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Tax digitalisation and tax revenue generation system in Nigeria

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ABSTRACT

One of the various avenues the government can use to generate the revenue needed for the provision of infrastructures, security and welfare to her citizenry is tax revenue generation system. Records has shown that tax revenue generation by government especially in developing countries like Nigeria is fraught with lots of irregularities which has resulted in low level revenue generation suggestibly due to lack of tax collection digitalisattion. Therefore, the focus of this study is to investigate the effect of tax digitalisation dimensions on revenue generation of Federal Inland Revenue Service (FIRS) headquarters, Abuja, Nigeria. A survey research design was used for the investigation. Ten thousand three hundred and forty-two managers and employees of the Federal Inland Revenue Service (FIRS) in Abuja, Nigeria, made up the research population. In order to get the appropriate sample size, this research used Cochran's formula (1977). Accordingly, seven hundred and thirty seven was the sample size. The sample was selected using the simple random sampling approach. Validity and reliability tests were conducted on the modified questionnaire. The reliability coefficients test showed Cronbach's alpha values between 0.802 to 0.907. Using multiple regression analysis, the data were analysed to determine the direction and relationship of the dependent and the independent variables. A favourable and statistically significant relationship between tax digitalisation characteristics and revenue generation was found in the results of the multiple regression study (Adj. R2 = 0.795, (F (4, 598) = 583.786, p<0.05)] with online payment system as the best predictor of revenue generation. The study concluded that Tax digitalization affect revenue generation and will help to eliminate tax leakages. Management of FIRS should ensure accuracy of account book, relevant tax authority approval, encourage use of apple pay for remittance, should create electronic reports for taxpayers to improve revenue generation system.

Keywords:
Electronic Audit, Electronic Tax Filing, Online Payment System, Electronic Reporting, Tax Revenue Generation, Digitalisation

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1. INTRODUCTION

The algorithm for tax revenue generation is fraught with leakages in several African nations with specific reference to Nigeria. The issue of tax compliance ,collection, monitoring and transparency has created a serious problem for tax revenue effectiveness. It is to this extent that tax digitalization in the form of electronic audit ,electronic tax filing ,online payment system and electronic reporting are being considered as treatment variables in this study to solve the problem of tax revenue generation. Tax revenue generation is low in Nigeria owing to inadequate tax collection digitalization. Therefore the focus of this study is to examine the significant effect of tax digitalization on tax revenue generation system using the federal inland revenue service in Abuja as case study. The official data from the Federal Inland Revenue Service (FIRS, 2022) in Nigeria indicate a worrisome situation regarding tax compliance in terms of income. Out of the total of four hundred and forty thousand registered enterprises in the nation, only about one hundred and twenty thousand are actively meeting their tax responsibilities to the FIRS. According to the Federal Inland Revenue Service (FIRS) in 2022, there are around three hundred and twenty thousand enterprises that have not fulfilled their tax obligations, resulting in a considerable loss of potential income. The causes of the poor tax revenue generation are inadequate tax compliance, poor tax collection and monitoring supported by lack of transparency. These actions together demonstrate a lack of respect for tax rules and regulations. Furthermore, a thorough examination of Nigeria's tax revenue statistics, together with other significant indicators, highlights the widespread problem of low compliance with tax regulations in the country (FIRS, 2022). According to figures from the Budget office of the Federation (2021), the Federal Inland Revenue Service (FIRS) accounted for 54.6% of the Tax-to-GDP ratio in 2016, 55.2% in 2017, 58.3% in 2018, and 59.0% in 2019. Nevertheless, it decreased to 50 percent in 2020. In view of the above, the study focused on determining the effect of tax digitalization on tax revenue generation system.

2. LITERATURE REVIEW

Tax Revenue Generation System: Tax revenue generation system is defined as the method of raising funds by government in order to meet capital and recurrent expenditure (Enahoro, 2012). Furthermore, it is referred to as the aggregate amount accruing to an entity from all sources of revenue irrespective of the nature and status at any time (Asnafi & Hamid (2018). Revenue generating system is seen as the method and means of generating financial resources for a government (Mabugu, 2022). Tax compliance, collection, monitoring, and transparency are therefore essential components of a revenue generating system..

Tax Digitalisation: Tax digitalisation is a process by which governments use digital platforms to gather accurate and timely information on taxpayer and the various operations (Bassongui & Houngbédji, 2023). Tax digitalization includes many systems and forms of technological adoption such as electronic filing of taxes and online submission of tax documents (Juswanto & Simms, 2017). In tax digilatisation, elements such people, technology, financing, communication and risk management are to considered (Lipniewicz, 2017). This paper examined tax digitalisation through the dimensions of electronic audit, electronic tax filing, online payment system and electronic reporting as discussed concisely. The use of computer based method to access electronic records in auditing is known as Electronic audit (Nindyastuti & Kiswara, 2014). Electronic tax filing is the process of submitting your tax return to the government electronically, often over the internet (Abolade & Durosinmi 2019). Electronic tax filing, or e-filing, is the process of sending completed tax return to the IRS or state tax agency over the internet (Alsyouf et al., 2023). Online payment system allows individuals and businesses to electronically exchange money and process financial transactions via the internet and enables buyers and sellers transfer money between two parties, typically over the internet (Adegbite & Mustapha, 2019; Adeyeye, 2019). According to Klaus and Holger (2019), electronic reporting can be described as a simplified method of creating electronic reports that can be used for information sharing and exchange between relevant agencies.

2.1 Tax Digitalisation Dimensions and Revenue Generation System

Studies conducted on tax digitalisation and revenue generation system has shown varied results. The study of Ogbonna et al. (2022) examined the impact of e-tax payment on revenue generation system in Nigeria and reported that there is a weak positive relationship between revenue generated before and after the implementation and adoption of capital gains tax using technology. Furthermore, revenue generation system is significantly affected by digitalization (Efunboade, 2014). The findings further confirmed that technology is an avenue to improve performance in revenue administration through the reduction of human interactions that leads to errors, reduction

in time of processing, provision of data for tax personnel and enhancing voluntary tax compliance which will lead to reduction in tax evasion. Likewise, Eliana et al. (2018) revealed that the use of technology in the business sector have made payment by customers and revenue generation system easier for organisations. Likewise, Adegbite et al. (2019) showed that digitalisation has a positive and significant effect on tax revenue generation system in Oyo State. Furthermore, the study of Obasan (2011) reported that there exists a positive and significant correlation between digitalisation and profitability of banks in Nigeria. Additionally, Seema (2014) showed that technological innovations positively influence the revenue generation system in banking and financial sector. The study of Goh et al. (2016) showed that online payment system and banking automation have increased the banks revenue thereby having a positive effect. In the same vein, John-Akamelu and Iyidiobi (2019) found the study revealed that e-taxation had effect on tax revenue generation system in Anambra State. Also, Joana et al. (2013) revealed that information and communication technologies are an enabler for revenue generation system optimization for the organisation. Furthermore, Morten (2019) reported that digitalisation and the use of IT automation increased revenue generation system, the reduction in lodgment, clearance time and costs and corruption, and ease of governance processes. In contrast, Mahboub (2018) showed that automation does not significantly affect revenue generation. Likewise, Rami et al. (2016) also reported a negative effect of digitalisation on revenue.

Theoretical Framework: Technology Acceptance Model (TAM) was adopted as the underpinning theory for the study. Wang et al. (2023) theorized that, TAM is a significant research model of information systems that can be used to predict the desire to use and accept technology and information system. TAM is appropriate for technology and online interactions because of the benefits therein which include information system application, prediction of when economic agents are presented using new technology and how and when technology will be used (Alsyouf et al., 2023). The relevance of the theory is that tax digitalization connects with effective tax revenue generation efficiently. The TAM present that effective tax administration should present easiness and convenience for the tax papers and the tax officials. The literature review has provided further understanding of the study leveraging on the contributions of past related authors. In effect, the study purposed to examine the effect of tax digitalization on tax revenue generation system.

Hypothesis statement: It therefore hypothesized that tax digitalization do not significantly affect revenue generation system.

AIMS: The study reveals the significant effect of tax digitalization as a strong factor to predict effective tax revenue generation system by the government and to block all loop holes that characterized tax collection system. The challenge of tax revenue generation system is being treated in this study for optimum performance by the intervention of tax digitalization of the process and algorithm.

3. METHODS

This study used a survey research design. The research sample consisted of Ten thousand three hundred and forty two thousand individuals who held managerial positions in the Federal Inland Revenue Service (FIRS) in Abuja, Nigeria. The research picked Abuja as the location because it serves as the headquarters of the Federal Inland Revenue Services, where decisions, approvals, and authorisations for innovations are made. This research used Cochran's sample size formula (1977) to determine the appropriate sample size. Therefore, a sample size of Seven hundred and thirty seven was used. The research adopted simple random sampling. The study used a modified and validated questionnaire. The Cronbach's alpha values for the reliability coefficients varied from 0.802 to 0.907. The data analysis was conducted using Multiple regression analysis to determine the direction and relationship of the independent and dependent variables..

4. RESULTS

Table 1: Summary of Results for effect of Tax digitalisation dimensions on Revenue Generation System of Federal Inland Revenue Service, Abuja, Nigeria

N	Model	*B*	T	Sig.	Sig.	R	Adjusted R^2	F (4, 598)
603	(Constant)	14.538	8.630	0.000	0.001[b]	0.892[a]	0.795	583.786
	Electronic Audit	0.462	4.223	0.000				
	Electronic Tax Filing	0.565	4.946	0.000				
	Online Payment System	1.218	9.628	0.000				
	Electronic Reporting	1.108	9.102	0.000				

a. Dependent Variable: Revenue Generation System

Source: Researcher's Field Survey, 2024(see appendix one for spss)output

Interpretation

The findings from table one indicate that electronic audit (β = 0.462, t = 4.223, p<0.05), electronic tax filing (β = 0.565, t = 4.946, p<0.05), online payment system (β = 1.218, t = 9.628, p<0.05), and electronic reporting (β = 1.108, t = 9.102, p<0.05) all have a positive and statistically significant impact on the revenue generation system of the Federal Inland Revenue Service (FIRS) in Abuja, Nigeria. The findings indicate that all aspects of tax digitalisation, including electronic reporting, electronic audit, electronic tax filing, and online payment system, are significant factors in predicting the revenue generating system of the Federal Inland Revenue Service in Abuja, Nigeria. Additionally, it demonstrates that among the aspects, the online payment method was the most accurate predictor of income production.

The correlation coefficient of 0.892 confirms that the process of digitising taxes has a significant and favourable impact on the revenue production system of the Federal Inland Revenue Service (FIRS) in Abuja, Nigeria. The adjusted coefficient of determination, Adj. R2, is 0.795, indicating that approximately 79.5% of the variance in revenue generation systems of FIRs in Abuja, Nigeria can be explained by the measures of tax digitalisation. The remaining 20.5% of changes are attributed to variables that were not included in the study's model. The predictive and prescriptive multiple regression models are stated in the following manner:

RGS= 14.538+0.462EA+0.565ETF+1.218OPS+1.108ER + U_i------Eqn 1 (Predictive Model)

RGS= 14.538+0.462EA+0.565ETF+1.218OPS+1.108ER + U_i $_i$---Eqn 1 (Prescriptive Model)

Where:

RGS = Revenue Generation System

EA = Electronic Audit

ETF = Electronic Tax Filling

OPS = Online Payment system

ER = Electronic Reporting

The regression model showed that if the tax digitalisation aspects were kept at zero, the revenue generation system of FIRs in Abuja, Nigeria would be 14.538, suggesting a positive trend. The predictive model indicates that all four aspects of tax digitalisation (electronic audit, electronic tax filing, online payment system, and electronic reporting) have a major impact on the revenue generating system and make a substantial contribution to the prediction. According to the prescriptive model, there is a statistical relationship between improvements in tax digitalisation dimensions (such as electronic audit, electronic tax filing, online payment system, and electronic reporting) and the revenue generation system. Specifically, for every unit of improvement in these dimensions, the revenue generation system is expected to increase by 0.462, 0.565, 1.218, and 1.108 units respectively. The findings indicated that the dimensions of tax digitalisation have a major role in defining the revenue generating system.

Furthermore, the F-statistics (df = 4, 598) = 583.786 at p < 0.05) demonstrate that the whole model is statistically significant in projecting the impact of tax digitalisation on the revenue generating system. This suggests that the regression model is well-suited for predicting the impact of tax digitalisation (FIRS) on the revenue generating system of (FIRS) in Abuja, Nigeria. This indicates that the variables incorporated in the model (electronic audit, electronic tax filing, online payment system, and electronic reporting) all have a significant impact on explaining the variation in the revenue generation system. Among these variables, the online payment system is the most effective predictor of the revenue generation system. Thus, the analysis refutes the null hypothesis (H0) that posits Tax digitalisation features have no substantial impact on the revenue collection system..

5. DISCUSSION

The results from this study corroborate the work of Efunboade (2014) that digitalisation had a significant effect on revenue generation system. Likewise, Eliana et al. (2018) found that the use of technology in the business sector have made payment by customers and revenue generation system significantly easier for organisations. Building on previous findings, Adegbite et al. (2019) discovered that digitalisation positively and significantly impact on tax revenue generation system. That digitalisation is an effective tool that enhances taxation. Also, it was revealed that electronic reporting positively and significantly improves the efficiency, quality and coverage of service delivery and revenue generation system processes of an organisation and at the same time boost revenue while reducing cost (Manu et al., 2020).

Further, Ershaid (2021) found that there is a statistically significant relationship between computerized taxes registers and VAT compliance. Adegboye et al. (2022) that specific ICT thresholds, industrialization and ICT play significant role for tax revenue mobilization. Supporting these findings, Ogbonna et al. (2022) investigated the impact of e-tax payment on revenue generation system in Nigeria, found a weakly positive association between revenue collected before and after the implementation of a capital gains tax.

In consonance with the previous findings, earlier works have also found that electronic taxation has a significant contribution to revenue generation system (Afuberoh & Okoye, 2014); furthermore, electronic reporting enhances the revenue generation system capacity and that information communication technology have positive impact on organisational revenue growth. Similarly, electronic payment channels have impact on the revenue generation system (Seema, 2014; Tijani & Ilugbemi, 2015). In contrast, Yu et al. (2023) discovered that information technology has no positive and significant impact on tax revenue collection. Likewise, Mahboub (2018) showed that automation does not significantly affect revenue generation. While, Rami et al. (2016) revealed that digitalisation has a negative effect on revenue. The divergent results could be attributed to methodological approach and industry-specific. The convergence and divergence of findings were as results of dynamics in the research environment, methodology and population.

Theoretically, the results support the Technology Acceptance Model by supporting the principles of the theory. As such, taxpayers could be motivated if the digital tax procedure is useful and credible. Thus, according to Mishra et al. (2023) and Karimi et al. (2017), taxpayers perceived usefulness and perceived ease of using information system or information technology will have an influence on attitudes about an information system, as well as on individuals' intents to use and acceptance of the system.

6. CONCLUSION

The research determined that the process of digitising taxes has an impact on the system of generating money. The establishment of an efficient tax revenue system is directly connected to the successful implementation of tax digitalisation. The research suggests that the management of FIRS should prioritise the correctness of their account books and get necessary approvals from the tax authorities. They should also promote the usage of Apple Pay for remittance and provide electronic reporting for taxpayers to enhance the revenue generating system. The administration of the Federal Inland Revenue Service should strive to enhance the implementation of electronic tax filing and electronic audit in order to establish an efficient system for generating tax revenue. In order to mitigate the influence of cultural prejudice and overcome geographical constraints, it is recommended that future study be conducted in an alternative developing country. In future studies, researchers may use a mixed-method approach or investigate the influence of external factors, such as moderators, on the correlation between the two main variables. The study findings may provide insight on the ways in which digital technologies are transforming the tax landscape and the strategies used for tax collection and management. This knowledge is valuable for tax managers.

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