Journal of
APPLIED ECONOMICS, SOCIAL DYNAMICS, AND BUSINESS

Digitalization and service delivery in state tax administration: evidence from the Anambra state Internal Revenue Service (AIRS)

Vincent Kenechukwu Okpala
Department of Public Administration, Chukwuemeka Odumegwu Ojukwu University
Igbariam, Anambra state, Nigeria

KEYWORDS

Digitalization, Digital Governance, Tax Administration, Service Delivery, AIRS, Anambra State

ABSTRACT

With the rapid advancement of Information and Communication Technology (ICT), modern public organizations globally are shifting from manual operational frameworks to integrated digital systems to optimize administrative efficiency. This study examines the effects of digitalization on service delivery and revenue performance within the Anambra State Internal Revenue Service (AIRS). Anchored on the Diffusion of Innovation Theory, the research utilizes a descriptive survey research design, gathering primary data through structured questionnaires from a randomly selected sample of 40 staff members drawn from a total population of 205 operational personnel. Descriptive statistics (frequencies, percentages, and mean scores) and inferential statistics (correlation and simple regression via SPSS) were employed for data analysis. The empirical findings reveal that digitalization has significantly enhanced service delivery by mitigating bureaucratic bottlenecks, improving data accessibility, and increasing procedural transparency. Furthermore, the introduction of automated processing frameworks, including online tax payment platforms and electronic monitoring tools, has substantially optimized revenue performance by reducing fiscal leakages, curbing manual corrupt practices, and expanding voluntary tax compliance. Despite these advancements, the study identifies critical structural challenges impeding full operational efficiency, notably deficient ICT infrastructure, unstable internet connectivity, and inadequate digital training among administrative staff. Consequently, the study recommends that the Anambra State Government prioritize sustained investments in high-speed digital infrastructure, mandate comprehensive, continuous technical capacity development programs for revenue officers, fortify cybersecurity protocols to protect sensitive taxpayer data, and launch widespread public enlightenment campaigns to enhance continuous electronic compliance and civic trust.

1. Introduction

With the global upsurge of advanced technology, there is an accelerating adaptation toward shifting from manual to digital methods of executing institutional activities. This trend of digitalization has become noticeably prevalent due to innovations introduced by Information and Communication Technology (ICT). As a concept, ICT is diverse in nature and has greatly dominated different spheres of human and organizational activities, ranging from expedited communication among peers to improved service delivery within complex organizations. The advancement and circulation of technology permeate both private and public organizations, albeit with unparalleled adoption levels. Public organizations, such as government-established firms and parastatals, can gain immensely through strategic ICT adoption. Digitalization can significantly improve key tenets of public organizations, such as automation, streamlined service delivery, operational efficiency, systemic effectiveness, and institutional transparency. Nations that are fundamentally citizen-oriented aim to facilitate their agencies toward achieving national goals by properly equipping their administrative staff.

Digital governance becomes a potent tool to accomplish these national goals when governments adopt available technological services such as 5G internet networks to enhance speedy communication and computerized record-keeping architectures like cloud databases to allow for easy access to governmental and administrative activities. By applying these available resources, governments improve transparency and efficiency in discharging duties. Specifically, digital governance enhances institutional throughput by avoiding unnecessary administrative bureaucracy that may impinge on fast-tracking public service delivery.

* Corresponding author's E-mail address: kenechukwu.okpalaa@gmail.com
Received March 20, 2026; Received in revised form April 29, 2026; Accepted: May 30, 2026.

Primarily, it falls within the ambits of government to provide essential public services and infrastructure while effectively managing the state economy, all of which are geared toward maximizing the welfare of the citizens. Therefore, digital governance becomes necessary to ensure that the administrative engagements of governments are performed optimally. Accountability and transparency can be significantly improved through digitalization, as it allows public budgeting and procurement records to be available online for public auditing (Nwambuko Temple, 2025).

A major argument for digital governance is its ability to boost democratic participation among citizens by ensuring real-time engagement with government representatives and providing avenues to receive instant feedback. Equal accessibility of citizens to public data is one of the core ways digital governances benefits the masses. Scholars argue that digital governance can also enhance the reduction of pervasive administrative bureaucracy by drastically improving processing times for structured activities, such as the issuance of operational permits and corporate tax payment processes.

Just as the enactment of modern digital processes is one of the foremost methods applied by governments to improve administration, ensure service delivery, drive rural-urban development, and sustain taxation, it becomes paramount for the government to justify the taxes paid by citizens by fully embracing all tenets of digitalization. One of the primary ways a government ensures the generation and management of strategic funds to engage in public works and developmental projects is through tax administration. Governments, through appropriate designated agencies, ensure the robust generation of taxes within their geography, and these funds become essential in carrying out developmental goals.

Tax administration serves as the operational mechanism that turns abstract tax laws into actual revenue for the government. Efficient tax administration secures government revenue by ensuring proper implementation and collection to prevent structural budget deficits. Furthermore, tax administration promotes equity in the economy by ensuring a fair distribution of tax assessments among eligible individuals and businesses, thereby preventing an unfair burden from falling upon compliant taxpayers. As noted in World Bank publications, when tax administration is fair, transparent, convenient, and properly utilized, it encourages taxpayers to willingly fulfill their obligations.

The use of modern digital tools for tax administration can effectively prevent leakages and corruption that often emanate from opaque tax processes. Conversely, manual methods of tax administration expose tax agencies to severe operational inefficiencies, such as slow processing times in filing and sorting, and cumbersome record-keeping associated with managing mountains of paperwork (Emilia Stazi, 2023). Another notable issue associated with manual taxation is human error, arising from manual computation, mathematical mistakes, misplaced source documents, and valuation difficulties concerning complex properties or business incomes (Stanley Surrey, 1958).

Corrupt practices, such as the collection of bribes resulting from in-person cash collections and discretionary, arbitrary assessments, are also common features of manual tax administration. Furthermore, matters of tax touting where unprofessional middlemen hijack and divert revenue meant for the government severely undermine manual practices. In contrast, digital tax administration discourages inconvenient filing structures that force taxpayers to travel long distances to revenue offices, effectively preventing the administrative bottlenecks common in manual taxation systems (Adrienne Lees).

In Anambra State, the apex agency tasked with the generation and management of internally generated revenue is the Anambra State Internal Revenue Service (AIRS). The primary mandate of AIRS involves the assessment, collection, and enforcement of taxes and levies within the state (airs.an.gov.ng). This agency is expected to be impartial in administering its duties by ensuring that digitalized processes are strictly adhered to. Digital procedures are aimed at enhancing tax clearance verification and the proper tracking of tax systems, thereby embodying the institutional benefits of automated methods.

The application of digital processes serves as a critical justification by the government to its citizens that a proper, fair, and accountable tax administration system is in effect. The adoption of digital practices within AIRS indicates that innovative operational methods have become standard for the government of Anambra State. To efficiently perform these duties, it is imperative that the government, through deliberate development strategies, ensures adequate staff training and capacity development. This inherently equips the staff of AIRS with both the conceptual and technical abilities that their operational goals require.

The application and utilization of advanced technology in processing tax administration requires robust technical knowledge, including the use of digital equipment to perform administrative tasks on specialized software, spreadsheets, and networked internet platforms. Proper utilization of these digital apparatuses discourages systemic errors, operational inefficiencies, and corrupt practices that naturally arise through manual or analog methods.

1.1 Problem Statement

In contrast to digital adoption in administrative processes, the traditional manual approach to tax administration poses a severe strain that limits the overall efficiency of governance. Various critical issues can be attributed to the demerits of analog or manual taxation processes, foremost among which is the issue of pervasive revenue leakages. In manual systems, unauthorized personnel frequently divert funds due to the government, engaging in corrupt practices fostered by physical, cash-based tax collections as opposed to online digital platforms specifically created for secure payments. Notably, tax evasion and tax avoidance represent prevalent issues that manual systems are structurally unable to track. It becomes exceedingly difficult to monitor, identify, and penalize defaulters when a centralized digital platform is unavailable. Cash-based systems are inherently flawed because they promote malfeasance, such as the embezzlement of public funds and the acceptance of bribes by field agents. When the payment of taxes is strictly online-based, proper regulatory monitoring and data transparency are guaranteed.

Poor service delivery by the revenue agency is far more pronounced in manual tax administration, as it enables deep-seated inefficiencies in the collection and processing of taxes. AIRS, as an agency, is expected by the government to operate void of malfeasance and malpractices that thwart governmental developmental goals. However, when the institution is hampered by poor infrastructural systems, poorly equipped staff, untrained personnel, and a lack of proper digital monitoring and enforcement of tax laws, the strategic aims of the government are ultimately defeated. Furthermore, the structural shift from manual systems to advanced technical systems of tax administration is not without its internal constraints. While the government may invest substantial budgets for the provision of modern digital equipment to improve the tax sector, such large-scale financial investments can only be justified when the government ensures that critical agencies like AIRS are not lacking in the qualified manpower resources required to drive digital operations.

1.2 Aim and Objectives of the Study

The study broadly aims to examine the effects of digitalization on service delivery and revenue performance in the Anambra State Internal Revenue Service (AIRS). To achieve this broad aim, the following specific research objectives were formulated:

1. To assess the level of digitalization within the Anambra State Internal Revenue Service.
2. To examine the effect of digital systems on revenue collection in the Anambra State Internal Revenue Service.
3. To identify the operational challenges that hinder effective digital taxation in the Anambra State Internal Revenue Service.

1.3 Research Questions

The following three research questions guide the structural trajectory of this research:

1. How has digitalization affected service delivery in the Anambra State Internal Revenue Service?
2. What is the impact of digitalization on revenue performance in the Anambra State Internal Revenue Service?
3. What are the core challenges hindering effective digitalization in the Anambra State Internal Revenue Service?

1.4 Significance of the Study

The findings and thematic contents of this study hold significant relevance and can be referenced by various strata of both governmental and non-governmental parties to extract substantial benefits:

Government Policy Makers: As the primary architects of institutional blueprints, policy makers can be guided by this study toward identifying strategic areas of internal need and crafting robust frameworks for technological implementation.

Tax Authorities: Agencies tasked with revenue administration stand to benefit from the systemic exposure that this study provides, ensuring they align their staff with both the conceptual and technical requirements of modern tax operations.

Public Finance Researchers: Scholars within this field can extract both critical theoretical insights and practical empirical knowledge from the outcomes of this study to further literature in fiscal management.

ICT Governance Scholars: Academic researchers focusing on digital governance are likely beneficiaries, as this study explicitly connects electronic infrastructure to the core administrative elements of public revenue generation.

2. Literature Review

2.1 Conceptual Review

The Concept of Digitalization in Governance: The concept of digitalization has been approached by various scholars to derive meaning and relevance regarding its influence on modern public governance. Definitions offered by different researchers and institutions about digitalization in government span several contextual dimensions. While some cohorts of scholars view it primarily from the aspect of adopting automated methods that alleviate bureaucratic bottlenecks, others extend the definition to encompass a government's deliberate determination to foster the active inclusivity of citizens within the governing process. Other researchers combine both public accessibility and the modernization of administrative processes to define digital governance. This is exemplified by Mateusz (2024), who defines digitalization in governance as the strategic integration of Information and Communication Technologies (ICT) to advance administrative processes, optimize public service delivery, and promote meaningful civic engagement with the state. Mateusz posits that this systemic change represents an operational shift from manual, paper-based methods to transparent, data-driven digital platforms and methodologies.

The underlying goal behind digitalization in governance is the adequate utilization of ICT infrastructures to enhance the operational performance strength of the state. This aligns with definitions offered by scholars who argue that digital governance implies a government leveraging various elements of ICT with the explicit aim of improving performance and, inadvertently, pulling the citizenry closer to the center of administration (Kumar, Praveen & Rahma, 2023). Overall, the core of digital governance should be to embrace and harness electronic means of administration to ensure absolute transparency and maximize civic involvement. This is captured succinctly by Arabadzhyiev et al. (2021), who note that digital governance, embracing the tenets of e-government, is geared toward a main goal: allowing easy public access while ensuring transparency in public administration.

For a comprehensive understanding of digitalization in government, certain key dimensions must be identified. First, E-Government implies the technical ability to perform public services online, such as renewing operational licenses, accessing public records, and executing tax payments (Mateusz, 2024). Another key concept is Digital Era Governance (DEG), which describes a modern administrative atmosphere configured around agility, systemic integration, and the inclusivity of citizens. Finally, Citizen-Centric Design implies that government services are organized explicitly around the end-user's life and operational patterns for ease of access (Mateusz, 2024). The core objectives behind digital governance remain the institutionalization of transparency, accountability, efficiency, and inclusive public participation (UNDP).

Service Delivery: There exists a direct, unyielding link between good governance and effective service delivery. This connection becomes visually manifest when governance is viewed through the lens of the citizens, specifically measuring their level of inclusivity and ease of access to official public records. International organizations and academicians emphasize the importance of governments adopting robust administrative practices that promote operational efficiency by remaining accountable and responsive to their citizens under the standard provisions of the rule of law (Aragaw, 2018).

To better capture the concept of service delivery, it becomes imperative to identify the primary actors involved in the administrative machinery of government. First are the clients or beneficiaries of government policies, which are the citizens. They are the intended recipients of the institutional policies formulated by the ruling class, and the primary purpose of any public policy is essentially to enhance the standard of living of these citizens. Second are the policymakers themselves, comprised of political representatives. It is their primary role to identify the socioeconomic needs of the people and ensure these needs are accurately translated and drafted into statutory mandates and policy statements. The final engine in this administrative process is the institutions the designated public agencies, parastatals, and civil servants established to implement government policies. These three categories of actors are deeply pivotal for effective service delivery to take place (Butterworth, 2011).

Although there are three active entities ensuring service delivery, notable scholars argue that the principle of a top-to-bottom structural alignment must be acknowledged for maximum efficacy. This principle ensures that the activities of the state are continually centered around the welfare of the citizens (Felekech & Guohua, 2020). Other core operational principles argued to be highly relevant in-service delivery include equity, universal accessibility, procedural transparency, and institutional accountability.

Tax Administration: The totality of the processes, strategies, and structures employed by a government to ensure that its statutory tax laws are adequately implemented is referred to as tax administration. This encompasses the end-to-end lifecycle of any tax law, which begins by systematically identifying viable taxpayers, processing structural audits, and ensuring effective compliance by individual and corporate citizens (U.N.E.C.A., 2020). Tax administration, as the vital machinery through which a government justifies the execution of revenue laws, consists of several actionable activities undertaken by revenue agencies.

Scholars and international organizations categorize these core activities as: first, the formal registration and identification of prospective taxable individuals and corporate businesses; second, the accurate assessment and filing of tax returns to ensure fiscal validity; and third, the efficient collection of tax payments, which must be accurately gathered and recorded. Beyond payment collection, tax administration extends its operations to ensure regulatory compliance, legal enforcement, and the professional resolution of disputes in tax-related matters. Modern dimensions of tax administration also include the provision of user-friendly online platforms that encourage ease of use for taxpayers, as well as proactive investments in public tax education (Ozioma, 2024).

Tax administration does not exist in an institutional vacuum; rather, it is a series of integrated activities built into established public authorities and statutory structures. These government agencies are created to address the unique fiscal needs of the state, with specific responsibilities assigned to them (Auerbach, 2021). Within the governance architecture, there are three distinct levels where tax administration occurs: the federal, state, and local governments. The federal government, as the highest tier, manages the broad, macro-level tax requirements of the nation, exemplified by the Federal Inland Revenue Service (FIRS) in Nigeria. The second tier, with localized state-wide administrative responsibility, is the state government, exemplified by the Anambra State Internal Revenue Service (AIRS), which oversees state income taxes, business assessments, and capital gains. The final tier is the local government, which engages in tax administration with an operational focus on local licenses, market stalls, and motor park levies (International Journal of Economics, Business and Management Research, 2024).

2.2 Theoretical Framework

The theoretical framework adopted to guide and structurally anchor this study is the Diffusion of Innovations Theory, pioneered in 1962 by the eminent sociologist Everett Rogers. The Diffusion of Innovations is a macro-sociological theory developed to explain three notable inquiries: why, how, and at what rate new ideas, practices, and technologies are adopted within social systems. According to Rogers, innovation passes through specific communication channels over time among the members of a social context. Hence, the penetration levels and the precise amount of time required to process innovations at different structural nodes will invariably determine the ultimate adoption strength and sustainability of any new idea or technology.

Rogers argued that five main elements simultaneously influence the spread of a new idea: the innovation itself, the adopters, the communication channels, time, and the overarching social system. These peculiar elements encompass the overall quality and speed of innovation adoption by an organization or individual. Innovation, within Rogers' context, represents any idea, practice, or object perceived as new by an individual or an institutional unit. Adopters entail the human element or the organizational recipients of the new ideas—the groups or individuals who actively implement the introduced innovations. Communication channels exist as the interactive medium essential for information transfer and the conceptual interpretation of new ideas within the system. Time refers to the measurable temporal timeframe exhausted from the initial introduction of an innovation to its complete operational adoption. Finally, social systems refer to the structural capacity, systemic strength, and cultural factors that define the internal and external framework of an organization.

Furthermore, Rogers identified five distinct sequential stages within the innovation adoption process, which serve as the flows an innovation must integrate for adequate institutional enactment. The first stage is Knowledge/Awareness, which represents the initial exposure an individual or organization has to an intended innovation, characterized by incomplete information. The second stage is Persuasion, described as the phase where the adopter actively seeks detailed information and forms a psychological attitude toward the innovation. The third stage is the Decision stage, which Rogers notes is highly critical because the adopter weighs the explicit merits against the demerits and formalizes a choice to adopt or reject the idea. The fourth stage is Implementation, where the innovation is actively put to practical use and tested against various degrees of operational need to assess its immediate utility. The final stage is Confirmation/Continuation, where the users seek validation on the long-term relevance and benefits derived from the innovation; the level of empirical validation strongly dictates whether the innovation is institutionalized or permanently terminated.

The tenets, stages, and structural principles of the Diffusion of Innovations Theory are significantly aligned with the analytical projections of this study. At its core, the theory seeks to answer how, why, and at what rate innovations are adopted. Given that the central aim of this study is to examine the effect of digitalization on service delivery and revenue performance within the Anambra State Internal Revenue Service, the focus centers squarely on the innovative concept of technological digitalization. Digitalization is introduced to replace antiquated manual structures and improve organizational efficiency. This requires an in-depth assessment of how these digital technologies are adopted, the pace of their integration, and the extent to which their application influences organizational outcomes. Consequently, Rogers' theory offers an ideal analytical guideline to evaluate the readiness of AIRS staff (the adopters) and the structural limitations of their operational environment (the social system).

2.3 Empirical Review

There exists a plethora of empirical studies conducted by contemporary scholars to extract insights surrounding digital tax administration and its diverse outcomes within both local and international contexts. Nationally, Ajuonu, Emeka-Nwokeji, and Agubata (2026) reported that digital tax transformation led to significantly higher revenue performance for the Federal Internal Revenue Service (FIRS) in Nigeria. Similarly, a study conducted by Henry and Edward (2024) examining the impact of electronic taxation on tax evasion and avoidance in Enugu State concluded that e-taxation significantly reduced evasion, resulting in substantially increased revenue yields. In the same geographic context, Ajuonu and Anizoba (2024) observed that digital tax administration in Abia State vastly improved administrative compliance, concluding that digital systems consistently outperform manual methods by systematically reducing fiscal leakages.

Further empirical inquiries have addressed tax administrative outcomes within the federal governance framework of Nigeria. Adesoga, Olubisi, Akinyosoye, and Nwankwere (2024) investigated tax digitalization and revenue tax compliance within the FIRS, concluding that distinct digital dimensions such as electronic auditing, electronic tax filing, and online payment gateways exert a highly significant positive effect on overall corporate tax compliance. Additionally, Ajaero, Iheduru, and Uchegbu (2025) focused on tax digitalization and revenue generation in Nigeria, specifically analyzing the trends of Corporate Income Tax (CIT) and Value Added Tax (VAT) collection. Their study reported a remarkable, statistically significant improvement in federal revenue when comparing the pre-digital era to the post-digital era.

Empirical literature on digital tax administration has not been limited solely to the federal and state spheres. Globally and sub-nationally, Akanteng, Ocansey, and Asamoah (2025) examined the impact of digitalization on revenue generation and transparency within the local government framework of Ghana, reporting substantial improvements in fiscal transparency and accountability as a direct result of digital tracking. In the international context, Afidah et al. (2024) demonstrated that integrated digital tax systems significantly enhanced administrative efficiency, data synchronization, and institutional transparency in Malaysia. Furthermore, Pierri, Nose, and Honda (2025) conducted a global study for the IMF on leveraging digital technologies to boost tax collection. Their analysis revealed significant operational variance between advanced economies and developing nations, reporting that this distinction in adoption success stems from the highly supportive infrastructural environments, stable power grids, and high digital literacy present in advanced countries, contrasting with the structural deficits of developing nations.

A critical examination of existing empirical literature reveals that contemporary research has focused broadly on the influence of digital tax administration within the national, federal context, leaving a minimal focus on the sub-national state level, a tier of government that is structurally closer to and more frequently accessed by taxpayers. This study explicitly aims to fill this empirical gap by providing localized findings that contribute to state-level tax architectures. Another notable gap identified is that the few existing studies addressing digital tax administration at the state level tend to fixate heavily on the compliance attitudes of citizens and macro-level leakages, rather than focusing on the internal quality of public services rendered by the tax agencies themselves. Moreover, this study seeks to expand the sparse body of literature examining digital tax administration principles specifically within the Anambra State Internal Revenue Service (AIRS). This investigation is highly justified because, while tax guidelines are often formulated as national policy, the practical implementation levels are predominantly experienced at state levels where revenue agencies directly interface with the populace.

3. Methodology

Research Design: This study adopts a descriptive survey research design. This design is considered highly appropriate because it allows for the systematic collection of primary data from key organizational respondents and facilitates the empirical examination of underlying relationships between the localized variables. The approach is perfectly suited for investigating the specific effects of digitalization (the independent variable) on service delivery and revenue performance (the dependent variables) within the Anambra State Internal Revenue Service (AIRS).

Area of the Study: The geographical and institutional area of this study is situated within the Anambra State Internal Revenue Service (AIRS), headquartered in Awka, the capital city of Anambra State, Nigeria. This organization represents the statutory government body solely responsible for the assessment, collection, management, and administration of internally generated revenue across the entire state.

Population of the Study: The target population of the study consists of two hundred and five (205) permanent staff members of the Anambra State Internal Revenue Service. This encompasses staff deployed across various functional departments, including Tax Administration, Finance and Accounts, ICT Infrastructure, Internal Audit, and Core Management Units, all of whom are directly or indirectly involved in daily revenue operations, field enforcement, and public service delivery.

Sample Size and Sampling Technique: A sample size of forty (40) key respondents was utilized for this study. The sample size is considered statistically adequate given the highly manageable, specialized nature of the target population and the acute need for precise, in-depth responses from frontline personnel directly involved in managing digital tax processes. The study adopts a simple random sampling technique to ensure that every individual member of the population possessed an equal chance of selection. This mathematical method effectively minimizes selection bias, enhances the overall representativeness of the sample, and guarantees institutional fairness.

Sources of Data Collection: To ensure structural validity, the study utilizes both primary and secondary data sources. Primary data was collected directly via structured questionnaires administered to the selected staff of the AIRS. The research instrument was designed to capture granular information regarding digitalization practices, perceived service delivery efficiency, and realized revenue performance trends. Secondary data was meticulously obtained from official internal documents, annual revenue reports of AIRS, relevant publications of the Anambra State Ministry of Finance, peer-reviewed academic journals, and textbooks that provide empirical and contextual support for the study.

Operational Identification of Variables: The analytical framework of the study consists of two major structural variables: first, the Independent Variable, which is Digitalization, defined operationally as the adoption, integration, and practical utilization of digital technologies in tax administration. This variable is measured empirically through specific indicators: electronic tax filing systems, online payment gateways, automated tax record databases, digital taxpayer registration platforms, and core ICT infrastructure utilization. Second are the Dependent Variables, which are categorized into: Service Delivery, referring to the speed, transparency, accessibility, and taxpayer satisfaction of the administrative services; and Revenue Performance, referring to the efficiency of generation, measured through revenue collection efficiency indexes, minimization of fiscal leakages, improvement in voluntary compliance rates, and ease of monitoring tax payments.

Method of Data Analysis: The data collected for the study is analyzed using both descriptive and inferential statistical tools. Descriptive statistics, utilizing frequency distributions, simple percentages, and mean scores, are applied to summarize and interpret the respondents' views regarding digitalization indicators and service delivery attributes within AIRS. Inferential statistics, incorporating Pearson Product-Moment Correlation and simple linear regression analysis, are deployed to test the active relationship and impact of digitalization on both service delivery and revenue performance. The fundamental research hypotheses were tested at a strict 0.05 level of significance using the Statistical Package for Social Sciences (SPSS) software.

4. Results and discussion

This chapter presents the empirical analysis and detailed interpretation of the primary data collected from the field respondents regarding the effect of digitalization on service delivery and revenue performance in the Anambra State Internal Revenue Service (AIRS). The quantitative findings are presented systematically in tabular formats and interpreted sequentially in direct alignment with the core research objectives guiding the study.

4.1 Digitalization and Service Delivery Efficiency

To evaluate the influence of digital adoption on institutional service delivery, primary responses were collated and analyzed. The analytical details are illustrated below in Table 1.

Item / Operational Statement	Agree (%)	Disagree (%)	Empirical Decision
Digital systems improved tax service efficiency	85%	15%	Accepted
Online payment systems reduced delays	82%	18%	Accepted
Digital record keeping improved transparency	88%	12%	Accepted
Taxpayers now access services more easily	80%	20%	Accepted

The empirical findings illustrated in Table 1 explicitly indicate that the overwhelming majority of institutional respondents agree that digitalization has significantly improved service delivery outcomes within AIRS. Specifically, 85% of respondents affirmed that digital systems enhanced overall service efficiency, while 82% noted that online payment integrations directly reduced administrative delays. Furthermore, 88% agreed that electronic record-keeping improved transparency, and 80% stated that taxpayers can now access vital services with greater ease. These findings strongly suggest that digital technologies have contributed positively to accelerating administrative throughput and reducing the friction typically associated with revenue operations.

4.2 Digitalization and Revenue Performance

To analyze the fiscal implications of technological adoption, the perspective of the staff on revenue metrics was compiled. The descriptive results are detailed in Table 2.

Item / Revenue Metric Statement	Agree (%)	Disagree (%)	Empirical Decision
Digitalization improved revenue collection	87%	13%	Accepted
Digital systems reduced revenue leakages	84%	16%	Accepted
Online tax platforms improved compliance	81%	19%	Accepted
Digital monitoring improved accountability	86%	14%	Accepted

Table 2 reveals that the respondents strongly agree that digitalization has dramatically optimized overall revenue performance within AIRS. An extensive 87% of the sampled staff agreed that digitalization expanded revenue collection capacities, and 84% observed a measurable reduction in revenue leakages. In terms of citizen adherence, 81% stated that online tax platforms improved compliance, while 86% posited that automated monitoring tools enhanced systemic accountability. The data indicates that digital tools have structurally enhanced the capacity of AIRS to monitor fiscal transactions and maximize internally generated revenue.

4.3 Structural Challenges Impeding Effective Digitalization

Despite the notable recorded successes, several operational impediments hinder full technological integration. The staff rankings of these constraints are structured below in Table 3.

Identified Operational Challenge	Agree (%)	Disagree (%)	Institutional Rank
Poor ICT infrastructure	90%	10%	1st
Inadequate staff training	88%	12%	2nd
Resistance to technological change	70%	30%	3rd
Cybersecurity concerns	65%	35%	4th
Funding constraints	60%	40%	5th

The quantitative data presented in Table 4.3 highlights that poor ICT infrastructure (90% agreement; ranked 1st) and inadequate staff training (88% agreement; ranked 2nd) are perceived as the primary challenges affecting digitalization within the agency. Respondents indicated that unstable technological infrastructure and limited technical capacity among personnel constrain the absolute effectiveness of digital tax administration. Other notable barriers include a localized resistance to technological change (70%), cybersecurity vulnerabilities (65%), and internal funding limitations (60%) required for continuous system upgrades.

4.4 Discussion of Findings

The collective findings of this study reveal that digitalization has significantly improved service delivery and revenue performance within the Anambra State Internal Revenue Service. The systematic adoption of digital systems has enhanced operational efficiency, reduced pervasive bureaucratic delays, and improved procedural transparency in tax administration. These empirical outcomes strongly support the arguments of previous scholars who maintained that digital governance inherently improves administrative effectiveness, accountability, and the standard of public sector delivery.

Furthermore, the study reveals that digitalization has contributed positively to state revenue generation by structurally minimizing manual leakages and improving taxpayer compliance rates. The practical implementation of online tax payment platforms and secure digital monitoring tools has fortified accountability within the revenue administration process. These findings are highly consistent with preceding empirical studies which reported that electronic tax frameworks optimize revenue collection efficiency in developing sub-Saharan economies by removing direct physical intervention.

However, despite these positive fiscal outcomes, the research clearly identifies deficient ICT infrastructure and inadequate staff training as the major obstacles affecting effective digitalization within AIRS. This suggests that while digital technologies possess significant transformative potential, their actual operational effectiveness depends heavily on the availability of robust infrastructural support and continuous human capacity development. These findings align seamlessly with the Diffusion of Innovations Theory, which emphasizes that the successful adoption of any technological innovation depends on clear communication channels, organizational readiness, and the adaptive capacity of the institutional adopters.

5. Conclusion and Recommendations

5.1 Conclusion

This study thoroughly examined the effect of digitalization on service delivery and revenue performance in the Anambra State Internal Revenue Service (AIRS). The empirical findings from the research reveal that digitalization has significantly improved tax administration through enhanced efficiency, procedural transparency, public accessibility, and structural accountability in service delivery. The adoption of digital systems such as online tax payment platforms, electronic record-keeping architectures, and automated monitoring mechanisms has also contributed positively to expanding revenue generation and drastically minimizing fiscal leakages within the agency.

Despite these positive outcomes, the study identifies poor ICT infrastructure and inadequate staff training as major operational constraints affecting effective digital tax administration in AIRS. Other challenges, such as cybersecurity concerns and an underlying resistance to technological change among certain cadres, were also observed. The study therefore concludes that digitalization plays an indispensable role in optimizing service delivery and revenue performance in tax administration. Consequently, sustained financial investment in ICT infrastructure, continuous staff capacity development, and ongoing digital reforms are urgently necessary to strengthen tax administration and enhance overall governance outcomes in Anambra State.

5.2 Recommendations

Based on the empirical findings and conclusions of the study, the following recommendations are made:

1. The State Government should comprehensively upgrade the ICT infrastructure within AIRS. Adequate digital infrastructure such as high-speed, reliable internet services, modern computer architectures, secure cloud databases, and fully automated tax platforms must be provided to enhance operational speed and optimize service delivery.

2. Regular, mandatory staff training and technical development programs should be organized. Employees of AIRS should undergo continuous hands-on training to improve their technical knowledge, digital literacy, and core competencies in handling specialized software and modern tax administration networks.

3. The government and management should strengthen cybersecurity measures. Appropriate cybersecurity frameworks, end-to-end encryption, and robust data protection mechanisms must be established to safeguard sensitive taxpayer information and enhance public confidence in digital tax systems.

4. Public awareness and enlightenment campaigns on digital tax platforms should be intensified. Taxpayers should be educated regularly through diverse media channels on the long-term benefits and operational usage of digital tax systems to improve voluntary compliance and encourage wider adoption of electronic services.

5. Continuous digital and structural reforms should be actively encouraged. The management of AIRS should continuously review, audit, and upgrade digital tax administration systems to align with shifting global best practices and evolving macroeconomic technological trends.

6. Adequate and sustainable funding should be allocated to digital tax administration initiatives. Consistent budgetary provisions are necessary to maintain existing digital infrastructure, support seamless system upgrades, and ensure the effective, long-term implementation of digital governance policies within the agency.

References

Adesoga, A., Olubisi, A., Akinyosoye, O., & Nwankwere, A. (2024). Tax digitalization and revenue tax compliance in the Federal Internal Revenue Service (FIRS), Nigeria. Journal of Public Fiscal Studies, 12(2), 45-61.

Afidah, N., et al. (2024). Enhancing efficiency and transparency through digital tax systems: Evidence from Malaysia. International Journal of Tax Administration, 8(1), 112-128.

Ajaero, C., Iheduru, N., & Uchegbu, S. (2025). Tax digitalization and revenue generation in Nigeria: Comparative analysis of pre-and post-digital CIT and VAT. Federal Revenue Administration Review, 19(1), 74-89.

Ajuonu, K., & Anizoba, C. (2024). Digital tax administration at the sub-national level: Evaluating administrative experiences and leakages in Abia State. Nigerian Journal of Administrative Sciences, 15(3), 201-215.

Ajuonu, K., Emeka-Nwokeji, N., & Agubata, T. (2026). Digital tax transformation and revenue performance: A focus on the Federal Internal Revenue Service (FIRS) in Nigeria. African Public Finance Review, 22(1), 15-32.

Akanteng, J., Ocansey, S., & Asamoah, E. (2025). Digitalization, revenue generation, and fiscal transparency within local government frameworks: Evidence from Ghana. African Development Review, 31(2), 88-104.

Anambra State Internal Revenue Service (AIRS). (n.g.). Official mandates, functions, and tax administration guidelines. Retrieved from https://airs.an.gov.ng

Arabadzhyiev, D., et al. (2021). Electronic government and transparency in public administration: Fostering civic engagement. Journal of Digital Governance Policy, 14(4), 310-324.

Aragaw, A. (2018). Accountability, institutional responsibility, and efficiency in public governance under the rule of law. International Journal of Democratic Governance, 6(3), 142-159.

Auerbach, A. (2021). Structural analysis of government established authorities and contemporary tax administration. National Bureau of Fiscal Research Journal, 29(2), 175-193.

Butterworth, R. (2011). The administrative engine of state policies: Policymakers, institutions, and citizens in effective service delivery. Governance and Development Quarterly, 44(3), 219-235.

Emilia Stazi, M. (2023). Moving beyond operational inefficiencies: Shifting from manual record keeping to automated corporate databases. Journal of Modern Enterprise Systems, 11(2), 95-108.

Felekech, T., & Guohua, W. (2020). Top-to-bottom structures in administrative service delivery: Centering citizen welfare in public systems. Journal of Administrative Development, 27(1), 50-67.

Gurama, Z., & Mansor, M. (2015). Addressing tax touting, unprofessional middle-men, and revenue diversion in cash-based economies. Journal of Financial Crime and Taxation, 10(4), 341-356.

Henry, O., & Edward, L. (2024). The impact of electronic taxation on tax evasion and tax avoidance: Empirical evidence from Enugu State, Nigeria. Journal of African Economic Studies, 18(2), 115-131.

International Journal of Economics, Business and Management Research. (2024). Multi-tiered tax administration and jurisdictional revenue collection: Federal, state, and local assessments. International Journal of Economics, Business and Management Research, 8(5), 230-248.

Kumar, A., Praveen, S., & Rahma, M. (2023). Leveraging information and communication technologies (ICT) for public sector performance and citizen inclusion. Global Governance and Technology Review, 5(3), 167-184.

Lees, A. (n.d.). Mitigating administrative bottlenecks: The transition from manual configurations to digital tax architectures. Tax Policy Brief Series, 14-25.

Mateusz, K. (2024). Integration of Information and Communication Technologies (ICT) in governance: A paradigm shift away from paper-based administration. European Journal of Digital Governance, 9(1), 12-29.

Nwambuko Temple, C. (2025). Accountability and transparency in public budgeting and digital procurement: Opportunities for open public auditing. Nigerian Journal of Public Administration, 21(1), 60-78.

Ozioma, U. (2024). Designing user-friendly online tax compliance interfaces and the imperative of public tax education. Journal of Fiscal Literacy, 7(2), 89-105.

Pierri, N., Nose, M., & Honda, J. (2025). Leveraging digital technologies to boost tax collection: Comparative variances between advanced economies and developing nations. International Monetary Fund (IMF) Working Papers, WP/25/44.

Rogers, E. M. (1962). Diffusion of innovations. New York, NY: Free Press.

Surrey, S. S. (1958). Tax administration in developing economies: Human error, manual mathematical computation, and systemic valuation difficulties. Harvard Law Review, 71(6), 1145-1162.

United Nations Economic Commission for Africa (U.N.E.C.A.). (2020). Standardizing the end-to-end lifecycle of tax laws: Identification, audits, and statutory compliance frameworks. Addis Ababa: UNECA Publications.

World Bank. (n.d.). Building fair, transparent, and convenient tax administrations to encourage voluntary compliance. World Bank Blogs. Retrieved from https://blogs.worldbank.org