

E-Governance and Efficiency in Public Service Delivery in Edo State

Joy Edobor¹, Adekunle Saheed Ajisebiyawo²

^{1,2}Department of Political Science and Public Administration Igbinedion University, Okada, Edo State

ABSTRACT	ARTICLE DETAILS
E-governance had emerged as a critical reform tool in developing countries, aimed at enhancing efficiency, transparency, and accountability in public service delivery. Despite its growing adoption across Nigeria, limited empirical studies had examined its effectiveness and challenges in specific state environments. This paper therefore aimed to assess the role of e-governance in improving public service delivery in Edo State, Nigeria. Guided by the Technology Acceptance Model (TAM) and Institutional Theory, the paper relied on qualitative approach to data gathering and used descriptive analysis. The findings indicated that there is widespread awareness of but with notable shortfall in usage due to gaps in accessibility and trust. E-governance processes significantly improved service delivery by reducing delays and curbing petty corruption, though transparency and accountability gains were more modest within the public service. This paper found major barriers to include poor ICT infrastructure, limited digital literacy, high data costs, and political interference, all of which constrained sustained adoption. Broader service delivery challenges, such as inadequate funding, bureaucratic bottlenecks, corruption, and shortages of skilled personnel, further undermined outcomes. The paper concluded that e-governance had enhanced efficiency and reduced petty corruption but had not yet transformed administrative culture or eliminated systemic barriers and recommended that government prioritize infrastructural expansion, invest in digital literacy programs, strengthen monitoring and evaluation, and secure sustainable funding to consolidate gains in public service delivery. KEYWORDS: Accountability, E-Governance, Efficiency, Public Service Delivery, Public Trust	Published On: 17 October 2025 Available on: https://ijiissh.com/

INTRODUCTION

E-governance (often termed e-government) refers broadly to the use of information and communication technologies (ICTs) by government entities to enhance the efficiency, transparency, and accessibility of public services. The primary aim of e-government systems is to “enhance the government’s major operations to promote effective transparency and efficiency in governance”. In practice, this means that ICT enables governments to streamline processes (e.g. permitting, licensing, tax collection), reduce manual paperwork, and facilitate more direct interactions between citizens and public institutions. Over the last two decades, the rapid diffusion of technologies such as high-speed internet, mobile platforms, cloud computing, and data analytics has transformed how public sector services can be delivered. Governments globally are now employing tools like open data portals, mobile service apps, and social media outreach to engage citizens and improve accountability. For example, open government initiatives encourage sharing of data to allow citizen monitoring of public expenditure, while social media channels provide new avenues for public feedback. This convergence of ICT and governance has given rise to the broader concept of “digital government,” reflecting an ecosystem where not only service delivery but governance itself is increasingly mediated by technology (Oludu et al., 2025). The importance of digital government was dramatically underscored by the COVID-19 pandemic. In 2020, countries around the world had to rely heavily on digital channels to maintain public services when physical offices and face-to-face interactions became impossible. The United Nations’ e-Government survey noted that the year 2020 served as a global benchmark for e-government, as governments were “reminded more than ever about the importance and relevance of Digital Government with the global outbreak of the Covid-19 pandemic” (Abu Bakar et al., 2020). In practice, governments accelerated digital initiatives to support remote work, online education, and virtual health services. The pandemic thus acted as a catalyst for digitization, with many administrations expanding digital infrastructure (e.g. data centers, broadband connectivity) and fast-tracking online service portals. International organizations have likewise emphasized digital transformation as a critical driver of sustainable development and resilience (UNESCO, 2025; World Bank, 2021).

In Nigeria, the national government has recognized the need for a digital transformation. In recent years Nigeria launched its National Digital Economy Policy and Strategy (NDEPS), a 10-year plan built on multiple pillars aimed at driving the country’s digital economy and governance (Olanusi, 2025). For instance, the strategy emphasizes digital literacy, e-skills training for public servants, and infrastructure development (such as broadband expansion and a national data center). UNESCO, for example, has supported Nigeria by training civil servants in artificial intelligence and digital government competencies, reflecting governmental commitment to building capacity for e-governance (UNESCO, 2025). Despite these efforts, Nigeria’s overall e-governance

performance remains modest. According to the 2022 UN E-Government Survey, Nigeria's E-Government Development Index (EGDI) was 0.4525, placing it at 140th out of 193 countries. The Online Service Index (OSI) – a sub-index measuring online availability of public services – was only 0.525. The E-Participation Index (EPI), reflecting how well citizens can interact with government online, stood at a low 0.3068 (Oludu et al., 2025). In practical terms, Nigeria's citizens on average have limited access to comprehensive e-services or user-friendly interfaces, and official portals often lack completeness.

Empirical studies have pinpointed several factors underlying Nigeria's e-governance challenges. Common obstacles include inadequate ICT infrastructure and power supply (especially in rural areas), limited digital literacy, and bureaucratic resistance (such as fragmented agencies and slow procedures). For example, Edemidiong et al (2025) and Oludu et al (2025) reported that challenges hindering the effective implementation of e-services in Nigeria include inadequate infrastructure, limited digital literacy, and bureaucratic bottlenecks, which must be overcome for success. Other researchers, like Oseni (2024), Abah & Nwokwu (2019) and Inakefe et al (2024) noted that lack of political will, poor data management, and insufficient funding frequently undermine e-government initiatives in Nigeria.

Moreover, systemic issues such as mistrust between government and citizens have been documented; one study observed that Nigerian governments have historically "lacked proper communication and interaction" with citizens, limiting transparency and "voiding the trust" that e-government reforms aim to build (Oludu et al., 2025). In short, while the potential benefits of e-governance for efficiency and transparency are widely acknowledged, practical impediments have kept Nigeria's progress uneven. At the subnational level, some states in Nigeria have taken bolder steps toward digital governance than others. Edo State has emerged as a leading example on e-governance.

The Edo State Information and Communication Technology Agency (ICTA) was established to drive ICT adoption across all government sectors, with the vision of making Edo a "fully digital entity" (Edo State ICT Agency, 2025). Under Governor Godwin Obaseki's administration, Edo undertook sweeping reforms to digitize its civil service. According to state reports and media coverage, Edo transitioned from "an archaic, analogue" mode of operation to a fully digitized government, connecting all local government offices via fiber-optic networks and instituting a unified e-government platform for document processing. As a result, Edo has been internationally recognized for its achievements: for example, the United Nations and UNDP workshop in 2023 ranked Edo as the best state in Nigeria for ICT and digital governance (Egbejule, 2023).

Similarly, the World Bank's 2019 Digital Economy Diagnostic identified Edo State as "a national leader in implementing IT and broadband for effective governance," noting that Edo's approach could serve as a model for others (Edo State ICT Agency, 2025). These recognitions attest that Edo State's government is at the forefront of embracing technology to improve public administration. Nonetheless, despite these successes, critical questions remain. It is not yet clear how sustainable Edo's digital reforms are in the long term, nor whether they have fully translated into improved public service efficiency and citizen satisfaction. Many of the structural issues seen nationally (e.g. power reliability, skilled personnel gaps, funding constraints) could still limit the impact of Edo's e-governance initiatives.

Moreover, studies such as Oludu et al (2025) noted that without active citizen engagement, even advanced e-government platforms cannot realize their potential. For instance, if citizens lack trust or awareness, they may underutilize online services, blunting expected efficiency gains. Given that Edo's transformation is relatively recent, its long-run outcomes (such as sustained efficiency gains or behavioral changes among citizens) are under-researched.

In summary, globally and in Nigeria, e-governance is seen as a transformative tool for enhancing government efficiency and citizen participation, but actual performance depends on overcoming significant socio-technical barriers. Edo State presents a compelling case: it has made notable progress in digitizing government operations (Edo State ICT Agency, 2025; Egbejule, 2023), yet it still faces the broader challenges known to afflict Nigerian e-government (e.g. infrastructure deficits, policy continuity, public trust). This backdrop motivates a focused investigation into Edo's situation to understand the interplay between its innovations and the factors that may limit their efficacy. Despite international and national efforts to advance digital government, Nigeria's progress in e-governance has been uneven. UNESCO and others have noted that many Nigerian public organizations still struggle with cultural inertia, limited IT investment, and skills gaps when attempting digital transformation (UNESCO, 2025).

Empirical studies similarly underscore that infrastructure deficits (e.g. unreliable power, slow broadband) and governance constraints (fragmented agencies, weak coordination) have kept the uptake of e-services below expectations (Egbara & Ayogu, 2024). These shortcomings have tangible consequences for citizens; for example, communication breakdowns between government and citizens have historically undermined transparency, eroding public trust (Oludu et al., 2025). Without trust and awareness, digital platforms may see low engagement even when technically functional.

In Edo State, the environment is somewhat different because the state government has explicitly prioritized digitalization. The Edo State ICTA has implemented numerous initiatives aimed at streamlining services and improving efficiency. Yet the core problem is that the actual impact and sustainability of these initiatives are not well understood. In other words, while Edo's government claims high e-government compliance and connectivity (Egbejule, 2023; Edo State ICT Agency), it is unclear what the long-term outcomes have been for public service efficiency. Are government services meaningfully faster, more transparent, and more accessible to citizens? Likewise, citizen perspectives on these reforms are largely unexplored: do residents perceive improved service quality and convenience, or do they still encounter delays and bottlenecks? Compounding this, no comprehensive evaluation has identified the specific factors limiting e-governance practice and public service efficiency in Edo State. Drawing on the national literature, potential limiting factors could include technical issues (e.g. power outages, system downtimes), human resource issues (insufficient staff training or turnover), institutional factors (bureaucratic resistance, lack of inter-agency coordination), and citizen-

level factors (digital literacy, trust, and demand). However, which of these are most critical in Edo's circumstance is unknown. Furthermore, there is a lack of comparative insight: how do Edo's e-governance outcomes and challenges compare to those in other Nigerian states? Without such comparison, it is hard to gauge Edo's relative success or to identify best practices.

Therefore, the problem this paper addressed is twofold. First, it investigates the constraints on effective e-governance and efficient public service delivery in Edo State. This means identifying the key barriers that are currently limiting the realization of the full benefits of e-governance in the state. Second, it seeks to understand the evidence of change brought by Edo's initiatives: whether the state's technological reforms have delivered on their promise of improving administrative efficiency and citizen satisfaction. By clarifying these issues, the research will fill a gap in the literature on e-governance in Nigerian sub-national settings. The findings will directly inform research questions and hypotheses about citizens' acceptance, the effectiveness of ICT reforms, and the comparative performance of Edo's digital governance, aligning with the revised study objectives. This clarity is critical for recommending policies that can enhance the adoption of e-services and optimize public sector efficiency both in Edo State and potentially in other similar jurisdictions.

LITERATURE REVIEW

E-governance referred to the systematic application of information and communication technologies (ICTs) by public institutions to enhance service delivery, improve administrative efficiency, and strengthen citizen engagement in governance. While it was often conflated with e-government, which primarily concerned the online provision of services, e-governance encompassed broader processes including digital administration, participatory governance, and the embedding of accountability and transparency mechanisms through technology (Nwokoroeze et al, 2025). It was therefore both a managerial and democratic reform agenda: managerial in the sense of streamlining public services and democratic in fostering citizen participation in decision-making (United Nations Department of Economic and Social Affairs, 2022).

Globally, the evolution of e-governance had been guided by frameworks such as the United Nations E-Government Development Index (EGDI), which benchmarked countries' readiness and capacity across three dimensions: online service provision, telecommunication infrastructure, and human capital. Leading countries such as Denmark, South Korea, and Estonia consistently achieved high EGDI scores due to long-term investment in digital infrastructure, robust broadband penetration, and inclusive service platforms (United Nations, 2022; Kim et al, 2024). By contrast, many developing countries, including Nigeria, recorded slower and uneven progress. Nigeria's EGDI rose from 0.225 in 2003 to 0.4815 in 2024, positioning it 144th of 193 countries (Nwafor, 2024). While this trajectory reflected tangible improvements, the country is still behind regional leaders such as Mauritius and Tunisia, underscoring systemic limitations in infrastructure, human capital, and institutional readiness.

The Nigerian government formally embraced e-governance in the early 2000s, with initiatives including the National e-Government Strategy and the adoption of platforms such as the Integrated Payroll and Personnel Information System (IPPIS). Subnational experiments, however, proved more successful in certain cases. Lagos State's e-governance portal, for instance, achieved a subnational Online Government Development Index (OGDI) score of 0.5662 in 2022, reflecting stronger adoption at the state level compared to the national average (UN DESA, 2022). In Edo State, reforms such as the Edo Geographic Information Service (EDOGIS) illustrated the potential of digital systems to reduce bureaucratic bottlenecks and streamline public access to land documentation (Okotie and Ambrose, 2025).

Conceptually, e-governance was best understood through its core dimensions. First, e-service referred to government-to-citizen (G2C) and government-to-business (G2B) transactions, such as online tax filing, business registration, and license renewals. This dimension emphasized efficiency and accessibility (Babarinde, 2024). Second, e-administration entailed the use of ICT to modernize internal government operations, including digital record management, payroll automation, and interoperable databases across ministries, departments, and agencies (Umar et al, 2023). Third, e-participation focused on engaging citizens in policymaking through online consultations, participatory budgeting, and feedback platforms. The UN's E-Participation Index (EPI) tracked this by assessing how governments informed, consulted, and involved citizens digitally (UN DESA, 2022). Finally, e-democracy extended participation into the political sphere, covering initiatives such as online voter registration, digital transparency of legislative processes, and pilot e-voting systems. Together, these dimensions highlighted the transformative potential of ICT not only to modernize service delivery but also to deepen democratic governance.

Despite its promise, Nigeria's experience demonstrated that e-governance was not merely a technical exercise but also a socio-political reform. Progress was evident in digital service platforms and selective state-level initiatives, yet the country's global ranking illustrated the distance still to travel. A sharper focus on infrastructure, digital literacy, and citizen engagement remained critical for Nigeria to fully align with international e-governance standards.

Public service efficiency on the other hand denoted the ability of government institutions to achieve intended service outcomes while minimizing waste of time, financial resources, and administrative effort. It was fundamentally an input–output construct, balancing the resources deployed with the quality and timeliness of services delivered to citizens. Efficiency in governance was not merely a technical construct; it was also normative, shaped by citizens' expectations of fairness, transparency, and accountability (Schmidhuber et al, 2023). In contemporary governance discourse, efficiency was increasingly assessed through both objective performance indicators and subjective evaluations such as citizen satisfaction surveys.

Scholars frequently conceptualize public service efficiency across five interrelated dimensions. Accessibility referred to the ease with which citizens obtained public services regardless of geography, income, or social status. In digital governance frameworks, accessibility also encompassed inclusivity of online portals, multilingual availability, and accommodations for citizens with

disabilities (Chan et al., 2021). Timeliness measured the speed of service delivery, where delays were often symptomatic of bureaucratic inefficiency. For example, digitized land registries in Edo State, particularly the Edo Geographic Information Service (EDOGIS), significantly reduced processing times for certificates of occupancy compared to manual systems (Okotie and Ambrose, 2025). Transparency reflected openness in service processes, where innovations such as online tracking systems and government data portals made it more difficult to conceal corruption or discretionary practices. Accountability referred to mechanisms through which officials were held responsible for poor service delivery, including grievance redress platforms and oversight institutions. Finally, citizen satisfaction functioned as the aggregate measure of whether services met public needs, thus serving as a critical proxy for efficiency in democratic settings (Kim, Rho, & Teo, 2024).

Empirical studies in Nigeria consistently demonstrated that the adoption of ICT enhanced these dimensions of efficiency. For instance, Ishola et al (2025) found that digital platforms within Nigerian public administration streamlined operations, strengthened record-keeping, and enabled real-time monitoring, thereby improving both timeliness and accountability. Similarly, research on service delivery at Federal University Wukari revealed that ICT adoption facilitated better communication between administrators and stakeholders, which translated into higher levels of satisfaction (Frederick et al., 2023). At the institutional level, reforms such as SERVICOM (Service Compact with All Nigerians) targeted citizen satisfaction by setting service charters and performance benchmarks, thereby embedding accountability into the broader framework of efficiency.

Nonetheless, efficiency gains remained unevenly distributed across Nigeria. Urban populations benefitted disproportionately from digital services because of better connectivity and literacy, while rural communities were often excluded. Omotayo et al (2025) observed that broadband penetration constituted a critical barrier to equitable efficiency, as rural dwellers frequently relied on manual procedures. Similarly, Dangaji and Unigwe (2025) noted that most e-service platforms in Nigeria operated only in English, thereby marginalizing populations with limited language proficiency. These inequities underscored that efficiency was not only a matter of speed and cost reduction, but also of inclusivity and equity in service delivery.

Although Nigeria's digital initiatives registered some progress, the country's low score of 25/100 on Transparency International's 2023 Corruption Perceptions Index reflected persistent inefficiencies tied to corruption and weak accountability (Transparency International, 2023). In contrast, African peers such as Mauritius and Rwanda leveraged ICT reforms to achieve higher levels of efficiency and citizen trust, demonstrating that governance frameworks were as critical as technological adoption (Ukorah et al, 2023).

In sum, public service efficiency represented a multidimensional construct that extended beyond speed and cost efficiency to incorporate transparency, accountability, inclusivity, and citizen satisfaction. ICT-enabled reforms held the potential to significantly strengthen these outcomes, as evidenced by subnational innovations such as EDOGIS and institutional mechanisms such as SERVICOM. However, Nigeria's experience showed that efficiency gains were fragile and uneven in the absence of robust infrastructure, equitable access, and strong governance institutions. For reforms to be sustainable, efficiency needed to be anchored not only in technological modernization but also in institutional reform and citizen-centered governance.

Theoretical Framework

This paper drew on the Technology Acceptance Model (TAM) and the principal-Agent Theory (PAT) as its guiding frameworks. Both were considered suitable because they explained complementary aspects of how e-governance influenced service delivery in Edo State. TAM, first developed by Davis (1989), emphasized that individuals' decisions to adopt new technologies depended on two key perceptions: usefulness and ease of use. Over time, TAM had been extended to include external variables such as trust, system quality, and organizational support (Venkatesh & Davis, 2000). Within the Nigerian public sector, where skepticism toward digital platforms was often widespread, these perceptions played an important role in determining whether citizens engaged with e-governance services. Research on ICT adoption in developing environments showed that limited literacy, poor infrastructure, and mistrust of government could reduce technology uptake, while clear usefulness (such as time savings or reduced costs) encouraged participation (Ihemadu & Anyiam, 2024).

The principal-Agent Theory, on the other hand, originated in economics and political science, and focused on the problem of information asymmetry between principals (citizens) and agents (government officials) (Eisenhardt, 1989). In many governance systems, agents possessed more information than principals and could use this advantage for self-interest, leading to inefficiency and corruption. E-governance platforms were expected to reduce this asymmetry by creating digital records, enabling monitoring, and promoting accountability. Prior studies in Nigeria highlighted that ICT tools such as e-tax systems, biometric verification, and electronic service portals constrained opportunities for rent-seeking, improved transparency, and allowed citizens to better evaluate government performance (Molobela, 2023).

The combined use of TAM and PAT, however, was not without challenges. A major critique of TAM was its narrow focus on individual-level perceptions, which risked overlooking broader structural and institutional barriers, such as inadequate power supply and digital divides (Bagozzi, 2007). Similarly, PAT had been criticized for assuming rational behavior by agents and principals, while political patronage, cultural networks, and weak enforcement often undermined accountability mechanisms in Nigeria (Lane, 2005). If these limitations were not acknowledged, relying solely on either framework might have produced a partial or distorted picture of e-governance outcomes. Taken together, the two frameworks reinforced each other in ways that directly advanced the objective of this paper.

The adoption of ICT platforms by citizens, as explained by TAM, created conditions under which the monitoring and accountability mechanisms of PAT could function effectively. For example, if citizens in Edo State did not perceive online platforms such as EDOGIS or the state tax portal as useful or easy to use, they would not adopt them, and the information flows necessary to reduce

information asymmetry would remain limited. Conversely, when citizens engaged with these systems, they generated transparent digital records that enhanced oversight and constrained opportunities for corruption, aligning with Principal-Agent assumptions. Thus, technology acceptance and accountability were not parallel processes but mutually reinforcing dynamics that illustrated the structural-behavioral link between governance reforms and citizen uptake.

The effectiveness of e-governance initiatives depended heavily on how citizens perceived and accepted the technologies that underpinned them. Public perception shaped patterns of use, while acceptance determined whether digital innovations achieved their intended outcomes. The Technology Acceptance Model (TAM) remained the dominant theoretical framework for understanding this process. TAM posited that individuals' behavioral intentions toward technology were influenced primarily by perceived usefulness and perceived ease of use (Davis, 1989). In governance environments, perceived usefulness referred to the extent to which citizens believed that digital platforms improved their access to services, reduced administrative delays, and enhanced the reliability of government processes. Perceived ease of use concerned whether citizens found these platforms intuitive, straightforward, and minimally burdensome. Empirical evidence consistently demonstrated that when either of these dimensions was absent, adoption rates declined significantly (Bolaji & Ibrahim-Raji, 2023).

Trust constitutes an equally critical dimension of citizen perception. In settings where institutional legitimacy was fragile, citizens' willingness to adopt digital platforms depended on their confidence that government would use their data responsibly and deliver services impartially. Ishola et al (2025) showed that weak trust in government constrained citizens' adoption of ICT-enabled security systems in Nigeria despite extensive investment. Similarly, the rollout of digital identification systems encountered resistance due to concerns about privacy breaches and potential misuse of biometric data (Okotie and Ambrose, 2025). Without credible assurances of transparency and data protection, even technically sound platforms risked rejection by the public.

Digital literacy represented another important factor influencing technology acceptance. Citizens' ability to navigate and utilize ICT tools determined whether they could meaningfully benefit from e-governance initiatives. Bolaji and Ibrahim-Raji (2023), examining literacy levels among staff in education agencies in Kwara State, found that low ICT competence constrained the effective implementation of digital systems. Likewise, Agwu et al (2019) observed that agricultural researchers in Edo State relied heavily on ICT and online resources, but their usage patterns were shaped by the cost of access, training opportunities, and infrastructural quality. These findings suggested that technology adoption could not be divorced from the broader socio-economic environment in which citizens operated.

Citizen satisfaction also played a central role in shaping perceptions of e-governance. When services delivered through digital platforms were timely, reliable, and responsive, citizens tended to view them positively. Conversely, frequent technical failures or slow processing times eroded satisfaction and discouraged usage. Edemidiong et al., (2020), in a study on e-governance adoption in Nigerian universities, reported that students were more likely to embrace digital administrative platforms when they delivered tangible benefits in efficiency and responsiveness. Similarly, Ndidi et al (2024) showed that women entrepreneurs in Edo State welcomed ICT adoption when it demonstrably improved their productivity, reduced transaction costs, and expanded market access. These examples underscored the pragmatic orientation of citizens: adoption followed when platforms provided measurable improvements in their daily lives.

Overall, citizen perception and acceptance of technology emerged from the intersection of cognitive, affective, and structural factors. Cognitive evaluations such as perceived usefulness and ease of use, affective judgments such as trust and satisfaction, and structural elements such as literacy and affordability collectively shaped adoption outcomes. In Nigeria, adoption remained uneven due to persistent gaps in digital literacy, affordability, and confidence in institutions. Addressing these challenges required citizen-centered reforms that ensured platforms were simple, secure, and demonstrably beneficial. Only through this approach could citizen acceptance provide a sustainable foundation for digital governance.

Barriers to E-Governance Adoption in Nigeria

Barriers to e-governance adoption were understood as the multiple obstacles that constrained the successful design, implementation, and institutionalization of digital governance initiatives. In public administration literature, such barriers were defined as the range of structural, technical, organizational, and socio-cultural factors that inhibited governments from effectively leveraging information and communication technologies (ICTs) to deliver services, promote accountability, and foster citizen engagement (Agwu et al., 2019). While developed nations had largely overcome many of these constraints through sustained investment in infrastructure and digital literacy, developing countries, including Nigeria, continued to face substantial challenges. The persistence of these obstacles explained why Nigeria lagged in global e-governance rankings and why subnational entities such as Edo State still struggled to achieve effective digital transformation (Ishola et al., 2025).

Scholars emphasized that these barriers could not be treated as isolated problems, since they often overlapped and reinforced one another. For example, weak infrastructure limited the effectiveness of well-designed platforms, while low trust in government institutions reduced citizens' willingness to adopt digital systems. Okotie and Ambrose (2025) argued that Nigeria's attempts at digital transformation, such as the reforms in Edo State Geographic Information Service (EDOGIS), revealed both the promise of digitization and the structural impediments that delayed its full impact. Similarly, Godwin (2019), through a bibliometric analysis of ICT in Nigerian public administration, found that although research and policy attention on digital governance had increased, systemic barriers remained underexplored, particularly in relation to vulnerable populations and rural communities. These insights underscored the importance of identifying barriers not only as technical deficiencies but as multidimensional challenges embedded in Nigeria's institutional and socio-economic circumstance.

For analytical clarity, the barriers to e-governance adoption in Nigeria were grouped into three broad categories: technical barriers, socio-economic barriers, and institutional barriers. Each category highlighted a distinct but interconnected set of issues that continued to shape the outcomes of digital governance initiatives.

1. Technical Barriers

Technical barriers remained the most immediate and visible obstacles to e-governance adoption in Nigeria. Reliable infrastructure, particularly electricity and broadband internet, was indispensable for effective digital service delivery. Yet Nigeria continued to grapple with unstable power supply and inadequate ICT infrastructure, which limited the sustainability of e-governance initiatives. Ugwueze et al. (2015) noted that despite federal investment in ICT, infrastructural gaps, especially erratic electricity supply, had hindered the effective implementation of e-government platforms. Without steady power, government data centers, digital kiosks, and online portals often failed, thereby eroding citizen confidence in the system.

Internet connectivity presented another significant barrier. Although mobile phone penetration had increased, broadband access remained limited, costly, and unevenly distributed across regions. Agwu et al. (2019) argued that corruption and inefficiencies persisted in part because manual systems continued to dominate, given the limited reach of reliable internet services. Ishola et al. (2025) further observed that in sectors such as national security, available ICT infrastructure was grossly underutilized due to poor maintenance and network unreliability, thereby weakening service delivery. Similarly, Agbor et al. (2024), in their study of the Federal Inland Revenue Service, highlighted that weak ICT infrastructure undermined the potential of online tax platforms, limiting compliance and frustrating citizens who attempted to use them.

A further technical limitation lay in the fragmentation of digital platforms. Okotie and Ambrose (2025) reported that although EDOGIS digitization reduced bureaucratic delays, the absence of interoperability across agencies led to inefficiencies. Systems designed in silos created duplication of effort and prevented the development of a unified citizen interface. Godwin (2019) also emphasized that Nigerian e-governance projects often lacked local customization and integration, which resulted in fragmented solutions that did not scale effectively. Together, these technical barriers suggested that without significant investment in electricity, broadband expansion, and system interoperability, Nigeria's e-governance progress would remain uneven and incomplete.

2. Socio-Economic Barriers

Socio-economic barriers further complicated the adoption of e-governance in Nigeria. Digital literacy, affordability, and public attitudes significantly influenced whether citizens could and would adopt online services. Ugwueze et al. (2015) identified low ICT literacy among public servants and citizens as a persistent obstacle to e-government implementation. Many Nigerians, particularly in rural areas, lacked the necessary skills to navigate online platforms, while limited ICT training in schools and workplaces perpetuated these knowledge gaps. Agwu et al. (2019) similarly observed that low levels of public confidence and widespread skepticism toward digital systems restricted adoption, especially in environments where manual methods remained dominant.

Affordability was another socio-economic factor. The high cost of data and limited access to affordable digital devices discouraged mass adoption of e-services. Agbor et al. (2024) found that businesses and individuals using online tax platforms often faced financial and technical barriers, which reduced compliance and diminished confidence in government systems. Furthermore, cultural norms and preferences for face-to-face interactions reinforced resistance to online services. In environments where interpersonal trust was highly valued, citizens often distrusted impersonal online platforms, especially if they perceived government as unaccountable.

Trust deficits also constituted a socio-economic barrier. Ishola et al. (2025) showed that in the security sector, citizen skepticism about government's ability to properly utilize ICT for protection had limited public cooperation with digital security initiatives. This mirrored broader patterns of mistrust in Nigeria's governance institutions, which discouraged citizens from embracing online platforms for sensitive activities such as financial transactions or identity registration. As Godwin (2019) stressed, unless public trust was strengthened through reliable services and safeguards for data privacy, e-governance adoption would remain constrained.

3. Institutional Barriers

Institutional weaknesses formed another major category of barriers to e-governance adoption. These included policy inconsistency, bureaucratic resistance, corruption, and limited technical capacity within government institutions. Ugwueze et al. (2016) documented how fragmented policy frameworks and lack of coordination across ministries and agencies hindered Nigeria's e-government agenda. Policy shifts and inconsistent implementation timelines often caused projects to stall or fail, while bureaucratic inertia slowed down reforms.

Resistance from officials was also significant. Agwu et al. (2019) reported that corrupt officials frequently resisted digital platforms because such systems reduced opportunities for rent-seeking. For example, automated payroll systems such as the Integrated Personnel and Payroll Information System (IPIS) and Treasury Single Account (TSA) were initially resisted because they exposed ghost workers and limited discretionary financial practices. Okotie and Ambrose (2025) noted similar institutional inertia in Edo State, where even beneficial reforms such as digital land registration faced challenges from entrenched administrative practices.

Capacity deficits within institutions further exacerbated these problems. Many ministries and agencies lacked sufficient ICT-trained personnel, which limited their ability to design, operate, and maintain complex systems. Agbor et al. (2024) emphasized that insufficient technical staff within the Federal Inland Revenue Service undermined the sustainability of digital tax systems, while Ishola et al. (2025) noted that even in the security sector, available ICT tools were underutilized due to inadequate training. Godwin (2019) further argued that without significant institutional investment in research, training, and indigenous technological

development, Nigeria's e-governance agenda would remain overly dependent on foreign models that were not fully adapted to local settings.

In sum, barriers to e-governance adoption in Nigeria were multifaceted and mutually reinforcing. Technical obstacles such as unreliable power supply, poor internet connectivity, and lack of interoperability limited the reliability of digital platforms. Socio-economic factors including digital illiteracy, affordability challenges, and public mistrust further hindered citizen adoption. Institutional barriers, marked by policy inconsistency, bureaucratic resistance, corruption, and limited capacity, compounded these challenges. Collectively, these constraints explained why Nigeria, despite progress in digital reforms, continued to lag in global e-governance rankings and why subnational entities like Edo State struggled to achieve efficiency gains. Addressing these barriers required not only infrastructure investment but also systemic reforms to build institutional capacity, strengthen citizen trust, and ensure inclusive access to digital governance.

E-governance and Public Service Efficiency

Barriers to public service efficiency were understood as the structural, institutional, and operational obstacles that constrained the ability of government agencies to deliver services in a timely, transparent, and citizen-oriented manner. In the Nigerian environment, efficiency in public administration was not determined by technological reforms alone but was shaped by entrenched governance practices and institutional weaknesses.

Research like Abdulkareem et al (2021), Inuwa (2021) and Lawal et al (2022) consistently showed that inefficiency stemmed from excessive bureaucracy, entrenched corruption, persistent underfunding, inadequate integration of ICT systems, and weak human capacity within the civil service. Transparency International's Corruption Perceptions Index for 2023 further underscored this challenge, ranking Nigeria 145th out of 180 countries with a score of 25/100, which highlighted corruption as a systemic barrier to efficiency (Transparency International, 2023). Together, these factors limited the effectiveness of reforms such as the Integrated Payroll and Personnel Information System (IPPIS) and the Treasury Single Account (TSA), demonstrating that institutional weaknesses and governance failures were as critical as technological gaps in shaping service delivery outcomes. Zakari and Button (2021) further revealed that manipulation of procurement processes and contract padding translated directly into inefficiency, as funds intended for essential infrastructure or staffing were siphoned away. Thus, corruption remained a structural barrier that weakened accountability and slowed progress toward efficient governance.

Efficient public service required steady investment in both human and material resources, but budgetary allocations were often inadequate to sustain reforms. Funding shortfalls led to obsolete ICT equipment, irregular system upgrades, and delays in service delivery. Agwu et al (2019) observed that while significant investments were made in Nigeria's digital infrastructure, these were neither sufficient nor consistently maintained, resulting in frequent breakdowns of critical platforms. Underfunding also limited staff recruitment and training, leaving many ministries and agencies unable to build the technical capacity required for large-scale e-governance implementation. The scarcity of resources therefore forced many agencies to continue relying on manual processes, undermining the efficiency of service delivery.

Inadequate ICT integration posed another significant challenge. Even where digital platforms were deployed, they often operated in silos without interoperability, leading to duplication and inefficiency. For instance, some state and local portals merely replicated paper forms online without connecting to backend systems, resulting in delays and errors in processing. Abdulkareem et al. (2021) highlighted how lack of coordination across ministries and agencies perpetuated inefficiency, as data were not shared seamlessly and parallel systems persisted. The absence of standardized platforms or harmonized regulations further complicated integration, reducing the effectiveness of digital reforms intended to improve service delivery.

Finally, weak human capacity constrained efficiency. Many public servants lacked the technical expertise required to operate and sustain ICT systems effectively. Godwin (2019) emphasized that insufficient training in ICT tools limited adoption and use, while low levels of digital literacy among both staff and citizens reduced the impact of reforms. Ishola et al. (2025) similarly reported that agencies often faced shortages of skilled personnel to maintain and troubleshoot digital platforms. The result was underutilization of existing systems, frequent technical errors, and reliance on external contractors whose services increased costs and reduced sustainability. Without adequate investment in human capital, digital reforms could not translate into lasting efficiency improvements.

In summary, barriers to public service efficiency in Nigeria extended beyond technological readiness to include deep-seated institutional and governance challenges. Bureaucracy and corruption eroded accountability and slowed reforms; underfunding deprived agencies of resources necessary for sustained efficiency; inadequate ICT integration perpetuated duplication and errors; and weak human capacity limited the effective use of available systems. For Edo State, overcoming these barriers required not only technological upgrades but also structural reforms aimed at reducing red tape, strengthening anti-corruption mechanisms, ensuring adequate funding, harmonizing ICT systems, and building staff capacity. Without addressing these interrelated obstacles, efforts to improve public service efficiency through e-governance would have remained constrained and uneven in impact.

Trust and transparency were widely regarded as central pillars of effective digital governance. Trust referred to citizens' confidence that government digital services would protect their privacy, handle their data securely, and deliver services fairly, while transparency referred to the openness of government processes, decisions, and use of resources in ways that could be scrutinized by the public (Wirtz & Müller, 2019). These concepts were interrelated: governments that demonstrated transparency in decision-making and information disclosure were more likely to foster trust among citizens, thereby encouraging higher adoption of e-governance platforms. In Nigeria, concerns about weak institutional accountability made trust a particularly critical issue. Citizens often associated public services with corruption and inefficiency, which undermined confidence in digital reforms. Studies

emphasized that where citizens perceived government as corrupt or opaque, trust in digital platforms was reduced regardless of the quality of the technology (Inuwa, 2021; Lawal et al, 2022). Conversely, evidence showed that e-governance platforms that offered open access to information, such as budget transparency portals or online feedback systems, tended to increase perceptions of government credibility (Wirtz & Müller, 2019).

The legal and institutional framework in Nigeria evolved to address these issues. The Nigeria Data Protection Act of 2023 was introduced to safeguard citizens' personal data and promote accountability in data processing (Nigeria Data Protection Bureau, 2023). By establishing rules on consent, lawful data handling, and penalties for misuse, the Act sought to strengthen the foundations of trust in digital systems. Nigeria also committed to the Open Government Partnership (OGP), which emphasized transparency in governance through reforms such as open budgeting, access to information laws, and participatory monitoring (Open Government Partnership, 2022). However, analysts noted that while these frameworks existed on paper, enforcement had remained uneven, limiting their ability to transform citizen perceptions (Afrobarometer, 2023).

Globally, empirical findings supported the view that transparency mechanisms directly influenced trust in digital governance. For example, Wirtz and Müller (2019) found that disclosure of decision-making processes, coupled with visible accountability mechanisms, significantly increased citizen willingness to use online government platforms. Similar patterns were observed in other developing countries, where trust was enhanced when governments implemented open data policies and ensured clear communication about how personal data were used (Bannister & Connolly, 2020). In Nigeria, however, surveys indicated that citizens remained cautious. Afrobarometer (2023) reported that only about one-third of Nigerians trusted government institutions "most of the time," a level of skepticism that carried over into perceptions of digital governance.

For Edo State, trust and transparency were not abstract principles but concrete determinants of whether e-governance reforms succeeded. Initiatives such as digital land registries, online tax portals, and procurement transparency systems were designed to make government processes more open and to reduce corruption. Yet, when citizens perceived that digital systems lacked reliability or feared that their personal data might be misused, adoption slowed. Thus, the state's ability to embed audit trails, public reporting dashboards, and responsive feedback mechanisms directly influenced levels of trust.

In essence, trust and transparency formed mutually reinforcing components of digital governance. When Edo State demonstrated transparency, by disclosing budget information, publishing service delivery metrics online, or enabling citizen feedback, it created the basis for greater public trust. This trust, in turn, increased the willingness of citizens to adopt and engage with e-governance platforms. However, where transparency mechanisms were weak or enforcement inconsistent, skepticism persisted. Ilawagbon and Ajisebiyawo (2024) therefore suggested that technical upgrades alone were insufficient: clear accountability, robust data protection, and visible openness were essential for building and sustaining citizen trust in Edo State's digital governance.

Assessing the impacts of e-governance processes on public service delivery in Edo State

E-governance processes have considerable impact on public service delivery in Edo State. Olabimitan et al (2025) reported that the introduction of e-governance in several Nigerian states helped reduce bureaucratic bottlenecks and delays, thereby making service delivery more efficient. Asomba et al (2024) also argued that digitizing transactions in areas such as licensing and revenue collection significantly reduced face-to-face interactions, cutting down opportunities for bribery and improving service outcomes. At the same time, the result that corruption reduction was a strong predictor of service quality corresponded with Ata-Agboni (2021), who emphasized that the transparency of digital transactions reduced opportunities for rent-seeking behavior among officials.

Adesola (2024) also found that in Lagos and Abuja, e-governance platforms enhanced transparency in land and tax administration, which directly improved citizen satisfaction with public services. However, Obodo & Anigbata (2018) argued that while ICT initiatives in Nigeria created spaces for accountability, weak institutional enforcement and uneven implementation limited the benefits for some groups of citizens. Overall, the Edo State reflected that e-governance processes contributed positively to service delivery outcomes, particularly by reducing delays and corruption.

Ajibade et al (2017) also found that digitization reduced paperwork and bottlenecks in Lagos ministries but did not fully eliminate delays in states where ICT infrastructure was weak. While online platforms improved responsiveness in urban centres, citizens in rural areas continued to face long waits due to unreliable connectivity and low digital literacy. Beyond Nigeria, Mutula and Mostert (2010) argued that e-government's capacity to reduce delays depended on parallel reforms in staffing and workflow, not only on technology. Thus, while Edo State's platforms improved processing speed for many, the persistence of infrastructural and institutional barriers, confirming that digitization alone could not fully resolve entrenched inefficiencies without broader administrative reform.

Similarly, Anioke (2024) noted that Abuja's tax platforms offered citizens access to online receipts, yet the persistence of insider manipulations and selective disclosure weakened confidence. In Edo State, Okotie and Ambrose (2025) reported that the EDOGIS digital transformation policy streamlined certificate of occupancy applications and improved tracking, but bottlenecks still remained because not all procedural information was made publicly accessible. These studies suggested that visibility of information did not automatically equal full transparency.

The evidence in literature supported that e-governance platforms in Edo State had visibly expanded access to information, transparency remained partial and contested. The platforms reduced secrecy around some processes, but the persistence of doubts about completeness, accuracy, and fairness of digital records limited their contribution to service quality. This indicated that transparency required not only technological solutions but also institutional reforms that ensured independent verification, consistent

publication of data, and stronger citizen oversight. For Frederick et al. (2023), Edo Specialist Hospital, reported that ICT systems allowed hospital managers to monitor staff attendance and task completion, which theoretically strengthened accountability.

However, they found that weak managerial culture meant disciplinary measures were rarely implemented. Ishola et al. (2025), in their bibliometric analysis of ICT in Nigerian public administration, highlighted that accountability was often framed as a technological achievement rather than an institutional practice. They concluded that unless backed by enforcement, monitoring systems served symbolic rather than substantive roles. This was also consistent with Obodo and Anigbata (2018), who argued that Nigerian ICT reforms created opportunities for accountability but rarely translated into sanctions due to weak institutional enforcement. Okotie and Ambrose (2025) also found that in EDOGIS, while application tracking systems recorded officer actions, accountability remained weak because delays and irregularities were tolerated by supervisors.

Jimoh et al (2018) similarly found that electronic governance reduced cash-based corruption but did not fully eliminate it, as manipulation of systems and selective disclosure continued. Obazele and Osuji (2025), in their study of e-procurement reforms in Edo State, reported that while e-government procurement improved efficiency and transparency, implementation was hindered by bureaucratic resistance and manipulation of procurement stages.

These findings demonstrated that e-governance processes in Edo State significantly reduced petty and transactional corruption, especially in payment systems and land administration. However, larger and systemic forms of corruption persisted in areas where discretion remained or where digital systems were not fully adopted. The results confirmed that while platforms were a strong predictor of improved service quality, sustainable corruption reduction required extending digitization across all processes, strengthening procurement systems, and reinforcing institutional checks.

CONCLUSION

This paper demonstrated that e-governance in Edo State held transformative potential for public service delivery, citizen engagement, and institutional reform, but was simultaneously constrained by entrenched barriers that limited its full realization. There is robust literature in support of adoption of digital platforms in Edo State and how it has improved awareness, reduced delays, minimized petty corruption, and increased transparency of certain government processes. At the same time, infrastructural weaknesses, limited digital literacy, inadequate funding, bureaucratic inefficiencies, and persistent trust deficits were found to undermine the sustainability and inclusiveness of these reforms.

In conclusion, the study revealed a paradox of progress: e-governance in Edo State made public services faster, more visible, and less prone to petty corruption, yet these gains were moderated by longstanding governance challenges that persisted beneath the digital layer. Technology, as the research showed, was not a substitute for institutions; it was only as effective as the administrative systems, financial structures, and trust relationships that underpinned it. Strengthening e-governance in Edo State and by extension Nigeria, required not only the expansion of digital platforms but also their embedding within deeper reforms in funding, infrastructure, institutional accountability, and citizen capacity. This dual recognition of technological opportunity and institutional constraint was the central contribution of the study, and it pointed to the need for sustained investment, adaptive policy design, and inclusive capacity building as the path forward.

REFERENCES

- 1) Abdulkareem, A. K., Ishola, A. A., & Abdulkareem, Z. J. (2021). E-Government and bureaucratic corruption in Nigeria: Successes and challenges. *Journal of Government and Politics*, 12(1), 1–15. <https://doi.org/10.18196/jgp.121125>
- 2) Abu Bakar, K., Ibrahim, R., & Yunus, Y. (2020). Digital Government Evolution and Maturity Models: A Review. *Open International Journal of Informatics*, 8(2), 70–87. Retrieved from <https://oiji.utm.my/index.php/oiji/article/view/41>
- 3) Adesola, B. A. (2024). Assessment of e-land administration in Federal Capital Territory, Abuja, Nigeria. *African Journal of Environment and Natural Science Research*, 7(2), 191–207. <https://doi.org/10.52589/AJENSR-KOOHD0NM>
- 4) Afrobarometer. (2023). Preference for democracy remains high in Nigeria, but dissatisfaction with its quality is growing: Findings from Round 10 survey. *Afrobarometer Dispatch*. <https://www.afrobarometer.org/articles/preference-for-democracy-remains-high-in-nigeria-but-dissatisfaction-with-its-quality-is-growing/>
- 5) Afrobarometer. (2023). Public attitudes towards governance in Nigeria. Retrieved from <https://www.afrobarometer.org/publications>
- 6) Agbor, C. N., Edu, G. O., Obun, E. M., Omoogun, R. M., Monity, F. M., & Undie, J. B. (2024). Impact of electronic-governance on students' management in Environmental Education Department, University of Calabar-Calabar, Nigeria. *Mediterranean Journal of Social Sciences*, 15(4), 140. <https://doi.org/10.36941/mjss-2024-0037>
- 7) Agwu, A. E., Uddin, I. O., & Nwobodo, C. E. (2019). ICTs and online resources used for meeting information needs by agricultural researchers and extension workers in Edo State, Nigeria. *Azarian Journal of Agriculture*, 6(2), 19–27.
- 8) Ajibade, O., Ibietan, J., & Ayelabola, O. (2017, November). E-governance implementation and public service delivery in Nigeria: The technology acceptance model (TAM) application. *Journal of Public Administration and Governance*, 7(4), 165–183. <https://doi.org/10.5296/jpag.v7i4.11475>
- 9) Anioke, V. U. (2024). Digital tax administration and revenue generation in Lagos State, 2008–2018. *European Journal of Political Science Studies*, 7(2). <https://doi.org/10.46827/ejps.v7i2.1816>
- 10) Asomba, I.I., Ejim, C.J., Onyia, O.D., & Orji, G.O. (2024). E-governance and improved public revenue generation in Nigeria: Issues and prospects. *Journal of Policy and Development Studies*, 16(1). Retrieved from <https://www.ajol.info/index.php/jpds/article/view/274883>

- 11) Ata-Agboni, J. (2021). E-Governance and e-government: Rethinking public governance in Nigeria, within the context of COVID-19. *Journal of Good Governance and Sustainable Development in Africa*, 6(2), 54–59. <https://doi.org/10.36758/jggsda/v6n2.2021/6>
- 12) Babarinde, S. A. (2024). Digital Technology as a Driver of Government Efficiency: An Analysis of Government Parastatals in Lagos State, Nigeria. *PERSPEKTIF*, 13(1), 285–297. <https://doi.org/10.31289/perspektif.v13i1.10654>
- 13) Bagozzi, R. P. (2007). The legacy of the technology acceptance model and a proposal for a paradigm shift. *Journal of the Association for Information Systems*, 8(4), 244–254. <https://doi.org/10.17705/1jais.00122>
- 14) Bolaji, H. O., & Ibrahim-Raji, T. B. (2023). ICT-based literacy evaluation in Nigeria educational sector: Case study in Kwara State. *International Journal of Informatics, Information System and Computer Engineering*, 4(1), 1–10. <https://doi.org/10.34010/injiiscom.v4i1.9274>
- 15) Chan, F. K. Y., Thong, J. Y. L., Brown, S. A., & Venkatesh, V. (2021). Service design and citizen satisfaction with e-government services: A multidimensional perspective. *Public Administration Review*, 81(5), 874–894. <https://doi.org/10.1111/puar.13308>
- 16) Dangaji, H. A., & Unigwe, C. M. (2025). Empowering Nigeria through language-technology for digital inclusion: A multilingual approach to information and communication technology accessibility. *Sapientia Foundation Journal of Education, Sciences and Gender Studies*, 3(1).
- 17) Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- 18) Edemidiong, E. E., Basssey, E. I., & Ozinegbe, O. (2020). Information and communication technology (ICT) and service delivery in Nigerian public sector: A study of Federal Inland Revenue Service (2000–2019). *EPRA International Journal of Environmental Economics, Commerce and Educational Management*. <https://doi.org/10.36713/epra5449>
- 19) Edo State ICT Agency. (n.d.). Awards and recognition. <https://icta.edostate.gov.ng/>
- 20) Egbara, E. A., & Ayogu, G. I. (2024). E-Governance for functional bureaucratization in Nigeria: Benefits and challenges. *International Journal of Research and Innovation in Social Science (IJRISS)*, 8(8), 3572–3580. <https://doi.org/10.47772/IJRISS.2024.8080265>
- 21) Egbejule, M. (2023, October 15). UN ranks Edo as best state in ICT, digital governance. *The Guardian Nigeria*. <https://guardian.ng/news/un-ranks-edo-as-best-state-in-ict-digital-governance/>
- 22) Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57–74. <https://doi.org/10.2307/258191>
- 23) Frederick, et al. (2023). Effects of the use of ICT on public administrator's service delivery: A study of Edo Specialist Hospital Benin City, Edo State, Nigeria. *International Journal of Research and Scientific Innovation, International Journal of Research and Scientific Innovation (IJRSI)*, vol. 10(7), pages 62-70, July.
- 24) Global Data Lab. (2022). Subnational Human Development Index (SHDI) for Nigerian states, 2022. Retrieved from <https://globaldatalab.org/shdi/table/2022/edindex+lifexp+lgnc/NGA/>
- 25) Ihemadu, M. C., & Anyiam, C. G. (2024). E-GOVERNANCE AND SERVICE DELIVERY IN NIGERIA: CHALLENGES AND PROSPECTS. *African Journal of Social and Behavioural Sciences*, 14(1). Retrieved from <https://journals.aphriapub.com/index.php/AJSBS/article/view/2539>
- 26) Ilawagbon, O.O. and Ajisebiyawo, A.S. (2024). Transparency and accountability in public service delivery: Leveraging e-administration in the post-covid-19 era in the federal civil service of Nigeria. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, Volume 29, Issue 7, Series 3 (July 2024) 01-12 e-ISSN: 2279-0837, p-ISSN: 2279-0845.
- 27) Inakefe, G., Bassey, V. U., & Amad, J. (2024). Evaluation of the policy and institutional implications of digital tools in e-governance reforms implementation for service delivery in Cross River State Civil Service, Nigeria. *SAGE Open*, 14(4), 1–15. <https://doi.org/10.1177/21582440241297047>
- 28) Inuwa, B. A. (2021). Corruption in the public sector: An overview of corruption in Nigeria civil service. *Lapai International Journal of Administration*, 4(1). Retrieved from <https://ojs.ibbuajournals.com.ng/index.php/lijad/article/view/207/>
- 29) Ishola, A. A., Maramura, T. C., & Gumbo, T. (2025). Charting digital governance: A bibliometric analysis of information and communication technology research in Nigeria's public administration using Scopus. *Electronic Library*, 43(2), 221–239. <https://doi.org/10.1108/EL-09-2024-0198>
- 30) Jimoh, R. G., Longe, O. B., & Ndunagu, J. N. (2018). Information about electronic governance: A tool to curb corruption in Nigeria. *The Messenger*, 10(2), 187–194. <https://doi.org/10.26623/themessenger.v10i2.874>
- 31) Kim, S., Rho, E., & Teo, Y. X. J. (2024). Citizen satisfaction research in public administration: A systematic literature review and future research agenda. *American Review of Public Administration*. Advance online publication. <https://doi.org/10.1177/02750740241237477>
- 32) Lawal, M. M., Abdulsalam, Z., & Wushishi, D. A. (2022). Impact of corruption on productivity in Nigerian public institutions: A study of manifestations and factors propelling civil service corruption. *Lapai International Journal of Administration*, 5(1). Retrieved from <https://ojs.ibbuajournals.com.ng/index.php/lijad/article/view/910/>
- 33) Molobela, T. (2023). E-Government and public administration: Navigating through the public administration paradigm of governance to make sense of e-governance. *International Journal of Social Science Research and Review*, 6(8), 340–351. <https://doi.org/10.47814/ijssrr.v6i8.1650>
- 34) Mutula, S. M., & Mostert, J. (2010). Challenges and opportunities of e-government in South Africa. *The Electronic Library*, 28(1), 38–53. <https://doi.org/10.1108/02640471011023360>
- 35) Ndidi, D. E., Franklin, M., Ssekajugo, D., & Olanipekun, D. B. (2024). Information communication technology (ICT) and womenpreneurship in Nigeria. *International Journal of Economics, Business and Management*, 1(1), 152–162.

- 36) Nigeria Data Protection Bureau. (2023). Nigeria Data Protection Act 2023. Retrieved from <https://ndpb.gov.ng>
- 37) Nwafor, A. E., Afuecheta, E. C., & Umetiti, C. B. (2024). Periscoping E-Governance in Nigeria: Matters Arising. *NG-Journal of Social Development*, 13(1) ISSN (e) 2814-1105. <https://www.ajol.info/index.php/ngjsd>
- 38) Nwokoroeze, C. N., Onwuekwem, T. R., & Chukwu, U. H. (2025). Evaluating the impact of e-government and digital transformation on public service delivery in Nigeria. *Global Journal of Political Science and Administration*, 13(2), 31–41. <https://doi.org/10.37745/gjpsa.2013/vol13n23141>
- 39) Obazele, E. O., & Osuji, S. (2025). Challenges and opportunities in implementing e-government procurement systems for sustainable procurement reforms: A case study of Edo State. *Journal of Public Procurement and Governance*, 25(2), 88–104.
- 40) Obodo, A. J., & Anigbata, B. (2018). Challenges of implementing electronic governance in public sector organizations in Nigeria. *International Journal of Applied Economics Finance and Accounting*, 2(1):30-35. DOI: 10.33094/8.2017.2018.21.30.35
- 41) Okotie, W., & Ambrose E. A. (2025). Edo State digital transformation policy and effective service delivery: A study of Edo Geographic Information Service (EDOGIS). *GOMBE JOURNAL OF ADMINISTRATION AND MANAGEMENT (GJAM)*, 7(1), 211–223.
- 42) Olabimitan, A. O., Ogunmodede, K., & Stephen, J. (2025). E-Governance and public service delivery: Evidence from Nigeria. *Global International Journal of Innovative Research*, 3(1), 27–41. <https://doi.org/10.59613/global.v3i1.374>
- 43) Olanusi, O. (2025). Catalysing Nigeria's digital transformation: Developing a roadmap. *BusinessDay* May 1 <https://businessday.ng/news/article/catalysing-nigerias-digital-transformation-developing-a-roadmap/>
- 44) Oludu, O. V., Kaya, T., & Karagozlu, D. (2025). Citizens' preference for e-participatory governance. *PLOS ONE*, 20(2), e0306268. <https://doi.org/10.1371/journal.pone.0306268>
- 45) Omotayo, O. A., Kehinde, O., & John, S. (2025). E-governance and public service delivery: Evidence from Nigeria. *Global International Journal of Innovative Research*, 3(1), 27–41. <https://doi.org/10.59613/global.v3i1.374>
- 46) Open Government Partnership. (2022). Nigeria action plan 2022–2024. Retrieved from <https://www.opengovpartnership.org>
- 47) Oseni, K. O. (2024). Barriers facing e-service adopting and implementation at local environment level in Nigeria. [Unpublished doctoral thesis]. ArXiv. <https://arxiv.org/abs/2406.15375>
- 48) Schmidhuber, L., Willems, J., & Krabina, B. (2023). Trust in public performance information: The effect of data accessibility and data source. *Public Administration Review*, 83(2), 279–295. <https://doi.org/10.1111/puar.13603>
- 49) Transparency International. (2023). Corruption Perceptions Index 2023. Transparency International. Retrieved from <https://www.transparency.org/en/cpi/2023>
- 50) Ugwueze, M. I., Onuoha, F. C., & Eze, R. C. (2016). Electronic governance and national security in Nigeria. *Mediterranean Journal of Social Sciences*, 7(6), 363–372. <https://doi.org/10.5901/mjss.2016.v7n6p363>
- 51) Ukorah, C. P., Nwosu, I., & Chidimma. (2023). Digital transformation of public services and its influence on the business landscape in African states. [Journal Name, Volume], 4(9), 467–472.
- 52) UNESCO. (2025). Advancing Nigeria's digital transformation: UNESCO trains civil service in AI and digital government. <https://www.unesco.org/en/articles/advancing-nigerias-digital-transformation-unesco-trains-civil-service-ai-and-digital-government>
- 53) United Nations Department of Economic and Social Affairs (2022). E-Government Survey 2022: The future of digital government
- 54) United Nations Department of Economic and Social Affairs (2024). Nigeria – Country information. UN E-Government Knowledgebase. United Nations. Retrieved from UN E-Government Knowledgebase: publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/125-Nigeria
- 55) United Nations (2020). E-Government Survey 2020: Digital government in the decade of action for sustainable development. United Nations.
- 56) United Nations. (2022). E-Government Survey 2022: The future of digital government. New York: United Nations.
- 57) Wirtz, B. W., & Müller, W. M. (2019). An integrated model of e-government success: An empirical analysis of 37 countries. *Public Management Review*, 21(3), 362–391. <https://doi.org/10.1080/14719037.2018.1500636>
- 58) World Bank. (2021). World Development Report 2021: Data for Better Lives. Washington, DC: World Bank. Retrieved from <https://www.worldbank.org/en/publication/wdr2021>
- 59) Yildiz, M. (2007). E-government research: Reviewing the literature, limitations, and ways forward. *Government Information Quarterly*, 24(3), 646–665. <https://doi.org/10.1016/j.giq.2007.01.002>
- 60) Zakari, M. B., & Button, M. (2021). Confronting the Monolith: Insider Accounts of the Nature and Techniques of Corruption in Nigeria. *Journal of White Collar and Corporate Crime*, 3(2), 100–108. <https://doi.org/10.1177/2631309X211004567>