



TAX MANAGEMENT PRACTICES AND PERFORMANCE OF STATE INTERNAL REVENUE SERVICES IN SOUTHWEST, NIGERIA: MODERATING ROLE OF INFORMATION TECHNOLOGY ADOPTION

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Abstract

Despite reforms in Nigeria's tax system, the performance of State Internal Revenue Services (SIRS) remains suboptimal, largely due to ineffective tax management practices and limited technological integration, resulting in low revenue generation. Given these issues, this study investigates the moderating role of information technology (IT) adoption on the relationship between tax management practices and the performance of SIRS in South-West Nigeria. The study aimed to examine both the direct and interaction effects of tax management and IT on institutional performance. A cross-sectional survey design was employed, targeting a population of 8,142 staff across Lagos, Ogun, and Oyo States. A sample size of 381 was determined using Taro Yamane statistical formula and Morgan's table and selected through proportionate stratified random sampling. Data were collected using structured questionnaires and analyzed using Covariance-Based Structural Equation Modeling (CB-SEM) and Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that tax management practices have a statistically significant positive effect on performance ($\beta = 0.471, p < 0.001$), as does IT adoption ($\beta = 0.392, p < 0.001$). However, the moderating effect of IT on the relationship between tax management and performance was statistically insignificant ($\beta = 0.041, p = 0.287$). The study concludes that while both tax practices and IT adoption independently improve SIRS performance, their interaction does not produce an additional significant effect under current conditions. The study recommends that SIRSs should continue flourishing investments in staff training, IT infrastructure, and administrative alignment to strengthen institutional capacity and improve their tax administration efficiencies.

Keywords: Tax Management Practices; Information Technology Adoption; Performance

JEL Classification Codes: H20, M15, H21

INTRODUCTION

Across the globe, the performance of tax authorities is increasingly tied to the efficiency and modernization of their administrative practices. According to the **OECD (2023)**, over 85% of member countries have adopted end-to-end digital tax administration solutions, in solving tax management problems, resulting in a 20–30% increase in voluntary compliance and significant improvements in revenue generation. These reforms reflect a broader global trend where advanced tax management practices, supported by real-time information systems, are now integral to fiscal policy success and public sector performance (Li et al., 2020; Chang et al., 2020; Adhikari & Jnr, 2025).

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In Africa, however, the progress remains uneven. Although digital tax initiatives such as mobile tax payments and e-filing have been introduced in countries like Rwanda, Kenya, and Ghana (Macharia & Oluoch, 2022; Anomah et al., 2024), the continent still faces challenges including poor infrastructure, fragmented systems, and limited taxpayer education. The African Tax Administration Forum (ATAF, 2022) and Ackom et al. (2025) reports that tax compliance rates in Sub-Saharan Africa remain below 50%, with administrative inefficiencies and weak enforcement structures contributing significantly to revenue leakages. As a result, many African countries struggle to meet their budgetary targets, deepen their tax base, and improve service delivery outcomes through taxation.

In Nigeria, tax administration reforms have gained renewed focus under the ongoing national strategy for revenue growth and fiscal sustainability. Yet, state-level tax authorities, particularly the State Internal Revenue Services (SIRS), continue to face challenges related to tax planning issues, compliance monitoring, audit ineffectiveness, and enforcement that have been affecting revenue performance negatively (Oyinkansola & Omodero, 2023; Adebimpe & Dahiru, 2024; Chamba, 2025). The performance of these state tax agencies remains inconsistent, as reflected in the National Bureau of Statistics (NBS) between 2023 and 2024 reports, which shows wide disparities in Internally Generated Revenue (IGR) across states (Makar et al., 2025). This disparity suggests that beyond regulatory frameworks, tax management practices including planning, audit procedures, compliance systems, auditing, risks, controls and enforcement mechanisms assume a critical role in revenue outcomes (Williams et al., 2023; Rezeki & Harahap, 2024). However, emerging research emphasizes and suggests that information technology (IT) adoption may significantly moderate the effectiveness of these practices (Sorguli et al., 2021; Ayeni, 2021; Awai & Oboh, 2020; Adhikari & Jnr, 2025). When properly deployed, IT tools such as automated taxpayer registration, e-filing platforms, integrated audit systems, and real-time data analytics can strengthen transparency, reduce processing time, and improve stakeholder trust, thereby enhancing performance (Ackom et al., 2025).

The performance of State Internal Revenue Services (SIRS) in Nigeria, particularly in the South-West region, remains suboptimal despite ongoing tax reforms and strategic initiatives aimed at increasing internally generated revenue (IGR) (Deshi et al., 2025). Many states still fall short of their revenue targets, with significant disparities in tax efficiency and service delivery outcomes. While Lagos State consistently leads with robust revenue performance, neighboring states such as Ekiti, Ondo, and Osun continue to struggle with low compliance rates, weak enforcement, and administrative bottlenecks (Ibikunle, 2025). These performance gaps raise concerns about the effectiveness of existing tax management practices, including policy implementation and enforcement strategies (Onwunyi & Okoli, 2025).

A core issue lies in the inconsistent implementation of tax management practices across states, which often lack standardization, real-time data access, and structured compliance monitoring systems, as several SIRS rely heavily on manual or fragmented processes, resulting in inefficiencies, revenue leakages, and limited taxpayer engagement (Usman et al., 2025). Despite the legal and institutional frameworks in place, challenges such as limited audit coverage, inadequate taxpayer education, weak internal controls, and non-integrated compliance systems continue to undermine tax administration effectiveness (Rezeki & Harahap, 2024; Oyinkansola &

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Omodero, 2023). These inefficiencies not only impact revenue collection but also erode public confidence in the tax system (Ahinsah-Wobil, 2025).

While the adoption of information technology (IT) is globally recognized as a driver of tax administration reform (OECD, 2023), its impact in Nigeria's subnational tax systems has not been fully harnessed. Some states have introduced digital platforms for e-filing, e-payment, and taxpayer registration, but the level of IT integration, functionality, and usage remains inconsistent (Dagunduro et al., 2025). More importantly, there is limited empirical evidence on how IT adoption interacts with tax management practices to influence overall tax performance. This creates a significant gap in understanding whether IT adoption serves merely as a support tool or as a strategic moderator that can strengthen the effectiveness of tax management systems. Therefore, this study seeks to examine the moderating role of IT adoption on the relationship between tax management practices and the performance of SIRS in South-West Nigeria, where digital infrastructure and administrative capacity vary widely across states. The South-West region is particularly relevant due to its relatively high economic activity, tax diversity, and varying levels of IT infrastructure adoption among its constituent states. The findings of this study are expected to offer practical and policy-relevant insights into how digital transformation can be harnessed to optimize tax administration and improve public revenue performance. This study is designed with three core specific objectives:

- i. To examine the influence of tax management practices on the performance of SIRS in South-West, Nigeria
- ii. To evaluate the effect of information technology adoption on SIRS performance in South-West, Nigeria
- iii. To investigate the moderating role of Information technology adoption in the relationship between tax management practices and performance SIRS in South-West, Nigeria

LITERATURE REVIEW

Conceptual Review

Tax Management Practices

Tax management practices have been explored from various perspectives in the literature, reflecting the absence of a universally accepted definition due to their inherent complexities. According to Santalova et al. (2021), tax management practices refer to the process of handling and administering taxes in accordance with the tax legislation to ensure proper imposition, collection, and deduction of taxes. Another point of view from Pwc (2019) averred that tax management involves establishing a framework for managing tax, defining principles for tax governance, outlining roles and responsibilities for the board and management, implementing a tax risk management approach, conducting control activities, ensuring effective information communication and reporting, monitoring and testing the approach. According to Zhang (2024), these tax management processes encompass activities related to taxpayer registration, tax assessment, tax filing and reporting, payment, compliance and monitoring, audit and investigation, dispute resolution, controls, refund and credit claims, enforcement and penalty imposition, tax policy review and amendments. According to Ogungbesan (2023), and Silalahi (2024), core tax management practices include taxpayer services, tax audit management, tax enforcement, and tax control systems. These practices aim to ensure transparency, accountability, and efficiency in tax administration, thereby improving the performance of revenue agencies.

Information Technology

Information Technology (IT) refers to the use of computers, software, networks, and other digital tools to manage, process, and disseminate information. In the context of public administration, IT enables automation, data integration, real-time communication, and improved decision-making (Macharia & Oluoch, 2020). When applied to tax administration, IT transforms traditional tax processes by digitizing taxpayer registration, filing, payment, compliance monitoring, and reporting (Odetayo et al., 2025). This reduces manual errors, enhances transparency, and improves accessibility for both tax authorities and taxpayers. Technologies such as e-filing systems, automated audit tools, cloud-based databases, and digital tax payment platforms are critical for improving the speed, accuracy, and reliability of tax administration (Nodirsho o'g'li, 2025).

Performance

Performance is generally defined as the extent to which an individual, group, or organization achieves its intended goals or objectives effectively and efficiently within a given time frame (Chamba, 2025). According to Deshi et al. (2025), performance reflects how well tasks, responsibilities, or processes are carried out to produce desired outcomes, often measured using key performance indicators (KPIs) such as productivity, quality, timeliness, and impact. Performance in a public sector setting generally refers to the extent to which institutions achieve their mandated goals efficiently and effectively. For the State Internal Revenue Services (SIRS), performance is measured by indicators such as revenue target achievement, tax compliance rates, operational efficiency, taxpayer satisfaction, and accountability (Olumoh & Sanni, 2022; Odetayo et al., 2025). The performance of SIRS is often influenced by the quality of its tax management practices, including planning, enforcement, and control systems, and the degree to which modern IT tools are adopted (Santalova et al., 2021; Onwunyi & Okoli, 2025). When IT is effectively integrated into tax administration, it can significantly enhance performance by improving internal controls, enabling data-driven decision-making, reducing turnaround times, and boosting public trust. (Elhilali, 2025).

Theoretical Review

The Resource-Based View (RBV) theory, originally developed by Wernerfelt (1984) and later expanded by Barney (1991), emphasizes that an organization's ability to achieve and sustain superior performance lies in its control and strategic use of internal resources. These resources must be valuable, rare, inimitable, and non-substitutable (VRIN) to provide a competitive edge. In the context of tax administration, RBV is particularly relevant in analyzing how internal capabilities such as skilled human resources, effective tax management structures, and the deployment of information technology (IT) can enhance performance (Lucena, 2024; Rezeki & Harahap, 2024; Adebimpe & Dahiru, 2024). For State Internal Revenue Services (SIRS), IT tools like e-filing systems, automated compliance monitoring, and real-time reporting platforms are not just operational aids but strategic resources that can reshape how tax functions are executed, leading to increased efficiency, improved taxpayer services, and higher revenue generation (Oyinkansola & Omodero, 2023; Williams et al., 2023; Odetayo et al., 2025).

Applying the RBV framework to this study underscores the proposition that performance revenue agencies are influenced not only by external regulatory frameworks but also by the extent to which SIRS utilize their internal technological capabilities (Anomah et al., 2024; Atayah & Alshater,

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2021). The theory supports the moderating role of IT adoption in strengthening the relationship between tax management practices and performance. By embedding IT within audit systems, registration processes, and enforcement mechanisms, SIRS can enhance the quality and consistency of tax operations (Nodirsho o'g'li, 2025). However, a fundamental limitation of RBV is its tendency to overlook the influence of external environmental factors, such as political interference, policy changes, and economic volatility, which are particularly relevant in public sector settings like Nigeria. Despite this, RBV remains a useful theoretical lens for examining how internal resource deployment, especially in technology, can significantly impact the operational performance of tax authorities (Silalahi, 2024). Thus, it forms the basis for investigating the strategic role of IT in optimizing tax management practices across South-West Nigeria.

Empirical Review

Tax Management Practices and Performance

Several studies have investigated the relationship between tax management practices and organizational performance. Iorombagah and Abiahu (2021) examined the impact of corporate tax management on the financial performance of listed manufacturing firms in Nigeria using an ex-post facto research design and multiple regression analysis. Their findings indicated that while company income tax had a significant positive effect on net income, tax mix and deferred tax had insignificant effects. Similarly, Oyinkansola and Omodero (2023) analyzed the influence of corporate taxation management and statutory audits on the profitability of listed firms in Nigeria. Employing a panel data approach, their study revealed that high audit quality, driven by tax auditor incentives, enhanced profitability by ensuring tax compliance. Williams et al. (2023) explored the impact of corporate tax management on the financial performance of 16 listed consumer goods firms in Nigeria from 2011 to 2021, using random effect panel regression. They found that company income tax negatively affected financial performance, while education tax had a significant positive impact on financial performance.

Examining a broader perspective, Iworiso et al. (2023) studied taxation revenue management and economic growth in Nigeria from 1994 to 2021. Their findings indicated that Value Added Tax significantly contributed to economic growth, while petroleum profit tax had a negative effect due to subsidy-related costs. Similarly, Adebimpe and Dahiru (2024) investigated tax management's influence on financial performance in publicly listed consumer goods firms between 2011 and 2022. Their random effect regression analysis showed that tax expenses significantly improved asset returns, while deferred tax liabilities also had a notable impact. The study by Rezeki and Harahap (2024) investigated the implementation of tax management policy by the Regional Financial and Revenue Management Agency in Medan City, and found the tax management policy is in place, but there are significant deficiencies in its execution. A key issue identified is the lack of effective supervision over tax collection, particularly in the restaurant and hotel tax segment.

Information Technology and Performance

Several studies across different regions have consistently demonstrated the significant role of information technology (IT) in enhancing tax administration performance and tax compliance. In developed countries like China, England, and Russia, empirical studies by Li et al. (2020), Shome (2020), and Mikhaleva & Vochozka (2021) investigated the impact of information technology on organizational performance, found that the adoption of advanced technologies such as GTP III

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systems, ICT-driven performance analytics, and innovations like blockchain and big data significantly improved tax enforcement capacity, operational efficiency, and reduced tax sheltering. Similarly, global comparative analyses by Chang et al. (2020) and Adhikari and Jnr (2025) confirmed that strategic IT investments, particularly in areas like AI, data integration, and digital audit tools, have significantly strengthened core tax administration functions, revenue collection, and reduced tax evasion.

In Africa, the impact of IT adoption has been affirmatively documented in countries like Tanzania, Kenya, The Gambia, Ghana, and Nigeria, with studies (Masunga et al., 2020; Shem, 2020; Ayeni, 2021; Anomah et al., 2024; Awai & Oboh, 2020) showing that e-tax systems, IT outsourcing, and blockchain technology all contribute to improved revenue collection, reduced leakages, and greater taxpayer compliance. While some studies, such as Lucena (2024) in Brazil and Sorguli et al. (2021) in Iraq, confirm that IT infrastructure, especially electronic tax systems, directly enhances administrative productivity, others, including Mahpudin (2024) in Indonesia, highlight the need for robust policy alignment to fully realize these benefits. Despite the diversity in methodologies, ranging from descriptive surveys to content and meta-analyses, a common thread is that IT adoption improves tax transparency, simplifies taxpayer interactions, and strengthens audit and enforcement functions. However, issues such as uneven IT access, stakeholder resistance, and system reliability persist, particularly in emerging economies. Collectively, these studies provide robust support for investigating the moderating role of IT adoption on the relationship between tax management practices and the performance of tax authorities, particularly within the context of Nigeria's subnational tax systems.

Despite growing global evidence, there remains limited empirical research on how information technology adoption interacts with tax management practices to influence institutional performance in developing countries. For instance, while studies in The Gambia (Ayeni, 2021), Kenya (Shem, 2020; Macharia & Oluoch, 2022), Ghana (Anomah et al., 2024), and Indonesia (Mahpudin, 2024) have shown the positive impact of IT or digital tax reforms on tax outcomes, they have not examined the combined or moderating effect of IT adoption on tax practices and performance. In Nigeria, most existing research focuses either on corporate tax management and financial performance using secondary data or ignores survey research with primary data (Iormbagah & Abiahu, 2021; Oyinkansola & Omodero, 2023; Williams et al., 2023; Adebimpe & Dahiru, 2024) or explores the direct role of IT on compliance (Awai & Oboh, 2020) without assessing its interaction with management practices. Furthermore, studies like Iworiso et al. (2023) and Rezeki & Harahap (2024) take a national or organizational-level view, overlooking sub-national tax bodies.

Recently, Onwunyi and Okoli (2025) examined the effect of e-governance on tax revenue management within the Federal Inland Revenue Service (FIRS) in Enugu State between 2015 and 2023, revealing that e-tax platforms and digital governance frameworks significantly improved tax administration efficiency and government agency performance. Similarly, Molete et al. (2025) highlighted that IT strategic planning positively influences SME performance, particularly through measurable improvements in key performance indicators. Complementing these findings, Hassan et al. (2025) explored the perceptions of auditors and accountants on the combined role of IT in fraud detection and prevention, establishing that robust IT systems enhance transparency and

accountability in financial processes. Collectively, these studies suggest that the integration of e-governance and IT systems not only improves operational effectiveness but also strengthens oversight mechanisms and trust in public and private institutions.

Specifically, the performance of State Internal Revenue Services (SIRS) in Nigeria, particularly in terms of how their internal tax management practices and IT adoption affect revenue and service delivery outcomes, using primary data, remains underexplored. No known study has comprehensively investigated the moderating role of information technology in the relationship between tax management practices and SIRS performance at the state level, especially in the South-West geopolitical zone, which has diverse economic bases and varying levels of IT infrastructure. This institutional gap justifies the need for a focused investigation into the interplay of tax management, information technology adoption, and performance outcomes in the State Internal Revenue Services in South-West Nigeria. This study has therefore examined the interplay between the subject matters.

METHODOLOGY

This study employed a cross-sectional survey research design and relied on primary data collected from a population of 8,142 staff members across the selected State Internal Revenue Services in Lagos, Ogun, and Oyo States in South-West Nigeria. Specifically, the staff distribution includes 4,879 from Lagos, 1,728 from Ogun, and 1,535 from Oyo. These states were selected due to their concentration of tax administration activities and leading positions in internally generated revenue in the regions. The sample size of 381 for the study was determined using the Taro Yamane (1967) formula, and the distribution of both the population and sample size across the variables is presented in Table 1. For a finite population, the simplified Yamane (1967) formula was applied, and the sample size was then calculated as $n = N/1+N(e)^2$, $n = 8,142/1+8,142(0.05)^2 = 381.3$

Table1. Proportional allocation across the three State Internal Revenue Services

State	Staff	Share	Sample (rounded)
Lagos	4,879	0.599	228
Ogun	1,728	0.212	81
Oyo	1,535	0.189	72
Total	8,142	1.000	381

Source: Author’s Compilation (2024) from the database of the Joint Tax Board of each State.

Table 1 presents the proportional allocation of the 381-sample size across the three selected State Internal Revenue Services based on their staff strength. Lagos, having the largest share (59.9%), contributed 228 respondents, followed by Ogun with 81 (21.2%) and Oyo with 72 (18.9%). A stratified sampling technique was applied to ensure that staff categories within each state were fairly represented in the survey. For data analysis, both Covariance-Based Structural Equation Modeling (CB-SEM) and Partial Least Squares Structural Equation Modeling (PLS-SEM) were utilized. CB-SEM was applied to evaluate the measurement model, focusing on factor loadings, mean structure, covariances, and indicator error terms. To analyze the moderating effect of information technology on the relationship between tax management practices and the performance of revenue agencies, the study employed PLS-SEM with bootstrapping for interaction analysis. the model specification of this study is stated as:

$$PERF = \beta_0 + \beta_1(TMP) + \beta_2(IT) + \beta_3(TMP \times IT) + \epsilon \dots \dots \dots (1)$$

Equation (1) represents a moderated regression model where Performance (PERF) is influenced by Tax Management Practices (TMP), Information Technology (IT), and their interaction term (TMP × IT). The coefficient β_3 captures the moderating effect of IT on the relationship between TMP and performance, while ε denotes the error term.

RESULTS AND DISCUSSION

This section provides a comprehensive analysis of the data obtained from the questionnaires administered. The analysis is structured into two key components: the Measurement Model and the Structural Model. Simultaneously, the Measurement Model was evaluated, and the basic CB-SEM algorithm was employed to assess the factor loadings, mean structure of manifest variables, factor covariances, and quality criteria for evaluating construct reliability and validity. These results are presented in Tables 2 to 4. Additionally, PLS-SEM Bootstrapping was utilized to perform the moderation analysis, and the outcomes are reported in Table 6.

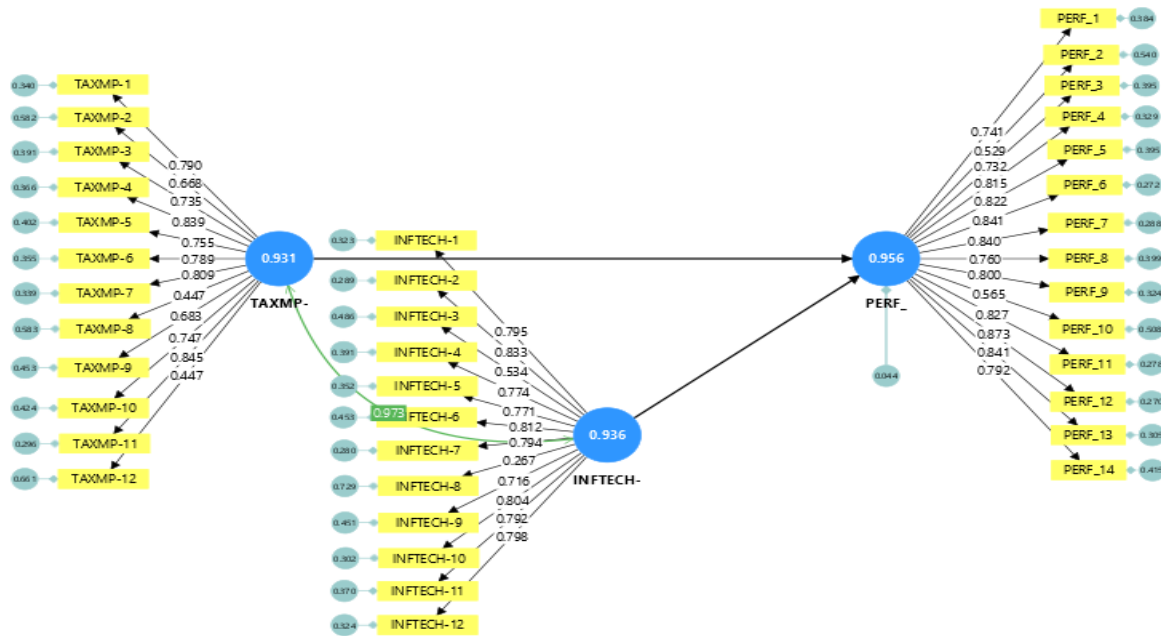


Figure 2: CB-SEM Analysis

The image in figure 2 displays the Basic CB-SEM (Covariance-Based Structural Equation Modeling) output showing factor loadings for three latent constructs: TAXMP (Tax Management Practices), INFTECH (Information Technology), and PERF (Performance).

Each latent construct is represented by a blue circle and is measured by several manifest (observable) variables shown in yellow boxes (e.g., TAXMP-1 to TAXMP-12). The factor loadings, which appear along the lines connecting each manifest variable to its corresponding latent variable, indicate the strength of the relationship between them. Most loadings are above the acceptable threshold of 0.70, demonstrating that the indicators reliably measure their constructs. For example, INFTECH-4 loads at 0.833, showing a strong contribution to the INFTECH latent constructs. The composite reliability values are shown inside the blue latent construct circles: 0.931 for TAXMP-, 0.936 for INFTECH-, and 0.956 for PERF_, all indicating excellent reliability. Structural paths (black arrows) connect the latent constructs, with path coefficients displayed on

the arrows (e.g., from INFTECH- to PERF_ is 0.644), representing the hypothesized causal relationships.

Conversely, the diagram confirms that the measurement model has strong factor loadings and internal consistency, validating the constructs used in the model and supporting the structural relationships among tax practices, IT, and performance.

Table 2. Mean Structure – Measurement Model Means and Intercepts

Manifest variables	Indicators	Parameter estimates	Standard errors	T values	P values
INFTECH-1	Automation of Core Tax Processes	0.323	0.050	6.511	0.000
INFTECH-2	Tax information system quality	0.289	0.045	6.356	0.000
INFTECH-3	Investment in IT Infrastructure	0.486	0.071	6.827	0.000
INFTECH-4	Data Quality and Integrity within IT Systems	0.391	0.060	6.562	0.000
INFTECH-5	Interconnectivity with National Databases (e.g., BVN, NIN)	0.352	0.054	6.558	0.000
INFTECH-6	Integration of Tax Databases Across Agencies	0.453	0.070	6.459	0.000
INFTECH-7	Real-Time Monitoring and Reporting Tools	0.280	0.043	6.484	0.000
INFTECH-8	Timely System Maintenance and Support	0.729	0.105	6.911	0.000
INFTECH-9	Real-Time Taxpayer Service Portals for Self-Service	0.451	0.068	6.663	0.000
INFTECH-10	Cybersecurity Measures for Tax Systems	0.302	0.047	6.385	0.000
INFTECH-11	Cloud-Based Tax Administration Infrastructure	0.370	0.057	6.520	0.000
INFTECH-12	Electronic Document Management Systems (EDMS)	0.324	0.050	6.487	0.000

Source: Author’s Computation (2025)

Table 2 presents the mean structure of the measurement model, showing the parameter estimates, standard errors, t-values, and p-values for twelve manifest variables representing different aspects of information technology (INFTECH) adoption in tax administration. All indicators recorded statistically significant parameter estimates ($p < 0.001$), with t-values ranging from 6.356 to 6.911, indicating strong contributions of each indicator to the underlying construct. Among them, “Timely System Maintenance and Support” (INFTECH-8) had the highest parameter estimate (0.729), suggesting it is the most influential factor, while “Real-Time Monitoring and Reporting Tools” (INFTECH-7) had the lowest (0.280). Hence, Table 2 confirms that all measured indicators are valid and significant components of the IT construct within the tax administration framework.

Table 3. Mean Structure – Measurement Model Means and Intercepts for Performance

Manifest variables	Indicators	Parameter estimates	Standard errors	T values	P values
PERF_1	Revenue target achievement	0.384	0.058	6.647	0.000
PERF_2	Operational Efficiency with Autonomy	0.540	0.079	6.842	0.000
PERF_3	Efficiency of the tax collection process	0.395	0.059	6.664	0.000
PERF_4	Cost reductions and tax gap reductions	0.329	0.051	6.445	0.000
PERF_5	Transparency, Accountability, and Governance	0.395	0.061	6.461	0.000
PERF_6	Elimination of tax fraud cases	0.272	0.043	6.383	0.000
PERF_7	Stakeholder engagement in tax policy discussions	0.288	0.046	6.315	0.000
PERF_8	Reduction in tax evasion cases	0.399	0.060	6.607	0.000
PERF_9	Tax Compliance	0.324	0.050	6.518	0.000
PERF_10	Turnaround time for tax return processing	0.508	0.075	6.819	0.000
PERF_11	Staff productivity and capacity	0.278	0.043	6.401	0.000
PERF_12	Contribution to state economic development	0.270	0.044	6.174	0.000
PERF_13	Taxpayer satisfaction level	0.305	0.048	6.368	0.000
PERF_14	Responsiveness to taxpayer complaints	0.415	0.063	6.545	0.000

Source: Author’s Computation (2025)

Table 3 presents the mean structure for the performance measurement model of the State Internal Revenue Services, highlighting the parameter estimates, standard errors, t-values, and p-values for fourteen manifest variables. All indicators are statistically significant at the 0.001 level ($p < 0.000$), with t-values ranging from 6.174 to 6.842, confirming the strong contribution of each variable to the performance construct. “Operational Efficiency with Autonomy” (PERF_2) and “Turnaround Time for Tax Return Processing” (PERF_10) had the highest parameter estimates of 0.540 and 0.508, respectively, indicating they are the most influential indicators of performance. Conversely, “Contribution to State Economic Development” (PERF_12) and “Elimination of tax fraud cases” (PERF_6) recorded the lowest estimates, though still significant. Conversely, results in Table 3 validate that all listed indicators significantly represent the performance dimensions of the tax authority.

Table 4. Mean Structure – Measurement Model Means and Intercepts for Tax Management Practices

Manifest variables	Indicators	Parameter estimates	Standard errors	T values	P values
TAXMP-1	Tax Planning Effectiveness	0.340	0.053	6.477	0.000
TAXMP-2	Taxpayer Registration Efficiency	0.582	0.087	6.699	0.000
TAXMP-3	Taxpayer Education and Awareness Programs	0.391	0.059	6.617	0.000

TAXMP-4	Tax Audit and Investigation Procedures	0.366	0.058	6.291	0.000
TAXMP-5	Tax Controls and Compliance Monitoring System	0.402	0.061	6.577	0.000
TAXMP-6	Accuracy of Tax Assessments	0.355	0.055	6.496	0.000
TAXMP-7	Enforcement and Penalty Mechanisms	0.339	0.053	6.438	0.000
TAXMP-8	Filing and Payment Systems	0.583	0.085	6.861	0.000
TAXMP-9	Tax Dispute Resolution Procedures	0.453	0.068	6.698	0.000
TAXMP-10	Clarity of Tax Policies and Guidelines	0.424	0.064	6.593	0.000
TAXMP-11	Internal Control Systems for Tax Collection	0.296	0.047	6.278	0.000
TAXMP-12	Risk Management in Tax Administration	0.661	0.096	6.863	0.000

Source: Author’s Computation (2025)

Table 4 presents the mean structure of the measurement model for Tax Management Practices (TAXMP), detailing parameter estimates, standard errors, t-values, and p-values for twelve manifest variables. All indicators are statistically significant ($p < 0.000$), with t-values ranging from 6.278 to 6.863, indicating strong contributions to the latent construct. The highest parameter estimates were recorded for “Risk Management in Tax Administration” (0.661) and “Filing and Payment Systems” (0.583), signifying their critical role in effective tax management. Similarly, “Taxpayer Registration Efficiency” and “Tax Dispute Resolution Procedures” also showed relatively high impact. On the other hand, “Internal Control Systems for Tax Collection” had the lowest estimate (0.296), though still significant. Overall, the results confirm that all listed indicators are valid and significant components for evaluating tax management practices within the revenue service framework.

Table 5. CB-SEM - Factor Covariance

Latent variables	INFTECH	PERF	TAXMP
Information Technology (INFTECH),	0.554	0.482	0.545
Performance (PERF)	0.482	0.468	0.485
Tax Management Practices (TAXMP)	0.545	0.485	0.567

Source: Author’s Computation (2025)

Table 5 presents the factor covariance results from the CB-SEM analysis, showing positive relationships among Information Technology (INFTECH), Performance (PERF), and Tax Management Practices (TAXMP). The covariance between INFTECH and TAXMP (0.545) indicates a strong association, suggesting that enhanced IT capabilities are often aligned with effective tax management systems. Similarly, INFTECH and PERF (0.482), as well as TAXMP and PERF (0.485), show moderate positive covariances, implying that improvements in both IT infrastructure and tax practices are associated with better performance outcomes in State Revenue Agencies. These results support the interconnectedness of internal capabilities as emphasized by the Resource-Based View.

CB-SEM -Quality Criteria

Table 6 Construct Reliability and Validity

Latent Variables	Cronbach's alpha (standardized)	Cronbach's alpha (unstandardized)	Composite reliability (rho_c)	Average variance extracted (AVE)
INFTECH-	0.930	0.931	0.936	0.549
PERF_	0.953	0.954	0.956	0.603
TAXMP-	0.927	0.928	0.931	0.525

Source: Author’s Computation (2025)

Table 7. R-Square Assessment

PERF_	0.850	0.845
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Source: Author’s Computation (2025)

Tables 6 and 7 provide evidence of the reliability, validity, and explanatory power of the measurement and structural models. In Table 6, all three constructs: Information Technology (INFTECH), Performance (PERF), and Tax Management Practices (TAXMP) exhibit high internal consistency, with Cronbach’s alpha values exceeding 0.90 and composite reliability (rho_c) above 0.93, compared with a 0.7 threshold, indicating excellent reliability. The Average Variance Extracted (AVE) values for all constructs are above the minimum threshold of 0.50, confirming adequate convergent validity. Table 7 shows that the R-squared value for Performance (PERF) is 0.850, meaning that 85% of the variance in agency performance is jointly explained by INFTECH and TAXMP. This high explanatory power demonstrates that the model is robust and that these constructs are strong predictors of performance within State Revenue Agencies.

Structural Model: Moderating Analysis through PLS-SEM Bootstrapping

The structural model presents the moderating analysis conducted using PLS-SEM bootstrapping to examine the interaction effects among variables (Information Technology, Tax Management Practices, and Performance).

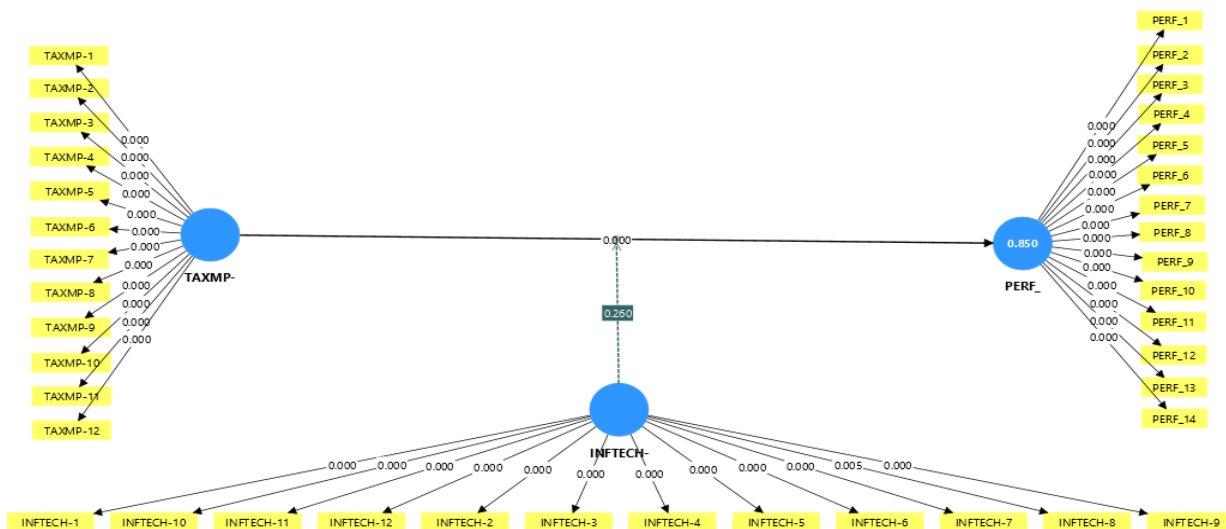


Figure 3. Structural Model

Figure 3 presents the structural model used for moderating analysis via PLS-SEM bootstrapping, illustrating the interaction effects between variables. The model visually confirms the strength, direction, and significance of relationships, including the moderating role within the hypothesized framework, as presented in Table 8.

Table 8. Path Coefficient Interaction Analysis

Constructs	Original sample	Sample mean	Standard deviation	T statistics	P values
TAXMP- -> PERF	0.403	0.407	0.108	3.745	0.000
INFTECH- -> PERF	0.551	0.547	0.107	5.131	0.000
INFTECH- x TAXMP- -> PERF	0.058	0.057	0.051	1.128	0.260

Source: Author’s Computation (2025)

Table 8 presents the structural model results for the relationships between Tax Management Practices (TAXMP), Information Technology (INFTECH), and the Performance (PERF) of State Revenue Agencies in South-West Nigeria.

Restatement of Hypotheses

H₀₁: Tax management practices do not have a significant influence on the performance of SIRS.

Based on the path coefficient presented in Table 8, the results reveal that TAXMP has a positive and statistically significant effect on PERF, with a path coefficient of 0.403 and a p-value of 0.000. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted. This indicates that effective tax management practices serve as a critical internal resource that enhances agency performance.

H₀₂: Information technology has no significant impact on the performance of SIRS.

Information Technology (INFTECH) also shows a strong and statistically significant positive influence on PERF, with a coefficient of 0.551 and a p-value of 0.000, leading to rejection of null hypothesis and acceptance of the alternative hypothesis. This confirms that information technology (IT) capabilities are vital performance-enhancing assets. The relatively high t-statistic (5.131) further emphasizes the strength and reliability of this relationship. It also indicates that IT may improve automation, data management, and real-time decision-making, which contributes to greater efficiency and effectiveness in revenue administration.

H₀₃: Information technology does not significantly moderate the relationship between tax management practices and the performance of SIRS

However, the interaction effect between information technology (INFTECH) and tax management practices (TAXMP) on performance is statistically insignificant, with a coefficient of 0.058, a t-statistic of 1.128, and a p-value of 0.260, leading to rejection of the null hypothesis and acceptance of the alternative hypothesis. This suggests that information technology does not significantly moderate the relationship between tax management practices and agency performance. additionally, both INFTECH and TAXMP independently influence performance; their combined (interactive) effect does not produce an additional synergistic impact within the context of this study.

Discussion of Findings

The findings from the structural model support the first hypothesis tested revealed that tax management practices significantly affect the performance of State Internal Revenue Services (SIRS). Drawing from the Resource-Based View (RBV), tax management practices such as audit procedures, policies, enforcement mechanisms, taxpayer education, compliance monitoring and controls constitute valuable internal capabilities that enhance institutional efficiency, compliance and service delivery. The results confirm that SIRS in South-West Nigeria that effectively implement structured tax management strategies tend to experience improved performance outcomes. These findings are consistent with previous research (Iormbagah & Abiahu, 2021; Oyinkansola & Omodero, 2023; Adebimpe & Dahiru, 2024; Iworiso et al., 2023; Rezeki & Harahap, 2024), reinforcing the argument that robust tax governance and planning contribute meaningfully to revenue agency effectiveness, although some studies (Williams et al., 2023) suggest that the effect may vary based on specific tax types or economic conditions.

In line with the second hypothesis tested, the results show that information technology adoption has a strong and significant positive impact on the performance of SIRS. This affirms the RBV theory assertion that technological infrastructure represents a strategic asset capable of transforming routine tax functions into value-enhancing processes. When properly deployed, IT tools such as e-filing systems, taxpayer portals, automated audits, and integrated databases can significantly improve service responsiveness, reduce administrative delays, and increase compliance levels. These outcomes are consistent with previous findings (Li et al., 2020; Shome, 2020; Mikhaleva & Vochozka, 2021; Hamza et al., 2021; Ayeni, 2021; Shem, 2020; Awai & Oboh, 2020; Odetayo et al., 2025), though occasional system failures and implementation gaps remain a concern (Awai & Oboh, 2020). Overall, the study validates the view that investment in IT infrastructure is critical to optimizing the performance of state-level tax authorities.

Contrary to expectations, the third hypothesis tested shows that information technology does not significantly moderate the relationship between tax management practices and performance. The interaction between IT adoption and tax management practices does not significantly enhance the overall performance of SIRS in South-West Nigeria. This suggests that while both variables are individually important, their combined or synergistic impact is not evident within this context. This aligns with the literature, where few studies (Chang et al., 2020; Atayah & Alshater, 2021) have examined such moderating relationships globally, and no known study has explored this dynamic within Nigeria's subnational tax systems. This outcome highlights a nuanced insight: that successful performance outcomes depend more on the independent strength of both tax practices and IT capabilities rather than their interaction, warranting further investigation.

The Resource-Based View (RBV) theory supports the relationships in this study by positing that internal resources, such as effective tax management practices and information technology systems, are strategic assets that drive superior organizational performance. When these resources are valuable, rare, inimitable, and non-substitutable (VRIN), they enhance the efficiency and effectiveness of tax administration. Thus, RBV justifies the influence of both tax practices and IT adoption on the performance of SIRS.

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However, the absence of a significant moderate effect implies that State Revenue Agencies may need to better align or integrate IT with tax management strategies to fully realize potential synergies. This insight can guide future investments and policy directions aimed at improving revenue administration performance.

CONCLUSION AND RECOMMENDATIONS

This study examined the moderating role of information technology (IT) adoption on the relationship between tax management practices and the performance of State Internal Revenue Services (SIRS) in South-West Nigeria. Findings revealed that both tax management practices and IT adoption individually have significant positive impacts on SIRS performance, affirming their strategic value as internal resources per the Resource-Based View (RBV) theory. However, the interaction effect between IT and tax management practices was not statistically significant, suggesting that while each contributes to performance on its own, their synergy may require further structural and institutional alignment to be effective. The results underscore the importance of strengthening both administrative practices and technological infrastructure to drive improved performance in subnational tax systems.

SIRS should invest in continuous training and capacity building for staff to effectively implement structured tax management practices across all operational levels. Additionally, State governments should continue to prioritize the full integration and standardization of IT systems in tax administration to enhance compliance monitoring and service delivery. Furthermore, Policymakers should develop frameworks that align IT capabilities with strategic tax objectives, ensuring that both elements are institutionally synchronized for optimal outcomes.

Policy and Social Implications

The findings have significant implications for fiscal policy and governance at the state level. Strengthening tax management systems and expanding IT infrastructure can lead to improved revenue generation, enhanced transparency, and increased taxpayer trust. Socially, improved performance of SIRS promotes better public service delivery and accountability, ultimately contributing to sustainable economic development and social welfare within the region.

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