E-Governance and Improved Public Revenue Generation in Nigeria: Issues and Prospects

[1.]Asomba, Ifeyinwa I.

Ifeyinwa.asomba@esut.edu.ng

[2.]Ejim, Chidinma Jacinta

[3.] Onyia Onyekachukwu Daniel

[4.]Orji Grace Ogochukwu

[1,2,3,4] Department of Public Administration
Enugu State University of Science and Technology *Enugu State, Nigeria.*

Abstract	*Journal of Policy and Development Studies (JPDS)*
The study examined E-governance and improved Public Revenue Generation in Nigeria, Issues and Prospects. The study was guided by three objectives. The study employed a documentary research approach. The study revealed that the implementation of e-government systems in Nigeria has significantly enhanced the efficiency of revenue collection processes, that E-government has notably increased transparency in Nigeria's public revenue systems through real-time access to financial data, improved accountability in spending, and enhanced citizen engagement and that the adoption of e-government systems in Nigeria's revenue generation sector faces significant challenges including the digital divide, cybersecurity threats, bureaucratic resistance, and inadequate legal frameworks. The study concluded that e-government presents a transformative opportunity for enhancing public revenue generation in Nigeria, despite encountering significant challenges. By streamlining administrative processes, increasing transparency, and fostering citizen engagement, e-government has the potential to improve efficiency and accountability in revenue collection. The study recommended that to strengthen cybersecurity measures to safeguard sensitive financial data and build trust in e-government systems. Robust policies and technologies must be implemented to mitigate cyber threats and protect against potential breaches.	

1. Introduction

Public revenue generation is crucial for Nigeria's economic stability and development. It provides the financial resources needed to fund essential public services, including healthcare, education, infrastructure, and security. Effective revenue generation enhances the government's capacity to invest in development projects, thereby fostering economic growth and reducing poverty (World Bank, 2021). Additionally, it enables the government to maintain fiscal discipline and reduce dependency on external borrowing, which can lead to debt sustainability issues (International Monetary Fund, 2020). In Nigeria, public revenue primarily comes from oil exports, taxes, and non-oil sectors. Diversifying revenue sources beyond oil is vital due to the volatility of global oil prices, which can significantly impact national income (Akanbi, 2019). Strengthening tax administration and broadening the tax base are essential strategies to enhance revenue collection and reduce tax evasion (Nwafor, 2022). Moreover, improved public revenue generation can lead to better governance and accountability. When citizens see tangible benefits from their contributions, such as improved public services and infrastructure, it can enhance public trust and compliance with tax regulations (Olusola, 2020). Thus, sustainable public revenue generation is integral to Nigeria's socio-economic development and stability.

E-government has emerged as a pivotal tool for enhancing public revenue generation in Nigeria. By leveraging information and communication technology (ICT), e-government initiatives streamline administrative processes, improve transparency, and reduce corruption, thereby increasing efficiency in revenue collection (Adeyemo, 2011). Implementing electronic tax systems, for instance, simplifies tax filing and payment, reducing errors and opportunities for tax evasion (Adebisi & Gbegi, 2013). One significant impact of e-government is the enhancement of accountability. Digital platforms enable real-time monitoring and auditing of revenue transactions, which helps in identifying and addressing leakages promptly. This increased transparency fosters public trust and encourages greater compliance with tax obligations (Okunola & Rowley, 2019). Moreover, automated systems reduce the bureaucratic red tape often associated with manual processes, expediting service delivery and making it easier for businesses and individuals to fulfill their tax responsibilities (Olaleye, 2015). E-government also supports broader revenue base expansion. By integrating various government services into a unified digital platform, it becomes easier to identify and register taxpayers, especially in the informal sector, which constitutes a significant portion of Nigeria's economy (Akinyele & Olatunji, 2020). This integration enhances the government's ability to capture previously untapped revenue sources, ultimately boosting overall public revenue. Hence, e-government significantly contributes to improved public revenue generation in Nigeria by enhancing transparency, accountability, and efficiency in revenue collection processes. This technological advancement not only strengthens fiscal stability but also promotes a more inclusive and compliant tax environment.

E-government presents both significant prospects and notable issues in improving public revenue generation in Nigeria.One primary issue is the digital divide. A significant portion of Nigeria's population, particularly in rural areas, lacks access to reliable internet and digital literacy, impeding widespread adoption of e-government services (Adeyemo, 2011). Additionally,

cybersecurity threats pose a risk to the integrity of digital revenue systems, making robust security measures essential (Olaleye, 2015). The high initial cost of implementing e-government infrastructure and maintaining these systems can also strain the government's financial resources (Adebisi & Gbegi, 2013).

Resistance to change within public administration is another hurdle. Bureaucratic inertia and reluctance to adopt new technologies can slow down the integration of e-government solutions (Okunola & Rowley, 2019). Furthermore, insufficient legal frameworks and policies to support e-government initiatives can hinder their effective implementation (Akinyele & Olatunji, 2020).

Despite these challenges, e-government holds substantial promise for enhancing public revenue generation. By automating tax collection and administration processes, e-government can significantly reduce tax evasion and corruption, leading to increased revenue (Adeyemo, 2011). The use of digital platforms facilitates easier and more efficient tax filing and payment, improving compliance rates and broadening the tax base (Adebisi & Gbegi, 2013). E-government also promotes transparency and accountability in revenue collection. Real-time monitoring of transactions helps identify and mitigate leakages, fostering public trust in government institutions (Okunola & Rowley, 2019). Moreover, digital integration of various government services can streamline processes, reduce administrative costs, and enhance service delivery (Akinyele & Olatunji, 2020). Consequently, while e-government in Nigeria faces challenges such as digital divide and cybersecurity threats, its potential to improve public revenue generation through enhanced efficiency, transparency, and broader tax base expansion remains significant.

1.2 Statement of the Problem

The integration of e-government in Nigeria holds great potential for enhancing public revenue generation through improved efficiency, transparency, and accountability. However, several issues hinder its full realization. First, the digital divide presents a significant challenge. A large segment of Nigeria's population, particularly in rural areas, lacks access to reliable internet and digital literacy, limiting the widespread adoption of e-government services. Cybersecurity threats pose another critical issue, risking the integrity of digital revenue systems and necessitating robust security measures. Additionally, the high initial costs of implementing and maintaining e-government infrastructure can strain government resources (Adebisi & Gbegi, 2013).

Resistance to change within public administration further complicates the integration of e-government solutions. Bureaucratic inertia and reluctance to adopt new technologies can slow down progress. Moreover, the lack of sufficient legal frameworks and policies to support e-government initiatives can impede their effective implementation.

Despite these challenges, the prospects of e-government in improving public revenue generation are promising. Automating tax processes can reduce evasion and corruption, increasing revenue. Digital platforms facilitate easier tax filing and payment, enhancing compliance and broadening the tax base. Improved transparency and real-time transaction monitoring can foster public trust and accountability.

40

1.3 Objectives of the Study

The broad objective of the study was to examine E-government and improved Public Revenue Generation in Nigeria, Issues and Prospect. The specific objectives of the study were to:

i. Assess the Impact of E-Government Implementation on Revenue Collection Efficiency in Nigeria,
ii. Examine the Role of E-Government in Enhancing Transparency and Accountability in Public Revenue Systems
iii. Identify and Analyze the Challenges Hindering the Adoption and Effectiveness of E-Government in Revenue Generation.

1.4 Research questions

The following research questions were raised for the study

i. How has the implementation of e-government systems affected the efficiency of revenue collection processes in Nigeria?
ii. In what ways has e-government contributed to increased transparency in Nigeria's public revenue systems?
iii. What are the primary challenges facing the adoption of e-government systems in Nigeria's revenue generation sector?

2. Review of Related Literature

Conceptual Review

E-Government

E-government, or electronic government, refers to the use of information and communication technologies (ICT) by governmental institutions to enhance the delivery of public services, improve administrative efficiency, and foster greater transparency and accountability (UNESCO, 2021). It encompasses a wide range of digital interactions between government agencies and citizens (G2C), businesses (G2B), employees (G2E), and other government entities (G2G). The concept of e-government is grounded in the idea of leveraging digital tools to streamline governmental processes, making them more accessible and efficient. By digitizing services such as tax collection, licensing, and social services, e-government aims to reduce bureaucratic red tape, lower administrative costs, and provide faster, more reliable service delivery (Heeks, 2001). It also includes the use of online platforms for citizen engagement, enabling greater public participation in governance and decision-making processes (Norris & Reddick, 2013).

E-government initiatives have the potential to transform public administration by fostering transparency and reducing opportunities for corruption. Real-time data sharing and electronic records management enhance accountability and ensure that governmental actions are visible and verifiable (Bertot, Jaeger, & Grimes, 2010). Additionally, e-government supports the efficient allocation of resources, driving economic growth and social development (OECD, 2003). However, the successful implementation of e-government requires addressing challenges such as digital divide, cybersecurity, and adequate legal frameworks. These efforts are crucial for maximizing the benefits of e-government and ensuring inclusive access to digital public services.

Public Revenue

Public revenue refers to the financial resources collected by government authorities to fund public services and infrastructure, and to meet other expenditures required for the functioning of the state (Musgrave & Musgrave, 1989). These revenues are essential for ensuring the government's capacity to provide goods and services that are not typically supplied by the private market, such as national defense, public education, and social welfare programs. The primary sources of public revenue include taxes, fees, fines, and income from government-owned enterprises. Taxes, which can be direct (such as income tax) or indirect (such as value-added tax), constitute the largest share of public revenue. Non-tax revenues, including fees for public services and earnings from public investments, also contribute significantly to the government's income (Stiglitz, 2000). Effective public revenue generation is crucial for economic stability and development. It allows for the redistribution of wealth, promotes economic equity, and provides the means to invest in long-term developmental projects (Bird & Zolt, 2005). Moreover, it is essential for maintaining fiscal discipline and reducing reliance on external borrowing, which can lead to debt sustainability issues (International Monetary Fund, 2019). However, the efficiency of public revenue systems depends on the government's ability to design equitable tax policies, ensure compliance, and manage public funds transparently and accountably (Tanzi & Zee, 2000).

Revenue Generation

Revenue generation refers to the process through which governments and organizations obtain income, typically through taxes, fees, and other sources, to fund public services and operational expenses. It is a critical aspect of economic governance, directly impacting the ability of governments to deliver essential services, promote development, and achieve socio-economic objectives (World Bank, 2020). In the context of public administration, effective revenue generation strategies are essential for sustainable fiscal health and economic stability. These strategies encompass a range of activities including tax policy formulation, efficient collection mechanisms, and prudent financial management practices (OECD, 2021). The goal is to maximize revenue while ensuring fairness, transparency, and compliance with legal frameworks. Moreover, revenue generation is influenced by broader economic factors, regulatory environments, and socio-political dynamics that shape fiscal policies and revenue administration practices (IMF, 2019). Balancing revenue generation with expenditure priorities is crucial for achieving fiscal sustainability and meeting developmental goals.
In conclusion, understanding the complexities of revenue generation requires comprehensive analysis of economic principles, policy frameworks, and administrative practices aimed at optimizing revenue streams for sustainable development and societal well-being.

E-government and Improved Public Revenue Generation in Nigeria, Issues and Prospect
E-government, defined as the use of information and communication technologies (ICT) by government agencies to improve the delivery of public services, enhance administrative efficiency, and promote transparency and accountability, has the potential to transform public revenue generation in Nigeria. By digitizing tax systems, licensing, and other revenue-related processes, e-government can reduce corruption, increase tax compliance, and streamline administrative procedures. However, the implementation of e-government in Nigeria faces significant challenges, including the digital divide, cybersecurity threats, and bureaucratic resistance. This article explores the issues and prospects of e-government in improving public revenue generation in Nigeria.

The Concept of E-Government
E-government involves the use of digital tools and platforms to facilitate the interaction between government entities and citizens (G2C), businesses (G2B), employees (G2E), and other government agencies (G2G). The primary goals of e-government are to improve service delivery, reduce costs, enhance transparency, and foster greater citizen engagement (UNESCO, 2021). By automating and digitizing administrative processes, e-government can significantly enhance the efficiency and effectiveness of public administration (Heeks, 2001).

Public Revenue in Nigeria
Public revenue refers to the financial resources collected by government authorities through various means, including taxes, fees, fines, and income from government-owned enterprises. Effective public revenue generation is crucial for economic stability and development, as it enables the government to fund essential services, such as healthcare, education, and infrastructure, and to invest in long-term developmental projects (Bird & Zolt, 2005).Public revenue in Nigeria encompasses income derived from various sources including taxes, royalties, fees, and other forms of revenue collected by the government to finance public expenditures and services. Nigeria's revenue base primarily relies on oil revenues, due to its status as a major oil-producing nation. However, the volatility of oil prices has highlighted the need to diversify revenue sources to ensure fiscal stability and sustainable development (World Bank, 2021).

The Nigerian government collects revenue through different agencies such as the Federal Inland Revenue Service (FIRS), which oversees taxation, and the Nigerian Customs Service, responsible for tariffs and import duties. Despite efforts to broaden the tax base, tax compliance remains a challenge, with a significant informal economy and high levels of tax evasion (IMF, 2020).

Effective revenue management is crucial for Nigeria's economic growth and social development. It requires robust fiscal policies, transparent revenue administration, and investments in infrastructure and human capital to enhance revenue mobilization capacity (Adeyemo, 2017). Improving governance and reducing corruption are also critical for ensuring that revenue generated is efficiently allocated and utilized to benefit all citizens (Transparency International, 2021). Moreover, Nigeria faces ongoing challenges such as weak institutional frameworks, political instability, and economic shocks that affect revenue generation efforts (Okunola & Oluwatobi, 2018). Addressing these challenges requires comprehensive reforms in tax administration, public financial management, and economic diversification strategies to reduce dependence on oil revenues and promote sustainable development across various sectors of the economy.

Hence, enhancing public revenue management in Nigeria is pivotal for achieving inclusive growth, reducing poverty, and fostering economic resilience amidst global uncertainties.

The Impact of E-Government on Revenue Collection Efficiency
One of the primary benefits of e-government is its potential to improve the efficiency of revenue collection. Traditional revenue collection methods in Nigeria are often characterized by bureaucratic red tape, high administrative costs, and opportunities for corruption. E-government

can address these issues by automating tax filing and payment processes, reducing the need for physical interactions and paperwork (Adeyemo, 2011).

Enhancing Efficiency

E-government systems can significantly reduce the time and cost associated with revenue collection. Automated processes streamline administrative tasks, allowing for faster and more accurate tax assessments and payments. This efficiency reduces the burden on taxpayers and encourages greater compliance, ultimately leading to increased revenue collection (Adebisi & Gbegi, 2013).

Reducing Corruption

By minimizing human interactions and implementing digital records, e-government reduces opportunities for corruption. Automated systems ensure that tax assessments and payments are transparent and traceable, making it more difficult for officials to engage in corrupt practices. This transparency fosters public trust in the revenue collection system and encourages voluntary compliance (Okunola & Rowley, 2019).

The Role of E-Government in Enhancing Transparency and Accountability

Transparency and accountability are critical components of effective public revenue systems. E-government can enhance these aspects by providing real-time access to information and facilitating the monitoring of government transactions (Bertot, Jaeger, & Grimes, 2010).

Increasing Transparency

Digital platforms enable the publication of government financial data, such as tax revenues and expenditures, making this information readily available to the public. This transparency allows citizens and stakeholders to hold the government accountable for its financial management and ensures that public funds are used appropriately (Olaleye, 2015).

Enhancing Accountability

E-government systems provide mechanisms for tracking and auditing government transactions. By maintaining digital records of tax assessments, payments, and other financial activities, e-government facilitates regular audits and reviews. This accountability helps to identify and address any discrepancies or irregularities in the revenue collection process (Okunola & Rowley, 2019).

Challenges Hindering the Adoption and Effectiveness of E-Government in Nigeria

Despite the potential benefits, several challenges hinder the adoption and effectiveness of e-government in Nigeria. These challenges include the digital divide, cybersecurity threats, bureaucratic resistance, and inadequate legal frameworks.

Digital Divide

The digital divide refers to the gap between those who have access to digital technologies and those who do not. In Nigeria, a significant portion of the population, particularly in rural areas, lacks access to reliable internet and digital literacy. This digital divide limits the widespread adoption of e-government services and excludes many citizens from benefiting from these initiatives (Adeyemo, 2011).

Cybersecurity Threats

As e-government systems handle sensitive financial data, they are vulnerable to cybersecurity threats. Cyberattacks, data breaches, and other security incidents can compromise the integrity of digital revenue systems and erode public trust. Ensuring robust cybersecurity measures is essential to protect e-government platforms and maintain their credibility (Olaleye, 2015).

Bureaucratic Resistance

Resistance to change within public administration is another significant challenge. Bureaucratic inertia and reluctance to adopt new technologies can slow down the integration of e-government solutions. Overcoming this resistance requires strong leadership, training, and a cultural shift towards embracing digital innovation (Okunola & Rowley, 2019).

Inadequate Legal Frameworks

The successful implementation of e-government depends on the existence of adequate legal and regulatory frameworks. In Nigeria, the lack of comprehensive policies and regulations to support e-government initiatives can hinder their effective deployment. Establishing clear legal frameworks that address issues such as data protection, digital signatures, and electronic transactions is crucial for the success of e-government (Akinyele & Olatunji, 2020).

Prospects for E-Government in Nigeria

Despite these challenges, the prospects for e-government in Nigeria are promising. With the right strategies and investments, e-government can significantly enhance public revenue generation and contribute to sustainable economic development.

Expanding the Tax Base

One of the key benefits of e-government is its potential to expand the tax base. By integrating various government services into a unified digital platform, e-government makes it easier to identify and register taxpayers, particularly in the informal sector. This integration enhances the government's ability to capture previously untapped revenue sources and broaden the tax base (Akinyele & Olatunji, 2020).

Improving Tax Compliance

E-government systems simplify the tax filing and payment process, making it more convenient for taxpayers to comply with their obligations. Automated reminders, online payment options, and user-friendly interfaces reduce the complexity of tax compliance and encourage voluntary participation. Improved compliance rates ultimately lead to increased revenue collection (Adebisi & Gbegi, 2013).

Promoting Transparency and Trust

By enhancing transparency and accountability, e-government fosters public trust in the revenue collection system. When citizens see that their tax contributions are being used effectively and transparently, they are more likely to comply with tax regulations. This trust is essential for the long-term sustainability of public revenue systems (Okunola & Rowley, 2019).

E-government holds significant potential for improving public revenue generation in Nigeria by enhancing efficiency, transparency, and accountability. However, its successful implementation requires addressing challenges such as the digital divide, cybersecurity threats, bureaucratic resistance, and inadequate legal frameworks. With strategic investments and a commitment to digital innovation, Nigeria can harness the benefits of e-government to strengthen its revenue systems and promote sustainable economic development.

Theoretical Framework

The study on e-government and improved public revenue generation in Nigeria is grounded in the Technology Acceptance Model (TAM)

The **Technology Acceptance Model (TAM)** provides a foundation for understanding the adoption of e-government systems. It posits that perceived usefulness and perceived ease of use are critical determinants of technology acceptance (Davis, 1989). In the context of e-government, this model helps explain how these perceptions influence the willingness of government employees and citizens to embrace digital platforms for revenue collection and management.

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, is a theoretical framework that explains how users come to accept and use a technology. The model posits that two primary factors influence technology acceptance: **perceived usefulness** and **perceived ease of use**. Perceived usefulness is defined as the degree to which a person believes that using a particular system would enhance their job performance. Perceived ease of use refers to the extent to which a person believes that using the system would be free of effort.

TAM suggests that these perceptions lead to an individual's attitude toward using the technology, which subsequently influences their intention to use the technology and actual usage behavior. The model also highlights the role of external variables, such as system design features and training, which can affect perceived usefulness and ease of use. TAM provides a robust framework for understanding and predicting user acceptance of new technologies across various contexts

In studying e-government and improved public revenue generation in Nigeria, the Technology Acceptance Model (TAM) serves as a valuable lens for understanding how stakeholders perceive and adopt digital platforms for tax collection and management. TAM's focus on perceived usefulness and perceived ease of use helps elucidate why government officials, taxpayers, and other stakeholders may embrace or resist e-government initiatives. For instance, assessing stakeholders' perceptions of how e-government systems enhance the efficiency of revenue collection (perceived usefulness) and whether they find these systems user-friendly and accessible (perceived ease of use) can predict their acceptance and usage behavior. By applying TAM, researchers can identify key factors influencing technology adoption in the context of public revenue systems, thereby informing strategies to enhance implementation and overcome barriers such as digital literacy and bureaucratic resistance. TAM's structured approach aids in crafting effective policies and interventions to maximize the benefits of e-government in Nigeria.

2.3 Empirical Review

James and Adekeye (2016) focused on E-governance and economic development in Nigeria; Problems and Prospects. Globalization has opened the doors for technology transfer from one countries to another due to the advent of Information Communication Technology (1CT). Hence, both the developed and developing countries have embraced the use of modem tools in place of manual labour considered to be susceptible to unnecessary delay, low productivity, errors, and mistakes. It is in the light of the above that this study seeks to examine whether there is relationship between Electronic governance and economic development in Nigeria. In a bid to achieve the objective of this study, the secondary method of data collection was used through the content analysis of documents, reports, government policies, programmes and decisions. Bye and large, the findings of the study revealed that the world has become a global village where information can be sent and received in a matter of seconds. Therefore, any government that fails

46

to exploit the enormous opportunities provided by Information Communication Technology (ICT) would be left behind by other Nations States of the world. Also, a relationship was established between electronic governance and economic development since it encourages fast, quick, efficient and accurate information dissemination with dispatch. It equally has the capacity to cut down waste, check corruption and eliminated ghost workers from government payroll, ensure better coordination and corporations between different levels of governments, promote effective regulatory framework, accountability, transparency and integrity. However, the cost of procuring electronic equipment for government Ministries, Departments and Agencies is capital intensive and expensive to maintain. At the same time, it will lead to mass retrenchment of workers, wage cut, low standard of living, poverty, inequality and unemployment.

Nchuchuwe & Ojo (2017) examined the E-governance, revenue generation and public service delivery in Nigeria: An overview of the E- taxation system in Lagos State.In the early 90s, e-governance became a global pursuit towards improving public service delivery. Nigeria joined the bandwagon of the e-governance drive in year 2000, when the government realized the need to adopt e-governance to improve public service delivery. This paper attempts to look at the implementation of e-governance in Nigeria, in relation to e-taxation in Lagos state. It examines the capacity of the Lagos state government to utilize Information, communication and technology (ICT) devices to generate revenue and block revenue leakages. The study is empirical in nature, making use the survey method (questionnaires) to gather data. Descriptive statistics were employed to analyze responses from the respondents, and the Chi-Square statistical method of analysis was used to test the hypotheses formulated. The study revealed that despite the huge investment of state government on ICT to realize these objectives little progress has been achieved. This can be attributed to infrastructural gap, power failure, digital divide, low ICT literacy level, theft and vandalizations of ICT equipment, poor enlightenment among others. The study concludes that the emerging growth and adoption of e-taxation in Lagos state has not significantly improved its revenue generation. Hence, among the suggestions proffered by the paper is that the state government should partner with software providers to provide smart phones for tax payers at minimum cost to ease tax payments via ICT with Tax Identification Numbers (TIN).

Olawale & Adekunle (2019) examined the "Impact of E-tax Implementation on Grassroots Development in Nigeria: A Case Study of Ogun State". Methodology: Mixed methods (surveys, interviews). StatisticalTool: Descriptive statistics, thematic analysis. Findings: E-tax adoption positively correlated with increased revenue generation and improved service delivery at the grassroots level. Conclusion: E-tax systems play a crucial role in promoting fiscal transparency and enhancing grassroots development. Recommendations: Strengthen e-tax infrastructure, provide training for tax administrators, and increase public awareness on the benefits of e-tax.

Ibrahim, & Okonkwo (2018) carried out a study on assessing the Socio-economic Impact of E-Tax Systems on Grassroots Communities: Evidence from Northern Nigeria". Methodology: Quantitative survey. Statistical Tool: Correlation analysis, regression modeling. Findings: E-tax adoption was positively associated with increased government revenue, improved service delivery, and enhanced local economic development. Conclusion: E-tax systems have the potential to catalyze grassroots socio-economic development by strengthening fiscal governance

47

and promoting resource mobilization. Recommendations: Enhance taxpayer education, modernize tax administration systems, and foster intergovernmental collaboration.

Adewale & Ayodele (2020) focused on evaluating the Effectiveness of E-Tax Systems in Enhancing Grassroots Development in Nigeria". Methodology: Quantitative survey. StatisticalTool: Regression analysis. Findings: E-tax implementation significantly contributed to increased revenue generation and transparency in local government finances. Conclusion: E-tax systems are effective tools for promoting grassroots development by improving fiscal accountability and resource mobilization. Recommendations: Strengthen e-tax infrastructure, enhance capacity building for tax officials, and promote tax compliance among citizens.

Abdul & Fatima (2017) examined the Impact of E-Tax Adoption on Grassroots Socio-economic Development: Insights from Rural Communities in Ogun State. Methodology: Mixed methods (surveys, focus group discussions). StatisticalTool: Chi-square test, thematic analysis. Findings: E-tax adoption led to increased government responsiveness, improved infrastructure development, and greater community participation in development projects. Conclusion: E-tax initiatives play a crucial role in fostering grassroots socio-economic development by promoting inclusive governance and citizen engagement. Recommendations: Strengthen local government capacity, promote civic education on tax compliance, and invest in digital infrastructure.

Adekunle & Bello (2016) examined the Role of E-Tax in Enhancing Grassroots Empowerment: A Comparative Analysis of Urban and Rural Communities in Nigeria". Methodology: Quantitative comparative study. StatisticalTool: T-test, ANOVA. Findings: E-tax implementation had a more significant positive impact on grassroots empowerment in urban areas compared to rural areas, attributed to differences in digital infrastructure and access to services. Conclusion: While e-tax systems hold promise for grassroots development, addressing disparities in ICT access is crucial for equitable outcomes across regions. Recommendations: Bridge the digital divide, tailor e-tax solutions to local contexts, and prioritize investments in rural ICT infrastructure.

3. Methodology

This study employed a documentary research approach, analyzing existing literature, official reports, policy documents, and relevant online sources on e-government and public revenue generation in Nigeria. Thematic analysis was used to identify, analyze, and report patterns within the data. The research systematically reviewed documents from government publications, academic journals, and international organizations to gather comprehensive information on the implementation, challenges, and prospects of e-government in Nigeria. Thematic analysis involved coding the data and categorizing it into key themes such as efficiency, transparency, accountability, and barriers to adoption. This approach allows for a detailed understanding of how e-government initiatives influence revenue generation and identifies recurring issues and potential solutions. By synthesizing insights from diverse sources, the study aims to provide a nuanced perspective on the impact of e-government on Nigeria's public revenue systems and offer actionable recommendations for improvement.

4. Analysis of Research Questions

ow has the implementation of e-government systems affected the efficiency of revenue collection processes in Nigeria?

The implementation of e-government systems has significantly enhanced the efficiency of revenue collection processes in Nigeria. Traditionally plagued by inefficiencies, bureaucratic delays, and corruption, the revenue collection system has benefited from digital transformation. Firstly, e-government has streamlined administrative procedures by automating tax filing, payment, and assessment processes. This automation reduces the manual handling of documents, minimizes paperwork, and accelerates the processing of tax returns. Taxpayers can now submit their returns online, reducing the time and effort previously required for physical visits to tax offices.

Secondly, e-government systems have improved the accuracy and transparency of revenue collection. Digital platforms enable real-time data capture and analysis, which enhances the accuracy of tax assessments and minimizes errors. Taxpayers receive instant feedback on their submissions, reducing disputes and improving compliance rates. Moreover, digital records and audit trails enhance transparency by providing stakeholders with access to verifiable information on revenue collection activities. Furthermore, the efficiency gains from e-government have reduced operational costs associated with revenue collection. With fewer manual processes and streamlined workflows, government agencies can allocate resources more effectively towards improving service delivery rather than administrative overheads.

Overall, the implementation of e-government in Nigeria has revolutionized revenue collection by enhancing efficiency, accuracy, transparency, and reducing operational costs. However, challenges such as the digital divide, cybersecurity threats, and resistance to change within bureaucracy remain critical to address for sustained improvements in public revenue management.

Previous research indicates that the implementation of e-government systems has significantly enhanced the efficiency of revenue collection processes in Nigeria. Studies have highlighted several key improvements brought about by digital transformation. For instance, automated tax filing and payment systems have streamlined administrative procedures, reducing the time and effort required for taxpayers to comply with their obligations (Adebisi & Gbegi, 2013). This automation not only accelerates the processing of tax returns but also improves the accuracy of assessments, minimizing errors and discrepancies (Olaleye, 2015).Moreover, digital platforms enable real-time data capture and analysis, enhancing transparency and accountability in revenue collection (Bertot, Jaeger, & Grimes, 2010). Stakeholders can access information on tax revenues and expenditures, fostering greater trust in government financial management practices (Okunola & Rowley, 2019).While these advancements are promising, challenges such as the digital divide and cybersecurity threats must be addressed to sustain these gains. Bridging the gap in digital access and ensuring robust cybersecurity measures are essential to realizing the full potential of e-government in improving public revenue management in Nigeria.

In what ways has e-government contributed to increased transparency in Nigeria's public revenue systems?

E-government has significantly contributed to increased transparency in Nigeria's public revenue systems through several key mechanisms. Firstly, digital platforms facilitate real-time access to

financial information and transactions, making government revenue activities more visible and accessible to the public (Bertot, Jaeger, & Grimes, 2010). Citizens can now monitor government spending, tax revenues, and expenditures online, enhancing accountability and reducing opportunities for corruption.

Secondly, e-government systems promote standardized and automated processes for revenue collection and management. By digitizing tax assessments, filings, and payments, these systems minimize human intervention and the potential for manipulation or misappropriation of funds (Olaleye, 2015). This transparency is further reinforced by audit trails and digital records that provide verifiable evidence of transactions, ensuring accountability in financial management practices (Okunola & Rowley, 2019).

Moreover, e-government encourages citizen engagement and participation in governance processes. Through online portals and interactive platforms, taxpayers can provide feedback, report irregularities, and participate in public consultations regarding revenue policies and management practices. This participatory approach fosters a culture of transparency and trust between the government and its citizens (UNESCO, 2021).

Overall, e-government in Nigeria has transformed public revenue systems by improving data transparency, enhancing financial accountability, and promoting citizen involvement in monitoring and oversight. However, ongoing efforts are needed to address challenges such as cybersecurity threats and ensure equitable access to digital services across all segments of the population.

What are the primary challenges facing the adoption of e-government systems in Nigeria's revenue generation sector?

The adoption of e-government systems in Nigeria's revenue generation sector faces several primary challenges that hinder its effective implementation and operation.

Firstly, the **digital divide** poses a significant barrier. Nigeria has uneven access to digital technologies, with disparities in internet connectivity and digital literacy between urban and rural areas. Many citizens, particularly in remote regions, lack the necessary infrastructure and skills to engage with e-government platforms, limiting their participation in online revenue processes (Adeyemo, 2011).

Secondly, **cybersecurity threats** present a critical concern. E-government systems handle sensitive financial data and personal information, making them vulnerable to cyberattacks, data breaches, and identity theft. Inadequate cybersecurity measures and the lack of robust defenses against cyber threats undermine public trust in digital platforms and pose risks to the integrity and confidentiality of revenue-related transactions (Olaleye, 2015).

Thirdly, **bureaucratic resistance** within government agencies slows down the adoption of e-government initiatives. Resistance to change, entrenched organizational cultures, and limited capacity among public officials to adapt to new technologies hinder the integration and

optimization of digital systems for revenue collection and management (Okunola & Rowley, 2019).

Moreover, the **inadequate legal and regulatory frameworks** pose challenges to e-government adoption. Nigeria lacks comprehensive legislation and policies governing digital transactions, data protection, and electronic signatures. The absence of clear guidelines and regulatory oversight complicates the implementation of secure and legally binding e-government systems, deterring both users and service providers from fully embracing digital platforms (Akinyele & Olatunji, 2020).

Addressing these challenges requires strategic investments in infrastructure, cybersecurity measures, digital literacy programs, and legislative reforms. Overcoming these barriers is crucial to realizing the full potential of e-government in improving efficiency, transparency, and accountability in Nigeria's revenue generation sector.

5. Summary of findings

The implementation of e-government systems in Nigeria has significantly enhanced the efficiency of revenue collection processes. Digital platforms have streamlined tax filing, payment, and assessment procedures, reducing administrative bottlenecks and improving accuracy. Real-time data capture and transparency measures have also bolstered accountability and reduced opportunities for corruption. However, challenges such as the digital divide, cybersecurity threats, bureaucratic resistance, and inadequate legal frameworks continue to impact the full realization of e-government's potential in Nigeria's revenue sector.

E-government has notably increased transparency in Nigeria's public revenue systems through real-time access to financial data, improved accountability in spending, and enhanced citizen engagement. Digital platforms have facilitated easier monitoring of government transactions and expenditures, fostering trust and reducing corruption risks. However, challenges like cybersecurity threats and uneven digital access persist, affecting the comprehensive integration and effectiveness of e-government initiatives in promoting transparency across all sectors of Nigeria's public revenue systems.

The adoption of e-government systems in Nigeria's revenue generation sector faces significant challenges including the digital divide, cybersecurity threats, bureaucratic resistance, and inadequate legal frameworks. These hurdles hinder effective implementation and operation of digital platforms for revenue collection and management. Addressing these challenges requires investments in infrastructure, cybersecurity measures, digital literacy programs, and legislative reforms to ensure equitable access, security, and legal compliance in leveraging e-government for improved efficiency and transparency in revenue processes.

Conclusion

The study concluded that e-government presents a transformative opportunity for enhancing public revenue generation in Nigeria, despite encountering significant challenges. By streamlining administrative processes, increasing transparency, and fostering citizen

engagement, e-government has the potential to improve efficiency and accountability in revenue collection. However, the challenges of the digital divide, cybersecurity threats, bureaucratic resistance, and inadequate legal frameworks remain formidable barriers that must be addressed to fully realize these benefits. Moving forward, policymakers and stakeholders should prioritize investments in digital infrastructure, cybersecurity protocols, and capacity-building initiatives to bridge digital gaps and strengthen regulatory frameworks. Enhancing public awareness and participation in e-government initiatives is crucial for building trust and ensuring sustainable adoption. Moreover, collaboration between government agencies, private sector partners, and civil society organizations is essential to navigate the complexities and maximize the potential of e-government in driving economic development and social progress through improved public revenue management in Nigeria.

Recommendations

The following recommendations are made for the study:

i.   The study concluded that addressing the digital divide is crucial. Initiatives should focus on expanding internet access and enhancing digital literacy across urban and rural areas to ensure equitable participation in e-government initiatives.
ii.   It is recommended to strengthen cybersecurity measures to safeguard sensitive financial data and build trust in e-government systems. Robust policies and technologies must be implemented to mitigate cyber threats and protect against potential breaches.
iii. Collaboration among government, private sector, and civil society is essential. Partnerships can enhance the effectiveness of e-government by leveraging diverse expertise and resources to overcome bureaucratic resistance and improve regulatory frameworks.

References
Adebisi, J. F., & Gbegi, D. O. (2013). Effect of Tax Avoidance and Tax Evasion on Personal Income Tax Administration in Nigeria. *American Journal of Humanities and Social Sciences, 1*(3), 125-134.

Adeyemo, A. B. (2011). E-government implementation in Nigeria: An assessment of Nigeria's e-government ranking. *Journal of Internet and Information Systems, 2*(1), 11-19.

Adeyemo, T. (2017). Taxation and economic development in Nigeria: A comparative analysis. *African Journal of Economic Review, 5*(1), 58-70.

Akanbi, O. (2019). Diversification of Nigeria's Revenue Base: Challenges and Prospects. *Journal of Economics and Sustainable Development, 10*(4), 23-31.

Akinyele, Y. O., & Olatunji, O. (2020). E-Government and Revenue Generation in Nigeria. *Journal of Public Administration and Governance, 10*(2), 45-60.

Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly, 27*(3), 264-271.

Bird, R. M., & Zolt, E. M. (2005). Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries. *International Tax Program Paper 0508*. University of Toronto.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340.

Heeks, R. (2001). Understanding e-Governance for Development. *iGovernment Working Paper Series, Paper No. 11*. Institute for Development Policy and Management.

IMF. (2019). Fiscal Monitor: Taxing Times. Retrieved from IMF

IMF. (2020). Nigeria: 2020 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for Nigeria. Retrieved from IMF

International Monetary Fund. (2019). *Fiscal Monitor: How to Mitigate Climate Change*. IMF.

International Monetary Fund. (2020). *Nigeria: Staff Report for the 2020 Article IV Consultation*. IMF.

Musgrave, R. A., & Musgrave, P. B. (1989). *Public Finance in Theory and Practice*. McGraw-Hill.

Norris, D. F., & Reddick, C. G. (2013). E-government and public administration. *Public Administration Review, 73*(3), 363-372.

Nwafor, C. (2022). Tax Administration and Revenue Generation in Nigeria. *African Journal of Economic Review, 5*(2), 45-59.

OECD. (2003). The e-Government Imperative. *OECD e-Government Studies*. OECD Publishing.

OECD. (2021). Revenue Statistics. Retrieved from OECD

Okunola, A. A., & Oluwatobi, S. A. (2018). The impact of tax revenue on economic growth: Evidence from Nigeria. *Cogent Economics & Finance, 6*(1), 1-15.

Okunola, F. A., & Rowley, C. (2019). E-Government and Public Sector Management in Nigeria: A Service Delivery Perspective. *International Journal of Public Administration, 42*(3), 241-253.

Olaleye, O. (2015). The Role of E-Government in the Fight against Corruption in Nigeria. *Mediterranean Journal of Social Sciences, 6*(4), 54-61.

Samuelson, P. A. (1954). The Pure Theory of Public Expenditure. *Review of Economics and Statistics, 36*(4), 387-389.

Scott, W. R. (2004). Institutional theory. In Ritzer, G. (Ed.), *Encyclopedia of Social Theory*. Sage Publications.

Stiglitz, J. E. (2000). *Economics of the Public Sector*. W.W. Norton & Company.

Tanzi, V., & Zee, H. H. (2000). Tax Policy for Emerging Markets: Developing Countries. *National Tax Journal, 53*(2), 299-322.

Transparency International. (2021). Corruption Perception Index 2020. Retrieved from Transparency International

UNESCO. (2021). E-Government. Retrieved from UNESCO.

World Bank. (2020). Revenue Generation. Retrieved from World Bank

World Bank. (2021). *Nigeria Economic Update: Resilience through Reforms*. World Bank.

World Bank. (2021). Nigeria. Retrieved from World Bank