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IMPACT OF DIGITALIZATION ON TAX ADMINISTRATION IN ADAMAWA STATE BOARD OF INTERNAL REVENUE YOLA-NIGERIA

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ABSTRACT

The objective of this study is to examine the Impact of Digitalization on Tax Administration in Adamawa State Board of Internal Revenue Yola-Nigeria. The study is a survey in the form of cross-sectional study in which data was collected through questionnaire administered to 187 respondents. Data collected was subjected to percentage analysis and hypotheses were tested using regression analysis at 0.05 level of significance. The result revealed that online tax filling has significant impact on tax administration ($\beta = 0.110$, $t = 0.908$, $p < 0.05$). the study also revealed that online tax registration has positive impact on tax administration ($\beta = 0.709$, $t = 0.872$, $p < 0.05$), furthermore, it also revealed that online tax remittance has impact on tax administration ($\beta = 0.224$, $t = 1.199$, $p < 0.05$). The study therefore, recommends that the management of Adamawa state Board of Internal Revenue should organize training workshops for its taxpayers so that adoption rate of e-tax filing increases; government should improve the infrastructure that supports digitalization coverage across the state for electronic filing to be a success; System availability should be ensured by Adamawa state Board of Internal Revenue who should have its servers upgraded to be able to absorb pressure on e-traffic also government should benchmark their electronic filing services with those of states and countries that are developed in order to make it accessible and easier for tax remittance.

Keywords: *Tax Digitalization, Tax Administration, Board of Internal Revenue*

1.0 Introduction

The administration of taxes is a critical function of any government, providing the revenue needed for public goods, infrastructure development, and social services. Effective tax administration ensures compliance, minimizes evasion, and enhances the efficiency of revenue collection. However, traditional tax systems, characterized by manual processes and study work, have often been plagued by inefficiencies, corruption, delays, and revenue leakages. In recent years, technological advancements have revolutionized various sectors, including tax administration, offering tools for improved efficiency, transparency, and service delivery (Adebisi & Gbegi, 2022).

Digitalization in tax administration refers to the deployment of automated systems, electronic filing, online tax payment platforms, and data analytics to streamline tax processes. Globally, countries have increasingly adopted digital tax solutions to enhance compliance and reduce administrative burdens on both taxpayers and authorities. For instance, the introduction of Integrated Tax Administration Systems (ITAS) and Electronic Tax Filing Systems (e-Tax) has improved revenue generation and reduced fraud in many developing countries (Ogbonna & Ebimobowei, 2023). In Nigeria, the Federal Inland Revenue Service (FIRS) and various state tax agencies, including the Adamawa State Board of Internal Revenue (ASBIR), have embraced digital solutions to modernize their operations. Despite these efforts, challenges such as inadequate infrastructure, limited technical expertise, and resistance to change persist.

When the social contract between governments and the governed is fulfilled, good governance is achieved using modern information technology techniques. Putting in place good welfare facilities and up to-date securities apparatus for citizens is largely dependent on financial strength of that country (Harrison & Nahashon, 2015). Governments need money; how they get this money and whom they take it from are two of the most difficult political issues faced in any modern political economy (Harrison & Nahashon, 2015).

The Adamawa state board of Internal Revenue is one of the bodies in charged with the responsibility of accessing, collecting and accounting for the various taxes to the state and federal government of Nigeria. Over the years, tax administration in Adamawa State Board of Internal Revenue, Yola has been plagued with several limiting factors such as weak administrative lapses and administrative facilities like the evidence of a manually compiled database of tax payers. Manual compilation involves the use of files/ folders for data storage. When records are stored in this manner over a long period of time, retrieval of such records may prove to be very difficult and this results in situations such as tax evasion, tax avoidance, lack of adequate records, corruption and mismanagement on the part of the tax officials, inability to identify all taxable persons and lack of effective mechanism in place to prosecute cases of tax evasion (Ayodeji, 2020).

In spite of the adoption of IT as an institutional measure in tax administration, the problem of poor tax administration still persists. In Adamawa State, corporate taxpayers have not fully embraced the use of Information technology for tax administration and do not take advantage of the available IT platforms to remit their taxes. The fundamental question is that, has the application of IT enhanced performance of tax administration in Adamawa state Board of Internal Revenue, Yola? This is the central problem which the research intends to investigate.

Moreover, the application of digitalization in tax administration supports transparency and accountability, addressing issues of corruption and manipulation in manual systems. According to a study by Abdullahi and Ibrahim (2024), technological interventions such as digital payment platforms and data-driven audit mechanisms have enhanced compliance monitoring in northern Nigerian states. However, barriers including poor digitalization connectivity, inadequate training for tax officials, and low digital literacy among taxpayers continue to hinder the full realization of these benefits.

In respect of the above, few of the studies had so far been carried out to investigate information technology, in terms of online tax filing, online tax registration and online tax remittance on the level of tax administration in terms of tax productivity, planning and implementation, which depicts existence of gap in literature. Although, Thivya and Mathiraj (2023), Umaru, Nasiru and Yusuf (2022), Benaihia, Owino and Tanui (2017), Ondara, Kimani and Josphat (2021), and Harrison and Nahashon (2015) studied the impacts of online tax system in terms of Online Tax Filing, Online Tax Registration and Online Tax Remittance, but it was based on tax compliance. Therefore, this study aimed at investigating empirically the impacts of digitalization on tax administration in Adamawa State Board of Internal Revenue Yola-Nigeria. This study is structured in to sections one to five which covers the foregoing introduction, literature review, methodology, result and discussion and finally conclusion and recommendation respectively.

2.0 Literature Review

This section presents the review of literature on the subject matter as well as discussing the theoretical framework that guide the research.

2.1 Conceptual Clarifications

This section dealt with concept of tax, concept of online tax filling, concept of online tax registration, concept of online tax remittance and concept of tax administration. Which are further discussed below:

2.2 Concept of Tax digitalization

Muhangi (2022) defines tax as a compulsory levied imposed by government (central or local) on the profit, income, wealth or consumption (e.g. sales or value added tax) of an individual or estate through trustee or executor and corporate organization. Auyat (2020) further defines tax as a financial charge or other levy imposed upon a taxpayer (an individual or non-individuals) by a state or functional equivalent of a state, such that failure to pay is punishable by law. Auyat (2020) further defines tax as compulsory contribution from the person to government to defray the expenses incurred uncommon interest of all without reference to special benefit concurred. In summary, tax can be defined as the compulsory contribution levied by a sovereign power on the incomes, profits, goods, services or properties of individuals or corporate persons, trusts and settlements, which when collected, are used for carrying out government functions (Ada, 2022; Auyat, 2020; Muhangi, 2022).

There are several elements of tax including the tax base, tax rate and tax yield (Ofori, 2022). The tax base is the legal description of an object on which tax is imposed or charged which can be the income of the taxpayer, gain from certain activities he engaged in, property or asset owned or some services received (Simiyu, 2020). On the other hand, the tax rate is the proportion of tax base that is payable as tax while tax yield is the total amount of revenue generated from tax (Ramoo, 2021). There are two tax classifications that is the direct versus indirect taxes and the proportional versus progressive loans (Odongo, 2014). The direct taxes are those that affect the individual directly through a deduction from earnings.

In Nigeria, Oseni (2015), concluded that there is no hiding place for tax evaders with the use of this modern digitalization since all potential taxpayers are captured by the system, but the use of information technology (IT) can be catastrophic if carelessly employed by both the tax payers and the tax administrators as scammers and hackers of the digitalization facilities can utilize the ignorance or the lax security of the system. Efunboade (2014), indicated that these emerging global infrastructures (Taxpayer Identification Number- TIN, Factual Accurate Complete Timely- Project FACT and Integrated System of Tax Administration- ITAS) could make it increasingly possible for eligible taxpayers to pay tax online anywhere and anytime.

The indirect taxes are those that are paid to the government by an intermediary and then passed on to the final user by including the tax in the final price (Nakiwala, 2020). Examples of direct taxes include income tax and property tax. On the other hand, the examples of indirect taxes include export and import duties, excise and local production, Value Added Tax (VAT) and others (Ofori, 2022). The tax is said to be progressive if when with increasing income the tax liability not only increases in absolute terms but also proportionate to income (Simiyu, 2020). Ada (2022) defines proportional tax as form of tax that assesses a taxpayer to tax at flat rate on his total assessable income and as such the tax is payable proportional to the taxpayer's income. The progressive tax is a form of tax that is graduated as it applies to higher rates of tax as income increases (Ferreira, 2018).

The use of automated systems has been proven to be capable of introducing massive efficiencies to business processes at a minimal cost (Wasao, 2014), due to the bureaucratic structure of government which is costly to manage with little or no result, tax authorities as an agency of government are turning to e-government led solutions like electronic tax filing (e-filing) (Amabali, 2022), based on the arguments that it enhances the delivery of public services and fiscal profundity without incurring costly recurring overheads (Harrison & Nahashon, 2015). United Nations (2017) stated that e-taxation is a process where tax documents or tax returns are submitted through the digitalization, usually without the need to submit any paper return; it encompasses the use of digitalization, the WorldWide Web and Software for a wide range of tax administration and compliance purposes. Dowe (2018), disclosed that tax authorities around the world are using electronic tax administration systems to interact with taxpaying public in tax collection, administration and compliance settings so as to improve effectiveness and efficiency in tax administration.

Electronic tax filing or e-filing is a process where tax documents or tax returns are submitted through the digitalization, usually without the need to submit any paper return. The e-filing system encompasses the use of digitalization, the Worldwide Web and Software for a wide range of tax administration and compliance purposes. Electronic taxation differs among countries hence the name of the system differs from country to country. Gellis (1991) views electronic declaration as an electronic tax filing. It has also been called online taxation payment by United Nations (2017) or e-tax lodgment by Turner and Apelt (2021).

The electronic filing or online filing of tax returns is a general term for electronic filing or electronic lodgment or electronic declaration of tax returns through submission of tax data to a taxing authority in a computer file format through an digitalization connection (Ibrahim, 2022). Mandola (2020) defines electronic filing as an digitalization based system that enables the taxpayers to register and submit their tax returns over the digitalization. The platform or system could have an inbuilt software that has been pre-approved by the relevant tax authority to assist the taxpayers in calculating and consequently submit the correct amount of tax due (Mandola, 2020). The e-filing incorporates the process of registration, tax preparation, tax filing and tax payment (Lukorito, 2022). The taxpayer requires access to a computer, the tax software, a reliable digitalization connection and the knowledge to utilize the electronic filing (Hussein, Mohamed, Ahlan, Mahmud & Aditiawarman, 2020).

Electronic tax filing was first coined in United States, where the Internal Revenue Services (IRS) began offering tax return e-filing for tax refunds only (Muita, 2021). This has now grown to the level that currently approximately one out of every five individual taxpayers is now filing electronically. This however, has been as a result of numerous enhancements and features being added to the program over the years. Today, electronic filing has been extended to other developed countries like Australia, Canada, Italy United Kingdom, Chile, Ireland, Germany, France, Netherlands, Finland, Sweden, Switzerland, Norway, Singapore, Brazil, Mexico, India, China, Thailand, Malaysia and Turkey (Ramayah et al., 2021). Equally developing countries have also been embracing electronic filing of tax returns. Some of the countries which are embracing the electronic filing include Uganda, Nigeria, Rwanda and Kenya (Muita, 2021).

Globally, the tax environment is changing rapidly. The advancement of Digitalization (ICT) is challenging the operation of tax revenue systems (Muita, 2021). Tax authorities are being challenged to maintain a modernized and responsive tax administration system. Since 1990s, several tax authorities, particularly those from developed countries have progressively harnessed the power of ICT by embracing an electronic tax filing (Lai et al., 2021). Electronic filing is the modern way of tax authorities interacting with tax payers.

Andarias (2021) posit that electronic filing is dependent on the use of digitalization. Digitalization used in e-filing comprise of computer, digitalization and software applications. Electronic filing can be measured when the desired outputs are realized. According to Fu et al. (2021), some of the measures of electronic filing should include, reducing life of tax, improving efficiency and reducing errors in procedures, increasing multi-tasking levels of tax officers and facilitating taxpayers in complying with tax regulations. One of the pillars of e-filing is to have a single database which covers all proceedings in relation to taxable activities of the taxpayer, that is, valuation, billing, collection and enforcement. Taking cognizance of the existence and impact of tax operating cost is not a recent phenomenon. It was started in 1776 by Adam Smith's four well-known maxims of good tax practice (equity, certainty, convenience and economy) (Fu et al. 2021).

It is possible that e-filing may not deliver these expected benefits or may even lead to worse outcomes, especially in low income settings with limited information technology coverage and low capacity in other aspects of tax administration. For example, certain taxpayers may experience significant costs of adoption rendering e-filing inaccessible to them (Yilmaz & Coolidge, 2020). Mandola (2020) defines electronic filing as an digitalization based system that enables the taxpayers to register and submit their tax returns over the digitalization. The platform or system could have an inbuilt software that has been pre-approved by the relevant tax authority to assist the taxpayers in calculating and consequently submit the correct amount of tax due (Mandola, 2020). The efiling incorporates the process of registration, tax preparation, tax filing and tax payment (Lukorito, 2022). The taxpayer requires access to a computer, the tax software, a reliable digitalization connection and the knowledge to utilize the electronic filing (Hussein, Mohamed, Ahlan, Mahmud & Aditiawarman, 2020).

Deloitte (2020) is of the view that taxpayer registration is the process, by which the tax administration collects basic taxpayer identifying information, such as names, addresses, and legal entity types. This information allows the tax administration to know who its taxpayers are, where they are located, and whether they are active or inactive. Modern tax administrations also collect compliance information, such as business activity types or estimated turnover, to plan future compliance activities. During registration, most tax administrations issue a unique Personal Identification Number (PIN) and a registration certificate, and provide the new taxpayer with information on his or her filing and payment obligations.

The basic registration functionality of an online tax system includes the storing and maintenance of taxpayer identifying information, the automatic issuance of PINs and taxpayer certificates, and the automatic determination of taxpayer filing requirements. Effective registration with online tax systems uses unique PINs to facilitate exchange of information between government agencies to ease the detection of non - compliance; integrates registration across taxes to allow for a single view of the taxpayer during audit or collections; centralizes the registration database to allow for effective non - compliance monitoring; provides a single facility to the taxpayer to register for all taxes to simplify compliance; and interfaces with the e - tax system, allowing new taxpayers to register online.

A single centralized taxpayer registration database also enables proper planning, allowing the tax administration to rationalize staffing and resources based on the size and geographic location of the active taxpayer population. Many of these tasks would be impossible without an online tax system. For example, an online tax system can automatically verify that newly issued PIN is, in fact, unique, while the same verification would be nearly impossible manually if the taxpayer population is large (Deloitte, 2020).

Tax remittance is defined as the full payment of all taxes due (Braithwaite, 2022). Tax non-remittance is referred to as any difference between the actual amount of taxes paid and the amount of taxes due. This difference occurs because of overstating and understating income, expenses, and deductions. Non-remittance comprises both intentional evasion and unintentional non-remittance, which is due to calculation errors and an inadequate understanding of tax laws (Webley, 2021). Robben and Antonides (2021), taxpayer's mistakes can be unintended and thus, do not necessarily represent attempts to evade or may even lead to tax over reporting.

Jones (2022) concludes that tax remittance is the timely filling and reporting of required tax information, the correct self-assessment of taxes owed, and the timely payment of those taxes without enforcement action. From this definition, there are three dimensions of tax remittance: filing, reporting, and payment remittance. Filing remittance refers to whether the taxpayer submitted the correct forms to the revenue authority. Reporting remittance refers to whether the return was accurate, while payment remittance refers to whether the taxpayer paid his/her reported tax liability in a timely manner. Therefore, a taxpayer would be called non-compliant if the three dimensions are not properly accomplished (Jones, 2022).

Getting citizens to pay their taxes painlessly without hissing has been the dream of all governments (Teltscher, 2017). The task has however, never been simple, until the introduction of the modern information technology. Since the early 1980s the world has experienced an unprecedented pace of advancement in the field of information technology. These technological innovations are having a profound impact on the administration of fiscal systems and the way in which taxation is administered (Teltscher, 2017). Tax remittance is mainly achieved when majority of taxpayers voluntarily file their tax returns and pay resultant tax liabilities as stipulated in the tax laws, without the intervention of the tax authorities through enforcement. However, if the voluntary remittance is low, then enforcement measures like audit and collection are resorted to.

Setuba (2022) tax remittance is the ability to pay taxes on time and timely reporting of the correct tax information. Other definitions of tax remittance concentrate on the accuracy of the information contained in the tax returns and the cost of making the tax returns. For example, Auyat (2020) defines tax remittance as the supply of accurate and timely lodgment of income tax return together with the required payments whenever due. There are two types of tax remittance; voluntary and involuntary tax remittance (Mandola, 2020). The voluntary tax remittance requires no state enforcement for the taxpayers to comply with the tax requirements in contrast to the involuntary tax remittance (Hussein et al., 2020).

Tax remittance is concerned on the timely and accurate submission of tax remittance information to the revenue authority. The online filing system has a direct impact on the tax remittance levels (Nakiwala, 2020). The system ensures that the taxpayer has filled all the required mandatory fields before allowing him to proceed to the next level. This has the impact of ensuring that the revenue authority receives relatively high-quality data compared to the manual returns of the data (Nakiwala, 2020). The online filing of the tax returns ensures that there is lack of inconsistencies, missing information and unintentional errors (Mandola, 2020).

Tax remittance has been extensively reviewed (Kinsey, 1996). Three theoretical perspectives have been used to explain and measure the degree of tax remittance, namely economic models, uncertainty models, norms of remittance models and inertia models (Picur et al., 2021). Economic models explain that taxpayers' main goal is to maximize their financial taxes whenever the benefits from tax delinquency outweigh the risk of detection and punishment. On the other hand, uncertainty models extend the work of economic models. While retaining the assumption that rational taxpayers seek to maximize their financial interests, adherents to this model point out that in the real-world information about penalty provisions and the risk of audit is imperfect. Finally, norms of Remittance models explain that standards of taxpayer behaviour are influenced by the tax culture.

2.3 Concept of Tax Administration

Tax administration involves all the strategies and principles adopted by any government in order to plan, impose, collect, account, control and coordinate personnel charge with the responsibility of taxation. It also includes the effective use of tax revenue for efficient provision of necessary social amenities and facilities for the tax payers. Tax administration therefore consists of the tax authorities and the organs of tax administration (Ogbonna, 2022) that are charged with the responsibility of implementing the tax laws in accordance with the set guidelines. The Nigerian tax laws define tax authority to mean the Federal Inland Revenue service, state board of internal revenue or the local government revenue committee. Practice guidelines and new letters are published by FIRS and joint tax boards from time to time to address interpretation issues and making of clarification where necessary (Azubuike, 2020).

Tax administration exists to ensure compliance with the tax laws. This administrative dimension of taxation has long been recognized by tax administrators especially those working on tax policy in developing countries (Alm, 2021).

Over the years, there has been failure of tax administration in Nigeria due to lack of equity, certainty, convenience and poor motivation of tax officials. Other factors are improper planning, ineffective monitoring, weak control, fraudulent practices, unqualified and ill equipped manpower and public discouragement due to misuse of tax revenue by government (Ogbonna, 2022).

2.4 Empirical Review

Thivya and Mathiraj (2023) carried out study on the impact of e-filing of tax returns on tax revenue using Secondary data have been collected from published and unpublished reports, handbooks, action plan, Text Books, Journals, Magazines, and E-filing of income tax department Statistics. Their study revealed that the tax revenue has positive impact on electronic file and recognize its benefits. It is benefits like saving of costing, time saving, and easy to transactions of filing and payment. The results have been encouraging. E-filing is necessary digitalization in allover India.

Umaru, Nasiru and Yusuf (2022) conducted study on Information technology and tax administration in Adamawa State board of internal revenue Yola-Nigeria using a survey research method in which information is obtained from a sample of respondents. The population of the study comprises both senior and junior staff of Adamawa State Board of Internal Revenue, Yola.

Jankeeparsad, Jankeeparsad, and Nienaber (2021) in their study, acceptance of electronic method of filing returns by South African tax payers: An exploratory study utilised the decomposed theory of planned behaviour with factors adjusted specifically for South Africa as a developing country to identify the possible determinants of user acceptance of the e-Filing system among taxpayers. The study was an exploratory study and was conducted by means of a questionnaire survey. For taxpayers using the manual method, lack of facilitating conditions such as access to computer and digitalization resources was the most significant barrier to e-Filing usage, while taxpayers using the electronic method reported perceived usefulness as the primary determinant in their decision to use e-Filing. The target population consisted of taxpayers located in Durban and Pretoria during the period 1 August 2020 to 1 October 2020. This period was specifically chosen as it was tax filing season.

Ayodeji (2014) studied impact of electronic tax systems on tax administration in Nigeria. The purpose of this study was to assess the impact of electonic taxation on tax administration in Nigeria. The researcher argued that the dwindling global fortune occasioned by the fall in the price of crude oil, the major source of wealth for Nigeria shifted the attention of the government and major stakeholders in the country to the revenue generated locally. But the daunting task of boosting the Internally Generated Revenue necessitates the adoption of electronic tax systems technologies to drive Tax administration and concluded that electronic tax systems plays an important role in the increase of internally generated revenue in Nigeria by ensuring compliance thereby boosting productivity and economic activities in the country. It is a change agent for accelerated growth and poverty reduction in Nigeria and the whole of African continent at large

Gasteiger (2021), indicated that automated system enhances administration with the provision of multiple scenarios that allow senior management in a multi-campus university system to generate multiple income scenarios, make well-informed decisions concerning the operation of their institution and timely calculation and allocation of resources to academic departments.

Chatama (2020), studies on the impact of Digitalization on Taxation: the case of Large Taxpayer Department of Tanzania Revenue Authority. The study examines how the use of IT has modernized Tax administration procedures and improved revenue collection at Large Taxpayer Department of Tanzania Revenue Authority. The findings of the research revealed that IT was introduced for facilitating maintenance and timely access of records and fast processing of return so as to remove postal delays, minimize operational costs, curb cheating and plug revenue loss. Although the study has contributed to body of knowledge, it however was limited to the process of tax administration in Tanzania only, as such, its findings may not be applicable to other countries, like Nigeria. The study also focused on how IT modernized tax administration procedures at Large tax payer department in Tanzania ignoring the micro and small tax offices in tax administration.

Another study by Abiola and Asiweh (2022), on the Impact of Tax Administration on Government Revenue in a Developing Economy – A Case Study of Nigeria. The study looks at the Nigeria Tax administration and its capacity to reduce tax evasion and generate revenue for development desire of the populace. The study made use of 121 online survey questionnaires containing 25 relevant questions. The findings of the study reveals that increasing tax revenue is a function of effective enforcement strategy which is the pure responsibility of tax administration and the findings also pointed that Nigeria lack enforcement machinery which include adequate manpower, computers and effective postal and communication system. However, the study did not suggest practical solutions for Nigeria to strengthen its tax enforcement machinery, therefore, the study has no clear practical implications for tax practitioners.

In a research by Onyije and Opara (2020), on Information and Communication Technologies (IT): A Panacea to Achieving Effective Goals in Institutional Administration. The study examined the use of Digitalization (IT) by institutional administrators for effective administration. The study stated the need for effective use of IT by institutional administrators in maintaining and controlling, according to policies laid down by the governing bodies of the institution. Findings of the research revealed various IT resources used for effective institutional administration. It also revealed the extent of utility of IT to a tax administration's core operations but ignored key variables as IT capacity in terms of IT skills, values, relationship, knowledge and attitudes.

2.5 Theoretical Review

This study is based on the stakeholder theory propounded by Freeman E. (1984) which pinned on the idea that organizations that manage their relationships with stakeholders effectively will last longer and perform better than organizations that do not. In this view, tax authority is one of the stakeholders of taxpayers and the relationships with the Tax authorities need to be maintained by being tax compliant. The implication of this theory is that organizations in their bid to have a good corporate governance they will be tax compliant.

The stakeholder theory is also relevant in this study as it helps in analyzing the compliance behavior of taxpayers and the role of tax authorities in promoting tax compliance. The theory argues that taxpayers have a stake in maintaining good relationships with tax authorities, and that tax compliance is part of good corporate governance. However, the theory also raises questions about the legitimacy and transparency of tax authorities' actions, and about the effectiveness of tax enforcement strategies in promoting voluntary compliance.

3.0 Methodology

This research adopts a survey research method in which information is obtained from a sample of respondents. The population of the study comprises both senior and junior staff of Adamawa State Board of Internal Revenue, Yola, totally 187 staff (Board of Internal Revenue, Yola, 2025). Due to small size of the population, the researcher tends to carry out study on the whole population. 187 questionnaires would be distributed among the different employees in the ministry. Census sampling technique would be used for this study. Data for this study were collected through questionnaire administered to the respondents using convenient sampling techniques. The study used questionnaire as tool for collecting data. Questionnaires were distributed conveniently to the respondents, while nominal scale measurement was used in assigning membership to respondents, because nature of options to be selected in the questions involved: strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1). The data collected for this study was subjected to descriptive and inferential statistics using multiple regression analysis with help of Statistical Package for Social Sciences (SPSS) at 0.05 (5%) level of significance. The multiple regression equation use for the study was:

$$TA = f\left(OTF, OTR, OR\right) \tag{1}$$

$$TA = \beta_0 + \beta_1\left(OTF\right) + \beta_2\left(OTR\right) + \beta_3\left(OR\right) + \mu \tag{2}$$

Where:

OTF	=	Online tax filling
OTR	=	Online tax remittance
OR	=	Online registration
TA	=	Tax administration
μ	=	Error term
β0	=	The intercept; and reflects of the constant of the equation
β1-β3	=	Sensitive coefficient of each independent variables

4.0 Result, Discussion and Findings

A questionnaire is the primary data that was used in the analysis of the data collected. Out of 187 questionnaires distributed, 176 were successfully returned and valid, representing 94.1%, while 11 were not returned, representing 5.9%.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.975a	0.951	0.949	1.67684

a. Predictors: (Constant), OTF, OTR, OTRE

b. Dependent Variable: TA

(Source: field survey, 2025)

Table 1 shows there is a significant relationship between information technology and tax administration (r = 0.975, P < 0.05). The model summary in Table 1 reveals that the values of the coefficient of determination for model of the study, R2 statistic of 0.975(97.5%) shows that the model is a good predictor of the dependent variable. This shows that the model explains about 97.5% variations in the dependent variable. The model shows that there is significant relationship between information technology and tax administration in Adamawa state board of internal revenue, Yola.

Table 2: Coefficients of the study Model

Model	Unstandardized Coefficients B	Standardized Coefficients Std. Error	t Beta	Sig.	Collinearity Statistics	Tolerance	VIF
1	(Constant)	1.531	.411		3.728	.000	
	OTF	.120	.132	.110	.908	.025	1.000 1.000
	OTR	.826	.097	.709	8.472	.000	1.000 1.000
	OTRE	.258	.215	.224	1.199	.032	1.000 1.000

a. Dependent Variable: TA

The result in Table 2 revealed that online tax filing has positive and significant impact on tax administration in Adamawa state Board of internal Revenue, Yola (β = 0.110, t = 0.908, p < 0.05). likewise online tax registration has positive and significant impact on the tax administration in Adamawa state Board of internal Revenue (β = 0.709, t = 0.872, p< 0.05). Moreso online remittance filing has positive and significant impact on tax administration in Adamawa state Board of internal Revenue, Yola (β = 0.224, t = 1.199, p< 0.05).

The first finding revealed that online tax filing has a significant impact on the efficiency of tax administration at the Adamawa State Board of Internal Revenue (Yola). This is in line with the findings of previous research which suggested that the automation of tax filing processes leads to improved accuracy, reduced errors, and faster processing times, which in turn enhances overall administrative efficiency (Oluwaseun & Oluwatoyin, 2020). The adoption of online tax filing systems not only reduces the physical paperwork but also streamlines the entire tax filing process, making it easier for both tax authorities and taxpayers. The positive impact of this system suggests that it has improved the timeliness and effectiveness of tax revenue collection, which is critical for the financial health of the state.

The second finding indicates that online tax registration also plays a significant role in improving tax administration in the state. By shifting tax registration to an online platform, the Board of Internal Revenue in Adamawa has simplified the process, reducing the burden of in-person registration and improving taxpayer compliance. Previous studies, such as those by Oseni et al. (2019), have highlighted that online tax registration increases the accessibility of the tax system for taxpayers, thus encouraging greater participation. The findings suggest that the online registration system has not only enhanced the accessibility and reach of the tax administration but has also contributed to better data management and reporting. This aligns with global best practices in tax administration, where digital platforms are seen as a key enabler of efficient revenue collection and taxpayer compliance.

Lastly, the results from the hypothesis test on the impact of online tax remittance filing further confirm that it has a significant positive effect on tax administration in Adamawa State. The analysis showed that the coefficients of online remittance filing are positively significant, indicating that the system has improved the speed and accuracy with which taxpayers remit taxes. Similar findings have been reported by Adebayo and Durojaiye (2021), who found that online remittance systems reduce delays in tax payments and minimize the risk of tax evasion. The shift to an online remittance system has facilitated timely payments and greater transparency, contributing to improved revenue collection and administrative efficiency.

The findings of this study corroborate existing literature on the benefits of online tax systems. The positive impacts of online tax filing, registration, and remittance on the tax administration of Adamawa State are evident in the improved efficiency, reduced administrative burden, and enhanced taxpayer compliance. These results support the continued implementation of digital tax solutions as a strategy for enhancing tax governance in developing regions.

5.0 Conclusion and Recommendation

The study concludes that online tax filing has a significant impact on the efficiency of tax administration at the Adamawa State Board of Internal Revenue (Yola), while online tax registration also plays a significant role in improving tax administration in the state. On the same vein, online tax remittance filing further confirm that it has a significant positive effect on tax administration in Adamawa State.

Base on the study findings the study recommends that management of Adamawa state Board of Internal Revenue should organize training workshops for its taxpayers so that adoption rate of e-tax filing increases. Also, government should improve the infrastructure that supports digitalization coverage across the state for electronic filing to be a success. This is because taxpayers are found all over; even those in the rural areas can pay tax thus digitalization access should be guaranteed. On the other hand, System availability should be ensured by Adamawa state Board of Internal Revenue who should have its servers upgraded to be able to absorb pressure on e-traffic. Likewise, government should benchmark their electronic filing services with those of states and countries that are developed in order to make it accessible and easier for tax remittance.

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