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INFORMATION TECHNOLOGY ADOPTION AND OPERATIONAL PERFORMANCE IN STATE TAX ADMINISTRATION: EVIDENCE FROM OSUN STATE, NIGERIA

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ABSTRACT

The modernization of tax administration through information technology (IT) has become critical for improving the operational performance of tax authorities globally. Many States Internal Revenue Services have been encountering challenges on adoption and implementation of information technologies in tax processes, collections and compliance, due to its complexities, weak tax legislation and enforcement, which in turn reduce the operational performance of state revenue agencies. Given these issues, this study examines the role of IT adoption in enhancing the operational performance in the Osun State Tax Administration. The study population comprised 528 staff of Osun State Internal Revenue Service (OIRS), and using Taro Yamane's formula, a sample size of 228 was determined. Data was collected through a structured questionnaire and analyzed using Covariance-Based Structural Equation Modeling (CB-SEM). The study's path coefficient result of 0.913 showed a strong and statistically significant positive relationship between Information Technology and operational performance. The study concludes that the adoption of modern IT solutions is crucial to the effectiveness of tax administration in Osun State. It demonstrates that investments in technology not only improve internal operational processes but also build public trust and compliance among taxpayers. The study recommends that OIRS and similar revenue agencies in Nigeria enhance operational performance and ensure sustainable revenue growth by investing in robust digital infrastructure and cybersecurity frameworks to safeguard taxpayer data; promoting taxpayer education to boost digital literacy and engagement; and strengthening strategic partnerships with technology providers alongside regular capacity-building initiatives for staff.

Keywords: information technology; tax administration; operational performance

INTRODUCTION

Globally, information technology has revolutionized public sector operations, especially in tax administration. Developed economies such as the United States, Canada, and many European countries have adopted advanced IT-driven tax systems, improving operational performance, transparency, and compliance systems (Zotorvie et al., 2025). The Organization for Economic Co-operation and Development (OECD) stresses the critical role of IT in modern tax systems (Jasim & Raewf, 2020).In advanced economies, e-filing platforms, automated

auditing, and artificial intelligence-based taxpayer support have drastically enhanced efficiency. For instance, the U.S. Internal Revenue Service processes millions of returns annually through electronic means, reducing turnaround times and administrative costs (Belahouaoui & Attak, 2024).

Developing countries are increasingly adopting IT to enhance tax administration. Kenya's iTax platform, Tanzania and South Africa's e-filing system have significantly improved revenue generation and taxpayer services. However, challenges such as digital divide, cyber risks, and infrastructure limitations remain prevalent (Kibona & Goyayi, 2025).

In Nigeria, the adoption of information technology in tax administration has been progressive, especially at the federal level with initiatives such as the Integrated Tax Administration System (ITAS). At the state level, efforts vary considerably (Mohammed-El-Habib et al., 2023). Osun State has embarked on several IT-driven initiatives, including electronic tax payment platforms and automated taxpayer databases, aimed at boosting operational efficiency. Nonetheless, infrastructural inadequacies, taxpayer digital literacy challenges, and security concerns still impact the full potential of IT systems (Odetayo et al., 2025).

Despite the growing adoption of IT in tax administration across Nigerian states, the extent to which these technologies contribute to operational performance remains underexplored, particularly in less economically dominant states like Osun. While efforts have been made to digitalize tax collection and management, concerns about system efficiency, taxpayer adoption, and revenue outcomes persist.

Limited studies (Ganbold et al., 2021; Heslina & Syahruni, 2021; Sapta et al., 2021; Nugroho et al., 2022; Deng et al., 2023; Trieu et al., 2023) have investigated the effects of information technology on employee performance, organizational performance and SMEs' performance. These prior studies neglect aspects of tax revenue agencies' performance.

Most previous relevant studies (Li et al., 2020; Yu et al., 2021; Chege et al., 2020; Lucena, 2024) have examined the impact of information technology on specific performance: tax administration efficiency, revenue performance or leakages, and tax compliance in developed countries. In regions of Sub-Saharan Africa including

Nigeria, many prior studies (Masunga et al., 2020; Awai & Oboh, 2020; Shem, 2020; Anomah et al., 2024 Akinyosoye et al., 2025; Odetayo et al., 2025) have focused on specific tools like e-tax systems or digitalization and their effect on revenue collection efficiency. Others similar studies (Ayeni & Ogbeta, 2022; Masunga et al., 2020)examined information technology impact on tax compliance, without a broader performance evaluation framework (i.e. overall revenue performance, tax compliance, operational cost reduction, taxpayer satisfaction and trust, timeliness of tax assessment and returns, tax fraud and errors elimination, and tax productivity).

However, the aforementioned studies often overlook an integrated analysis of how the comprehensive adoption of information technology, beyond isolated tools, translates into operational performance outcomes within the context of sub-national revenue agencies in Nigeria. Moreover, most studies do not account for internal contextual factors like staff capacity, system integration challenges, or taxpayer engagement strategies, particularly in Osun State, which presents a unique administrative and digital environment.

This study fills this gap by offering a more holistic assessment of IT adoption and its effect on operational performance, incorporating both technological and organizational dimensions within the Osun State Tax Administrations. By doing so, it extends existing literature and provides context-specific insights that are vital for policy formulation and IT-driven reforms in state-level tax administration across Nigeria.

LITERATURE REVIEW

Information Technology (IT) refers to the use of computers, software, networks, and other digital systems to store, process, transmit, and manage data and information (Jasim & Raewf, 2020). IT encompasses both hardware (such as servers, computers, and networking devices) and software (databases, enterprise applications, and cloud services) that support business operations and decision-making (Balogun et al., 2021).In tax practice, according to Odetayo, et al. (2025), information technology in tax administration refers to the deployment of digital tools, systems, and processes to enhance the assessment, collection, and management of taxes. This includes systems such as e-filing platforms, online tax payment portals, digital compliance tracking, automated audit

systems, and taxpayer self-service applications, that could improve revenue performance (Adefunke & Mayowa, 2024).

Performance of any organization could be financial or non-financial and/or operational (Kori et al., 2020). This study focuses on operational performance. Be that as it may, Sharma, et al. (2020) defined operational performance as the effectiveness and efficiency with which an organization carries out its day-to-day activities to achieve its strategic and functional objectives. This encompasses Process efficiency (speed and accuracy of service delivery), resource utilization (use of personnel, time, and technology), service quality (responsiveness and reliability), cost-effectiveness, and internal productivity (output relative to inputs). In tax administration practices,

Belahouaoui and Attak (2024) see operational performance in tax administration, as it relates to efficiency, effectiveness, and responsiveness in carrying out tax-related functions. The fundamental indicators include revenue collection growth, accuracy and timeliness of tax processes, taxpayer satisfaction, reduction in operational costs, and administrative transparency.

Empirical Review

Many studies have explored different aspects of information technology for tax administration and organization performance with different outcomes. Several studies have been examined by different researchers in developed countries, for instance, In China, Li, et al. (2020)explored the effects of advanced information technology adoption by tax bureaus on tax compliance. The study used tax analysis ICT approach with modern algorithms for revenue analysis and KPI development and monitoring. Findings showed that ICT use has led to increased tax revenues and improved operational efficiency in tax administration. Similarly, Yu, et al. (2021), and Chege et al. (2020) found that technology innovation influences firm performance positively. Meanwhile, Mikhaleva and Vochozka (2021) investigated the application of information technologies in tax administration efficiency in Russia. The study adopted empirical research method with comparative analysis and found that modern technologies like big data, blockchain, and AI have the potential to improve tax administration efficiency. Sorguli, et al. (2021)investigated the influence of information technology (IT) on tax administration productivity in Kurdistan,

Iraq. The study employed descriptive research approach and primary data was collected via questionnaires and analyzed using Pearson Correlation and Multiple regression. Findings indicated IT (online tax filing, registration, and remittance) positively impacts tax administration efficiency.

Different organizations like companies and SMEs have also across countries have mixed findings on the relationship between information technology and performance. For instance,

Ganbold, et.al. (2021) examined the effect of information technology-enabled supply chain integration on firm's operational performance in Japan. The study adopted survey data from manufacturing firms and used resource -based view theory and found that IT-enabled supply chain integration improves operational performance through better coordination and responsiveness. In the same vein, Deng, et al. (2023) found that digital technologies enhance job performance through improved knowledge sharing and communication.

Trieu et al. (2023 investigated the information technology capabilities and organizational ambidexterity facilitating organizational resilience and firm performance of SMEs in Vietnam. The study adopted SEM with data from small and medium-sized enterprises (SMEs), and found that IT capabilities foster organizational ambidexterity, which strengthens resilience and firm performance.

Sapta, et al. (2021)evaluated the role of technology in improving employee performance during COVID-19 in Indonesia. The study revealed that technology improves employee performance, but only when mediated by supportive organizational culture and high job satisfaction. IT alone is not sufficient. A study by Heslina and Syahruni (2021) found that IT significantly enhances employee performance, especially when supported by human resource competency and engagement. Beyond employee performance, Nugroho, et al. (2022) revealed that IT adoption capability strengthens the effect of strategic orientation on firm performance in Indonesia, transforming IT from a support role into a strategic enabler.

In different scenarios, Ayeni and Ogbeta (2022)examined the relationship between information communication and technology (ICT) compliance and tax administration compliance in Gambia. The

study utilized research survey design with primary data from questionnaires and interviews, and secondary data from various sources. Data was analyzed using descriptive statistics and inferential statistics. The study found that ICT has a positive impact on tax administration and revenue generation, reducing tax leakages and capturing potential taxpayers. Lucena (2024) reviewed literature on information technology in tax administrations and its impact on tax collection in Brazil. The study employed literature review approach with an emphasis on empirical studies related to IT implementations in tax systems. Thematic synthesis of existing research findings indicated the significant positive impacts of standardized electronic tax systems on tax collection efficiency.

In developed countries, considering the relationship between information technology in the tax administration system and performance. Masunga, et al. (2020) focused on the quality of the e-tax system and its effect on tax compliance among large taxpayers in Tanzania. Using a survey design, the study gathered data from large taxpayers and analyzed it through regression analysis. The findings demonstrated that the quality of the e-tax system had a significant positive impact on tax compliance, with improvements in system reliability and user experience enhancing compliance rates. Shem (2020)assessed the effect of information systems on revenue collection in Elgeyo Marakwet County, Kenya. A descriptive survey design was used to gather data from relevant stakeholders. The study employed both descriptive and inferential statistics for data analysis. The findings indicated a positive correlation between the use of information systems and improved revenue collection efficiency in the country. In the same vein, Achibo and Wanjohi (2024) revealed that revenue collection was significantly influenced by electronic tax registration, tax efficiency and tax compliance. Akinyosoye, et al. (2025) established the impact of digitalization of tax systems and enhance tax revenue efficiency significantly in Nigeria.

Anomah, et al. (2024) explored the potential for blockchain technology integration in Ghana's tax policy for enhancing digital economy taxation. The study adopted qualitative research through case studies. And the content analysis of policy documents and expert interviews were

applied. The study found that higher stakeholder engagement increases the likelihood of successful blockchain integration in tax policy.

Many researchers have investigated the relationship between various aspects of information technology in tax administration and organizational performance with different factors. For instance, a study by Awai and Oboh (2020) analyzed the ease of paying taxes through Nigeria's electronic tax system and its impact on tax compliance. The study employed descriptive research design and surveyed taxpayers to gauge their experiences with the e-tax system. Data were analyzed using descriptive statistics and inferential analysis. The results indicated that the e-tax system significantly improved tax compliance by making tax payments more convenient, although challenges such as system reliability remained.

A study byMichael and Adegbie (2020)examined the impact of information technology on the efficiency of tax evaluation in Nigeria. The research utilized a survey research design, gathering data from 2,857 employees working in management and administration roles within six multinational companies in Lagos State, as well as from the Federal Inland Revenue Services and Lagos State Internal Revenue Service offices in Lagos. With a sample size of 641 determined through stratified sampling using Krejcie and Morgan's formula, the study employed both descriptive and inferential statistics for data analysis. The results indicated a statistically significant positive influence of information technology on effective tax assessment. Udegbunam and Nwankwo (2023) examined the effects of technological environment on service delivery within the Anambra Internal Revenue Service. The study focused on investigating the relationship between E-payment of tax and taxpayers' commitment to pay tax to AIRS, as well as analyzing the effect of the Internet of Things (IoT) on service quality in AIRS. The findings from the study revealed significant relationships between E-payment of tax and taxpayers' commitment to pay tax to AIRS, as well as a significant effect of the Internet of Things on service quality in AIRS. Meanwhile, Azeez, et al. (2025) investigated the extent to which information technology enhances the efficiency of tax administration of Osun State Internal Revenue Service (OSIRS) in Nigeria. They found that the application of IT enhanced the tax administration efficiency of the Osun State Internal Revenue Service by

automating processes, reducing administrative delays, and enhancing transparency.

In Sub-Saharan Africa,Adegboye (2022)explored the impact of increasing information communication technology (ICT) on government revenue mobilization. The study adopted a Generalized Method of Moments (GMM) analysis, and the study revealed that increasing ICT has a positive impact on tax revenue mobilization, but the marginal effects of ICT are extremely negative. Identified policy thresholds for ICT penetration rates. Similarly, Agbo (2022)assessed the role of ICT in revenue generation and tax administration in Abakaliki, Ebonyi State, Nigeria. The study used a literature review approach to explore various tax tools and the deployment and integration of ICT facilities. The study found that ICT has created new opportunities for revenue generation and tax administration, with significant impacts from the deployment of ICT facilities.

Despite numerous studies on the role of information technology in tax administration globally, limited research has specifically addressed its impact on operational performance at the sub-national level in Nigeria. Prior studies focused largely on tax compliance and revenue generation, overlooking internal performance metrics like efficiency, service delivery, and workflow improvement. Most existing literature employed national or international scopes, with minimal attention to state-level tax agencies such as the Osun State Internal Revenue Service. Additionally, few studies utilized both qualitative and quantitative approaches to assess IT effectiveness holistically. This study fills these gaps by evaluating how IT adoption influences operational performance within a state revenue agency context in Nigeria. Therefore, the hypothesis of this study is stated below.

H0: Information Technology Adoption has no significant impact on the operational performance of State Tax Administration.

H1: Information Technology adoption tax administration has significant impact on the operational performance of State Tax administration.

THEORETICAL FRAMEWORK

The theoretical framework of this study was anchored on the Technology

Acceptance Model (TAM) developed by Davis (1989). This model provides a robust framework for examining the behavioral intention of individuals to adopt and use new technologies based on perceived usefulness and perceived ease of use. In the context of the State Internal Revenue Service (OSIRS), the application of TAM is essential for understanding how tax administrators perceive the use of Information Technology (IT) tools in enhancing their operational functions. As digital systems, such as e-filing, automated assessment, and electronic payment platforms become integral to tax administration, their successful implementation depends on how fundamental and positively revenue officials perceive their efficiency and user-friendliness (Ajala & Adegbie, 2020; Ayeni & Ogbeta, 2022). Studies have confirmed that the perceived benefits of IT systems significantly enhance user adoption, improve tax compliance processes, and streamline operations in revenue agencies (Adegboye et al., 2022; Agbo, 2022).

Furthermore, TAM helps explain the correlation between IT usage and improved operational performance, defined by increased efficiency, reduced manual errors, improved taxpayer service delivery, and quicker decision-making. In line with this, Azeez et al. (2025)observed that IT enhances the internal controls and administrative capacities of OSIRS, enabling timely and accurate tax processing. Similarly, (Adegboye et al., 2022; Agbo, 2022).emphasized that e-taxation has a measurable impact on government tax revenue, largely through enhanced operational outcomes. Therefore, by grounding the study in TAM, this research investigates how perceived usefulness and ease of use influence the adoption of IT tools by staff within OSIRS, and how this in turn contributes to achieving higher operational performance benchmarks. This theoretical foundation supports the argument that effective IT implementation, when embraced by users - drives tangible improvements in tax administration performance.

RESEARCH METHOD

This study adopted a quantitative, cross-sectional survey design. The population comprised 528 staff of the Osun State Internal Revenue Service (OIRS). Random sampling was employed to select target respondents and the study's sample size is 228 and determined using Taro yamene formula

$$n = \frac{N}{1 + N(e)^2}$$ Where:

n = sample size, N = population size (528), and e = margin of error (0.05).

$$n = \frac{528}{1 + 528(0.05)^2}$$

n=227.586 ≈ 228 respondents.

Structured questionnaires were designed using a 5-point Likert scale, covering aspects of IT systems usage and perceived operational performance. The study utilized Covariance-Based Structural Equation Modeling (CB-SEM) with SmartPLS4 software to analyze the data. CB-SEM was chosen because of its strength in handling small and complex variable relationships and assessing model fit comprehensively. Measurement Model (Confirmatory Factor Analysis) and Structural Model (Hypothesis Testing) were applied.

Theoretical Justification

The adoption of the Technology Acceptance Model (TAM) as the theoretical framework for this study is well-justified based on the study's focus on understanding how information technology (IT) adoption influences operational performance in a public sector context, specifically, state tax administration. TAM posits that the behavioral intention to use a technology system is primarily influenced by two key factors: Perceived Usefulness (PU), the degree to which a user believes that using the system will enhance job performance, and Perceived Ease of Use (PEOU), the degree to which the system is perceived as free of effort. These constructs are highly relevant to public service delivery environments, where system adoption is not only influenced by the functionality of the technology but also by how it improves efficiency, responsiveness, and accountability in operations.

In the context of Osun State Internal Revenue Service (OIRS), where digital transformation is expected to streamline tax administration processes, the study assumes a priori that the adoption of IT systems would lead to improved operational performance (outcomes). These include faster processing times, increased revenue collection, better compliance rates, reduced fraud, and enhanced taxpayer trust. TAM provides a robust and empirically validated framework to examine how tax officers' perceptions of IT usefulness and ease drive actual usage behavior, which, in turn, translates into improved organizational performance. Given

this alignment, TAM offers both explanatory power and predictive relevance for the study's objective, making it a suitable model for examining the effectiveness of IT interventions in enhancing operational performance in public sector tax administration.

RESULT AND DISCUSSION

This study presents analysis in table format and graphical representations thereof using CB-SEM techniques.

Measurement Model Assessment

This section presents Table 1, where the measurement model was assessed to evaluate the reliability and validity of the constructs through factor loadings, composite reliability, Cronbach's alpha, and discriminant validity. The results confirmed that all indicators met the required thresholds, supporting the adequacy of the measurement model.

Table 1. Factor Cross Loadings, Construct Reliability, and Discriminant Validity, and Collinearity

Constructs	Variable	IT	OP	Cronbach's Alpha		rho_c	VIF
Information Technology				**Standardized**	**Unstandardized**		
	IT_1	0.569	0.258	0.828	0.827	0.838	1.393
	IT_2	0.545	0.233				1.353
	IT_3	0.62	0.3				1.417
	IT_4	0.656	0.299				1.76
	IT_5	0.74	0.251				1.914
	IT_6	0.667	0.497				1.568
	IT_7	0.772	0.247				1.971
	IT_8	0.72	0.281				1.945
	IT_9	0.769	0.414				2.249
Operational Performance							
	OP_1	0.233	0.715	0.871	0.867	0.868	2.089
	OP_2	0.433	0.668				1.729
	OP_3	0.279	0.782				2.114
	OP_4	0.248	0.766				2.015
	OP_5	0.298	0.722				1.779
	OP_6	0.335	0.742				1.975
	OP_7	0.317	0.697				1.877
	OP_8	0.527	0.706				1.951

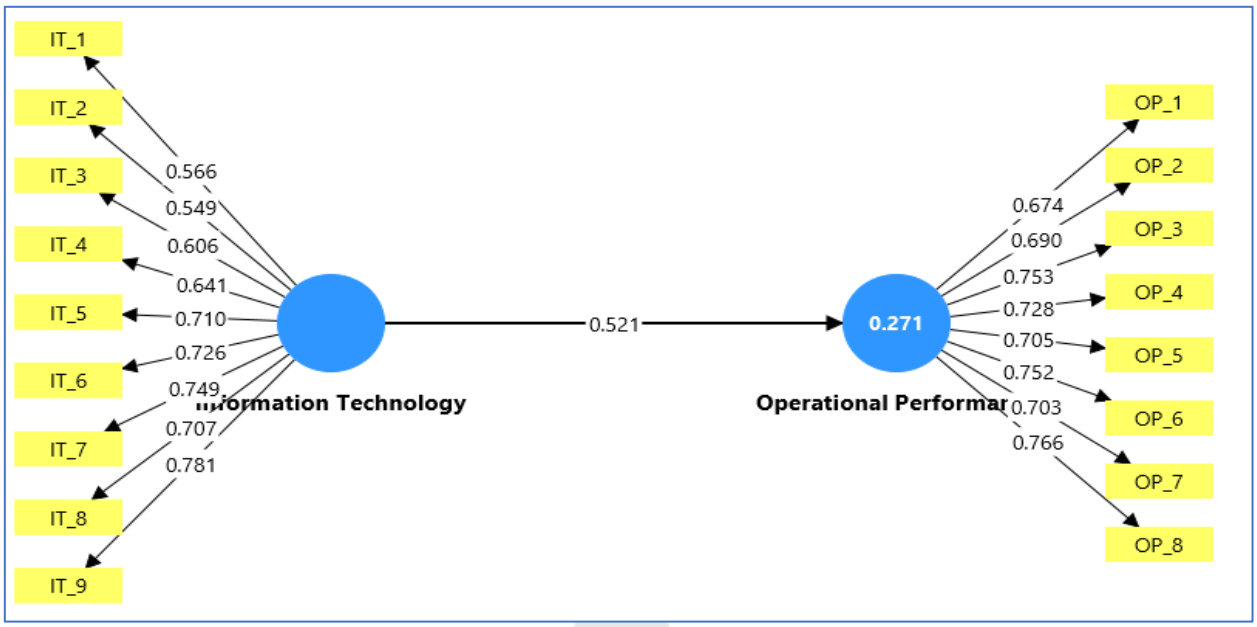

Figure 1: Diagrammatical Representation of Measurement Model of Basic PLS Algorithm

Table 1 presents the factor cross loadings, construct reliability, discriminant validity, and collinearity diagnostics for the study constructs: Information Technology (IT) and Operational Performance (OP). The factor loadings show that all indicators load higher on their respective constructs than on others, and all exceed 0.5, confirming discriminant validity. Cronbach's alpha values, both standardized (0.828 for IT and 0.871 for OP) and unstandardized (0.827 for IT and 0.867 for OP), indicate strong internal consistency. Composite reliability (rho_c) values of 0.838 for IT and 0.868 for OP further affirm construct reliability, as all values above 0.7 threshold. The variant inflation factors (VIF) for all indicators are below the critical threshold of 5, with values ranging between 1.353 and 2.249 for IT items and 1.729 to 2.114 for OP items, suggesting no multicollinearity issues. These results, supported by the diagrammatical measurement model generated using SmartPLS 4 in Figure 1, confirm that the measurement model meets the necessary reliability and validity criteria.

Basic CB-SEM Algorithm Result:

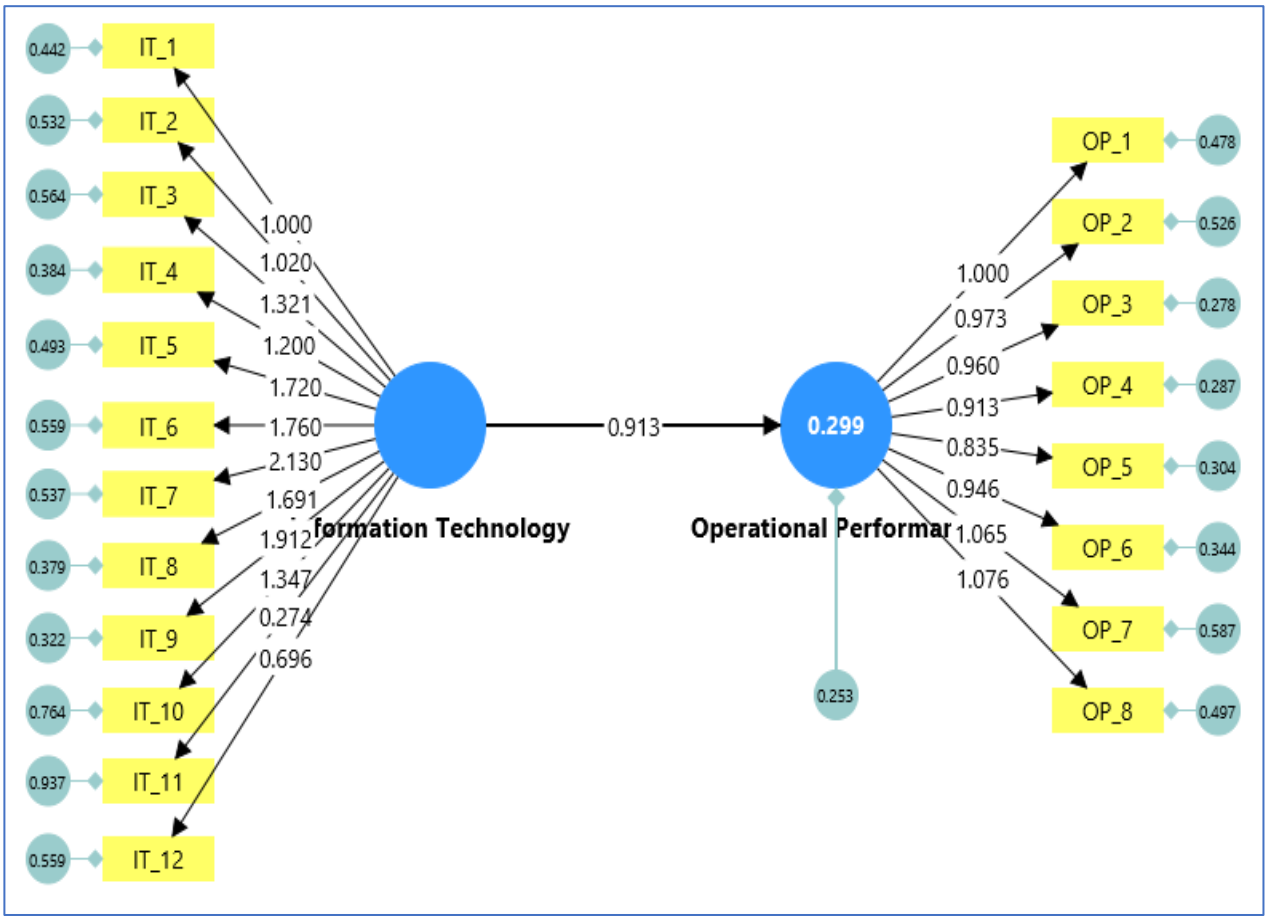

Figure 2: Basic CB-SEM Algorithm Path Diagram

Table 2. Factor Estimated Parameters

	Measurement Indicators	Parameter estimates	Standard errors	T values	P values
IT_1	Availability of electronic filing systems (e-filing platforms)	1.000	0.066	6.702	0.000
IT_2	Ease of access to online tax payment portals	1.020	0.296	3.446	0.001
IT_3	Efficiency of automated taxpayer registration systems	1.321	0.346	3.817	0.000
IT_4	Real-time tracking of tax filing and payments	1.200	0.308	3.901	0.000
IT_5	Integration of multiple tax systems into one digital platform	1.720	0.405	4.243	0.000
IT_6	Functionality of mobile tax applications	1.760	0.424	4.148	0.000

IT_7	Use of electronic notification and reminder systems (e.g., SMS, emails)	2.130	0.488	4.360	0.000
IT_8	Security and privacy protection of taxpayer information	1.691	0.388	4.353	0.000
IT_9	Speed of processing tax returns through IT systems	1.912	0.423	4.517	0.000
IT_10	Availability of self-service options for taxpayers (e.g., FAQs, chatbots)	1.347	0.386	3.486	0.001
IT_11	Technical support services for resolving IT-related issues	0.274	0.299	0.916	0.362
IT_12	Frequency of system updates and innovations in digital tax administration	0.696	0.266	2.614	0.010
OP_1	Increase in overall revenue collection	1.000	0.078	6.133	0.000
OP_2	Reduction in tax processing time	0.973	0.177	5.503	0.000
OP_3	Improvement in tax compliance rates	0.960	0.153	6.255	0.000
OP_4	Reduction in operational costs related to tax collection	0.913	0.149	6.131	0.000
OP_5	Enhancement of taxpayer satisfaction and trust	0.835	0.149	5.608	0.000
OP_6	Timeliness of tax return assessments and issuance	0.946	0.167	5.661	0.000
OP_7	Reduction in incidence of tax fraud and errors	1.065	0.198	5.379	0.000
OP_8	Improvement in internal staff efficiency and productivity	1.076	0.083	6.004	0.000

Figure 2 presents the basic CB-SEM algorithm path diagram, while Table 2 displays the estimated parameters for measurement indicators related to Information Technology (IT) and Operational Performance (OP). The parameter estimates for IT indicators range from 0.274 to 2.130, with most loadings being statistically significant at $p < 0.01$, except for IT_11 (Technical support services), which has a p-value of 0.362 and is thus insignificant. All other IT indicators, such as e-filing availability, real-time tracking, mobile application functionality, and data security, exhibit strong and significant contributions to the IT construct. For Operational Performance, all eight indicators, including revenue increase, reduced processing time, improved compliance rates, cost reduction, and enhanced taxpayer trust, have high and significant loadings ($p < 0.001$), confirming their validity as measures of performance

outcomes. The consistently high t-values and low standard errors across most items further support the reliability and strength of the model, as visually summarized in the SmartPLS4 path diagram.

Structural Model Assessment

Following the validation of the measurement model, the structural model was examined to test the hypothesized relationship between Information Technology and Operational Performance, as presented in Table 3. Path coefficients, t-values, and p-values were analyzed to determine the strength and significance of the relationship.

Table 3. Path coefficients

Constructs	(β)	Std. Err.	T-values	Sig.
IT -> OP	0.913	0.271	3.371	0.001

The findings from Table 3 reveal that Information Technology (IT) has a strong and statistically significant positive effect on Operational Performance (OP), with a path coefficient of 0.913 (p = 0.001). The high t-value of 3.371 indicates that this relationship is not due to chance and that improvements in the use of IT systems - such as e-filing platforms, online payment portals, and automated taxpayer services, substantially enhance the operational efficiency of the State Internal Revenue Service. This suggests that investments in digital tax administration infrastructure directly contribute to better revenue collection, reduced processing time, increased taxpayer compliance, and improved overall service delivery.

Be that as it may, technical support services in tax administration (represented by indicator IT_11) as a proxy for information technology, that is specifically expected to address the resolution of IT-related issues. However, IT_11 appears statistically insignificant, with a p-value of 0.362. This may be due to operational limitations in its implementation, which may decrease operational efficiency of tax administrations especially when compared to other indicators (IT_1 to IT_12), which show strong significance with p-values of 0.000, as presented in Table 2.

The implication is that tax authorities in Osun State, and by extension other state revenue services in Nigeria, must prioritize the continuous upgrading, integration, and security of their IT systems as a strategic approach to improving operational outcomes and achieving greater fiscal sustainability.

This study's finding is consistent with findings from studies (Mikhaleva and Vochozka (2021), Chege et al. (2020), Achibo and Wanjohi (2024), and Lucena (2024) in advanced nations, that information technologies in tax administration have significant effect on organizational performance. Several significant results in developing countries like Iraq, Gambia, Tanzania, Kenya, Ghana, Indonesia and other Sub-Saharan Africa, also align with this study's findings. As Sorguli et al. (2021), Ayeni and Ogbeta (2022) Masunga et al. (2020), Anomah et al. (2024), and Adegboye, et al. (2022) found that IT (online filing, registration), information systems usage or e-tax systems improves tax administration efficiency, and performance of revenue agencies in developing nations. There also limited consistent findings in Nigeria on the relationship between information technology and performance of revenue agencies. Studies like Awai and Oboh (2020), Agbo (2022)found that IT includes e-tax system, ICT tools improve tax compliance, tax administration and revenue generation. However, Adegboye, et al. (2022) mentioned extremely negative marginal effects of ICT on performance of revenue agency.

CONCLUSION

This study examined the impact of Information Technology on the operational performance of the State Internal Revenue Service in Nigeria, using Osun State as a case study. Based on the findings, the study concludes that the integration of robust IT infrastructure, e-tax tools such as e-filing platforms, tax payment portals, automated taxpayer registration systems, real-time tracking and availability of self-service options for taxpayers, leads to improved operational performance (revenue collection, faster processing times, greater taxpayer compliance, and better service delivery). These results align with global trends where technological innovations are transforming tax administration and improving government financial performance, as confirmed by Yu, et al. (2021) in China.

Based on the conclusion, it is recommended that the Osun State Internal Revenue Service continue to invest heavily in upgrading its Information Technology systems. Policy imperative should be given to improving system functionality, data security, mobile accessibility, and technical support services to maximize the benefits of digital tax administration. Additionally, continuous staff training in new technologies and public

awareness campaigns are essential to ensure that both employees and taxpayers can fully utilize and benefit from available IT services. Developing partnerships with private sector technology firms may also enhance system innovation and efficiency.

Limitation

Limitation of this study is its focus on a single state tax authority, Osun State Internal Revenue Service, which restricts the generalizability of the findings to other states or broader national contexts. Additionally, the cross-sectional design captures responses at only one point in time, limiting the ability to observe long-term impacts of IT adoption on operational performance. The reliance on self-reported data through structured questionnaires distributed to target respondents may also introduce response bias, as perceptions may not fully reflect financial performance outcomes.

Policy Implications

At a broader policy level, state governments across Nigeria should prioritize digital transformation initiatives within their revenue services as a strategy to boost operational performance and fiscal sustainability. Establishing a national framework for digital tax administration, supported by federal guidelines and funding, could standardize practices and close performance gaps among states. Furthermore, periodic evaluations of IT investments' effectiveness should be institutionalized to ensure that technology adoption consistently translates into tangible operational and financial improvements.

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