electronic Billing Machine (EBM) exert a positive effect on simplicity of Filing tax return. This is depicted by the positive signs of the coefficients ( $\beta_1 = 0.136$ ); ( $\beta_2 = 0.127$ ); ( $\beta_3 = 0.144$ ) and ( $\beta_4 = 0.128$ ) respectively. 1 % increase in perceived ease of use will lead to 13.6% increase in Filing of tax return, 1% increase in internet payment system will bring about 12.7% increase in filing of tax return, 1% increase in mobile payment system will bring about 14.4% increase in filing of tax return and 1% increase in electronic billing machine will bring about 12.8% increase in filing of tax return. The Adjusted  $R^2$  which measures the proportion of the changes in the simplicity of Filing tax return as a result of changes in Perceived Ease of Use (PEU); Internet Payment System (IPS); Mobile Payment System (MPS) and Electronic Billing Machine (EBM) depicts that only 11.1% changes in the Simplicity of Filing tax return in South West, Nigeria was attributable to the interactions of the Electronic Tax Management System proxies in the model, while the remaining 88.9% were from other factors not captured in the model.

Based on the probability, F-stat (68.343) = 0.000 is significant at  $p < 0.05$ . It means that Electronic Tax Management System proxies jointly affect the simplicity of Filing tax return in south west Nigeria. Over all, the model used for the study is significantly good enough in explaining the variation on the dependent variable. Hence, the simultaneous effect of the independent variables is significant (prob. F – Stat. = 0.000 < 0.05).

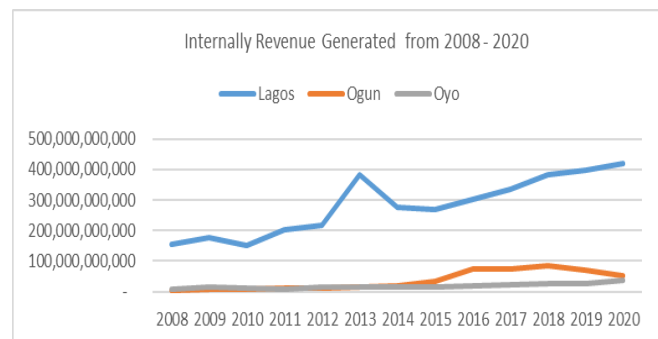
Therefore, the null hypothesis which states that “There is no significant impact of electronic tax management system on the simplicity of filing tax returns in South West, Nigeria” was rejected while accepting the alternate hypothesis and concluded that “There is a significant impact of electronic tax management system on the simplicity of filing tax returns in South West, Nigeria” be accepted.

#### 4.2 Discussion of Findings

The findings of hypothesis one revealed that electronic management system had a positive relationship with simplicity of filing tax return in the sense that an increase in electronic management system proxies will bring about an increase also in the simplicity of filing tax return of tax payers. However, the findings of this study was in tandem with the results of Tanzania, Kimathi, Zhang and Hu (2019) who examined the effect of electronic tax system on revenue collection efficiency of taxes. Their studies revealed that perceived ease of use, internet payment system, mobile payment system and electronic billing machine were all instrumental to the large improvement of the simplicity that was experienced in filing tax return of tax payers in the selected states which improved tax collection efficiency.

In the study of Salawati and Cheuk (2020) that also examined the relationship between E-Tax system and tax collection efficiency also agrees with the results of this study. E-Tax components were responsible for the improvement in the collection efficiency of taxes and filing of tax returns was quite simplified and was not cumbersome and complex. The reasons for this is adduced to the facts that tax payers were made to understand some of the components of the E - Tax system which made it very easy for tax payers to file their tax returns at appropriate time which greatly improved the revenue generation efficiency of taxes.

#### 4.3 Trend Analysis



The result of the trend analysis in this study was used to support the results obtained from the regression analysis of the survey that was carried out. The trend analysis results show the revenue generation efficiency before the implementation of the electronic tax management system and post electronic tax management system. The analysis shows revenue generated before implementation between 2008 and 2014 and then after implementation from 2015 to 2020. The result for Lagos clearly indicated that before the implementation the revenue generated was not as much as after the implementation. After the implementation the revenue generated from taxes kept increasing and this was in tandem with the respondents' response that

the adoption of the electronic tax management system will significantly improve the revenue collection efficiency of the tax authorities. The results for Ogun State were also similar even though the amount generated was not as much as that of Lagos. Nonetheless, the revenue generated was also increasing after the post implementation from 2014 to 2020. However the results for Oyo State although was negative generation before implementation which indicated lower revenue generated but after the post implementation also improved and increased but not as that of Ogun State.

## 5. CONCLUSION AND RECOMMENDATION

Thus, this study concluded that electronic tax management system has a significant positive effect on simplicity of filing tax returns in Nigeria and recommended that tax policy makers should ensure that the electronic tax system is designed in such a way that it will make the filing of tax return very simple as this will motivate tax payers to pay their taxes and skillful personnel should be made to be in charge of the tax management system.

### 5.1 Contribution to future research

The study has contributed in the following areas:

To Empirics: This study methodologically contributed to knowledge through the developed model which shows the effect of electronic tax management proxies on simplicity of filing tax returns.

To Literature: The study's conceptual work has extended the frontiers of knowledge on the effect electronic tax management system have on tax revenue collection efficiency in selected states in South West, Nigeria by introducing some components of the electronic tax management system and revenue collection strategies; also this study examined how the introduction of these components will impact all the proxies of revenue collection efficiency. It also developed a conceptual model that links the two variables together.

To Theory: This study has laid credence to the theoretical framework that has been adopted as it relates to the study and its variables. The theory explains the perceived ease of use and the perceived usefulness of a technology, whether or not it will improve performance and efficiency. The study focuses on the effect of electronic tax management system and Tax revenue collection efficiency and found a positive relationship. Therefore, the existence of electronic tax management system would help improve the tax revenue collection efficiency.

To Accounting Practice: The study investigated the effect of electronic tax management system and tax revenue collection efficiency. To the best of the researcher's knowledge, this study is one of the studies considering the simplicity of filing returns which is a factor that can improve the revenue collection efficiency of taxes by tax payers.

To Academics: The result of this study is useful for the field of academics and academia because it has contributed to existing accounting literature in the field of taxation and even Finance on the relationship that exist between electronic tax management system and tax revenue collection efficiency.

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