

E-Governance and Social Service Delivery as Tools for Sustainable Grassroots Development in Nigeria

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ABSTRACT

Integrating modern technology into governance systems presents a viable strategy for enhancing social amenities (healthcare and welfare) to the people in the society most especially at the rural areas in more efficient, transparent and accessible. Despite the potential of this modern government called e-governance remain under-researched. This paper examined the significant relationship between social service delivery through e-governance among the households in Nigeria since 2020 till date. The study employed a descriptive research designed as a methodology. This is done by drawing inferences from existing literature to explore the perspective of e-governance structure and social service delivery in Nigeria and the reports from National Bureau of Statistics, federal and state government budget office publication and these reports were subjected to thematic content analysis in which significant patterns in service output and infrastructure readiness across various communities in Nigeria. The result revealed that e-governance is a possible solution to overcoming the obstacles of in delivery of amenities and there are numerous factors that are significant for optimising the implementation of social service delivery through e-governance in Nigeria, these ranging from budget funding, increase the level of technical support, computerisation, and information support for the introduction of e-social amenities, training and retraining of the employees, and most especially, the access to the internet. The paper concluded that the underscore the necessity of re-evaluating current implementation strategies regarding e-governance has slightly improve the social service delivery and capacity building in Nigeria.

Keywords: e-governance, Social Service Delivery, Grassroots, Sustainable Development, Nigeria

INTRODUCTION

E-governance refers to the application of information and communication technologies (ICTs) to manage government operations, the administration of the public and the delivery of services to enhance the efficiency, transparency, accountability and participation of the citizen. The United Nations (2020) defines e-governance as the use of digital resources to change the way things are done within the government, increase the level of interaction between the government and the citizens and improve the decision-making process within the public sector. In emerging economies, such as Nigeria, e-governance is increasingly becoming a reform instrument and is aimed at addressing traditional problems such as bureaucratic inefficiency,

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corruption, insufficient institutional capacity and extent of services delivery at the grassroots level (World Bank, 2022).

In Nigeria, the projects of e-governance are mostly motivated by the federal and state policies of digital-transformation, and in particular, the National Digital Economy Policy and Strategy (2020-2030). These programmes are to modernise the work of the public administration with the help of the system of digital identities, the electronic budget, online portals, and government through data (Federal Ministry of Communications and Digital Economy [FMCDE], 2021). According to some scholars, e-governance is particularly topical in the multilingual Nigerian socio-political environment, where decentralisation of service delivery and local development are the priority of the policy (Adejuwon & Ayoade, 2021).

Empirical research indicates that the success of e-governance is not only dependent on the adoption of technology but also the institutional preparedness, political determination and the infrastructure capacity. Heeks (2021) notes that a lot of the developing countries encounter design-reality gaps in e-governance, where digital systems fail to meet administrative facts. In Nigeria, the lack of e-governance due to uneven internet connectivity, the absence of coordination between agencies, and the lack of capacity in the public service, especially in rural and semi-urban areas, restricts the results of e-governance (NBS, 2023).

Furthermore, ICT tools have also enabled citizen participation and inclusivity in governance. ICTs have transformed the political communication in the sense that it is real time, extensive and interactive communication between governments and citizens. Social media, particularly, has been central to mobilising the opinion of the people, increasing civic activism, and encouraging voters to vote, especially among youth (Dumitrica, 2014). ICTs enhance the electoral integrity through making voting more secure and accessible. Biometric voter registration and digital networks have significantly enhanced the transparency and believability of the electoral processes since they preclude electoral malpractices and boost the trust of voters in the electoral outcomes (Micheni & Murumba, 2018). ICTs have enhanced civic and political participation and are also instruments of accountability and oversight.

In addition, ICT tools have help government to collect and analyse data better. This enabled identification of trends and patterns which will enhance the service and operations of public administration (Arcellana, 2023). ICT has a great influence on availability of data because it is used to simplify data collection and storage. Such tools as School Management Information Systems support real-time data input and access, which is essential in responsive decision making (DeFlitch, 2024). Research also points to the worth of ICT in bringing together divergent data sources to make an all-out analysis (Halverson et al., 2007). This is achieved by the use of big data analytics and data mining methods that help the administrators to detect patterns, trends, and anomalies that could otherwise be obscured in the ocean of data (Ali & Sreekala, 2025).

E-governance can enhance the mutual relationship between the state and its people and further comprehensive development when applied appropriately. Governments can minimise the transaction costs, limit discretionary power abuse, and enhance access to services by marginalised groups and masses by digitising their administrative processes and service platforms. Therefore, e-governance is a guiding principle towards the successful provision of digital services as well as grassroots development in Nigeria.

DOMAINS OF E-GOVERNANCE

E-Governance and E-Administration encompass various domains and functions within the realm of public administration and government operations. These domains are defined by the specific areas and functions they address. While the precise categorization of domains can vary depending on the context and framework used, some common domains associated with E-Governance and E-Administration according to Arjan de Jager (2008), include the following:

- a) **Government-to-Citizen (G2C):** This domain focuses on digital interactions and services provided by the government to individual citizens. Examples include online tax filing, e-voting, and citizen feedback mechanisms.
- b) **Government-to-Business (G2B):** G2B E-Governance involves digital interactions between government and businesses. It includes services such as business registration, permit applications, and e-procurement.
- c) **Government-to-Government (G2G):** G2G E-Governance deals with electronic interactions between different government agencies and levels. It includes data sharing, interoperability, and communication between government entities.
- d) **Government-to-Employee (G2E):** This domain is concerned with internal government operations related to employees. It includes digital HR management, payroll systems, and employee training.
- e) **Government-to-Nonprofit (G2N):** G2N E-Governance involves interactions between the government and nonprofit organizations. It may include grants management, funding allocation, and collaboration on social programs.
- f) **Government-to-International Organizations (G2I):** In the context of international relations, G2I E-Governance covers digital communication and data exchange between a government and international organizations or foreign governments.
- g) **Government-to-Local Government (G2LG):** This is a term used to describe interactions, relationships, and collaboration between higher-level government entities, such as national or regional governments, and local governments within a country. It encompasses the various mechanisms through which higher-tier governments interact with, support, and oversee local government units, such as municipalities, counties, or districts. The nature of G2LG interactions can vary widely depending on the specific country's governance structure and the roles and responsibilities assigned to different levels of government.

Benefits of E-Governance in Service Delivery

According to the World Bank (2002), e-governance offers several significant benefits:

- a) It simplifies the process of information gathering for citizens and businesses.
- b) It empowers individuals to access information about any government department and participate in decision-making processes.
- c) e-Governance strengthens democracy by ensuring greater citizen participation at all levels of governance.
- d) It automates services, making information about public welfare activities easily accessible to all citizens, thus eliminating corruption.
- e) This transformation enhances government transparency and reduces corruption by making information about government activities readily available and ensuring government departments are accountable, knowing their actions are closely monitored.
- f) Proper implementation of e-governance allows people to complete tasks online, avoiding the hassle of travelling to government offices.
- g) Successful e-governance practices improve service delivery to citizens, enhance interactions with businesses and industries, empower citizens through access to information, and lead to better management, greater convenience, revenue growth, and cost reductions.

Moreover, the introduction of e-Governance brings governments closer to citizens, making it extremely convenient to contact government agencies. Citizen service centers are now more accessible, which might include unattended kiosks in government agencies, service kiosks near clients, or the use of personal computers at home or work. Additionally, e-

governance practices enable businesses to access important information with ease (Seifert & Bonham, 2003).

Role of ICT on Good Governance

Information and Communication Technology (ICT) is the use of technologies to disseminate, share and collect information with the help of computer networks. It's the utilization of digital tools (computers, internet services, mobile gadgets and software systems) to collect, process and share information between users. Devi, et al. (2021) sees ICT as a way of using modern technologies and systems to change the world into a digital one. Good governance on the other hand was defined by the former president of World Bank Barber Conable (1986-1991) as the "public service that is efficient, a judicial system that is reliable and an administration that is accountable to its public." Over the years the concept of good governance has been empirically viewed as a concept that connotes an inclusive governance that performs based on accountability, responsibility and transparency on the principles of efficiency, legitimacy, and consensus with the sole aim of protecting and advocating for the rights of individual citizens and the public interest (Devi, et al., 2021). The ICT performs the following roles in promoting good governance.

ICT tools are changing the pattern of transparency and accountability to enable individual citizens have access to information easily and monitor the progress of developmental process (Raghavendra et al., 2021). Thus, ICT has been utilised as a medium which ensure transparency and accountability in government activities. Over the last two decades there is decline in public trust due to the widening gap between public expectation perceived governmental performance with the influence of mass media, lack of transparency, political scandals and corruption (Sinker & Cosi 2007). Furthermore, with the emergence of ICT citizen can now easily air their opinions and communication between the government, the citizens, and the society has become more interactive.

Also, ICT has brought effectiveness and efficiency to public administration by removing all the red-tapism that causes unwarranted delays during discharge of governance activities (Mukherjee & Roy, 2016). ICT has creates opportunities for governments to perform various functions in a more efficient way by removing non-value-added ways, workflow streamlining, and also leveraging on ICT tools to create a new more effective ways of working. ICT has enabled a deliberate effort to have the citizen in the centre of a governance network Citizens are being viewed as customers and clients as opposed to beneficiaries. Internet revolution has become an influential mechanism of citizen-based governance. One such aspect of the Internet potential is the opportunity to give public services at any time, and anywhere.

ICT can contribute to combating corruption by mitigating the information asymmetry, making collective action easier, automating and standardizing government processes, limiting discretion of government officials, reducing red tape (Gronlund et al., 2010), and enhancing the chances of punishment (Bhattacharjee & Shrivastava, 2018). ICTs, more generally, can play a significant role in overcoming one of the most important enablers of corruption, namely, the unavailability of government information, especially mobile phones.

It has been repeatedly stated that one of the main contributions of ICTs to the anti-corruption efforts is its capacity to disseminate information and, consequently, raise the transparency. Internet adoption was observed in a survey of 70 countries to bring about a decline in the level of corruption, but the impact was not pronounced, arguably due to the fact that the potential of the Internet was not fully exploited (Lio et al., 2011). Gaskin (2013) reaches the same conclusion and claims that access to Internet can be of great influence on corruption as it provides more transparency and that mobiles have a statistically significant influence on transparency, but it is not as strong. According to the study of Goel, et al, (2012) the

information on web-searches, implied access to information which led to the awareness of corruption and decreases the perceptions and incidence of corruption.

Service Delivery

Service delivery refers to how governments distribute the fundamental social services (including healthcare, education, welfare, and water), to the citizens through a number of processes, mechanisms, and institutional arrangements. According to the OECD (2021), one of the key state functions is the public service delivery that demonstrates the capacity, legitimacy, and development-focus of the state. Successful delivery is key to performance of governance and sustainable development.

The provision of services in Nigeria has been plagued with bureaucratic delays, poor funding, corruption and poor supervision. It has been found that the rural and grass communities are affected by these failures the most due to inadequately maintained infrastructure and centralised governance (Akinola & Adesopo, 2020). These loopholes have generated higher levels of socio-economic inequality and diminished confidence of the populace, particularly the lower government where service delivery is most crucial.

Service delivery has become one of the performance indicators of the public institutions governed by reforms. According to the UNDP (2022), quality delivery enhances legitimacy of a state and makes people participate, especially in a weak society. Within Nigeria, the transformation of health and welfare such as the digital enrolment system of the National Health Insurance Authority is meant to enhance access and efficiency by reorganising institutions and embracing technology.

Manual operations, disjointed information, and low accountabilities continue to damage performance. According to scholars, no matter how high the demands of the Nigeria population are, the old models of delivery cannot address them in the absence of structural change and innovation (Olaopa, 2021). Thus, it is necessary to incur more expenditure, institutionalised innovation, enhanced coordination, and strategic exploitation of digital tools to enhance delivery; hence, e-governance is a crucial facilitator.

E-Service Delivery

E-service delivery refers to the online expansion of the delivery of services in the government where citizens can access online government services without needing to visit the physical offices. It provides services through websites, mobile applications, databases, and online portals to provide services like registration, payments, health information, and welfare benefits (Heeks, 2021). E-service delivery is a viable way of e-governance, and it serves as a direct connection between the government and citizens.

E-service delivery has increased at a significant pace in Nigeria since 2020, at least due to the COVID-19 pandemic that triggered the increased use of digital public services. The online systems of health surveillance, electronic social assistance registers, and digital education platforms turned out to be crucial in terms of ensuring the continuity of services during lockdowns (World Bank, 2023). These advances demonstrated that e-service provision has the potential of enhancing accessibility, particularly to places where the government institutions are hard to access physically.

Irrespective of these benefits, e-service delivery is skewed in Nigeria. Good internet connectivity, internet literacy, and access to power are also among the factors that influence accessibility of electronic services by citizens. The National Bureau of Statistics (2023) indicates that the penetration of the internet in rural regions remains very low, and this hinders the inclusiveness of the e-service providers. Digital service system sustainability is also obstructed by institutional resistance to change and the lack of technical capacity of employees working in the public sector.

It is evidenced that the properly developed e-service delivery systems are able to decrease the time spent on the administration and improve the transparency and control over the services. Digital platforms can decrease the necessity to engage with the face-to-face interaction, which, in turn, minimizes the chances of rent-seeking, as well as increases accountability in service delivery (Transparency International, 2022). Thus, e-service delivery is an imperative means through which e-governance has a direct impact on the results of social services and assists in sustainable grassroots development in Nigeria.

Democratic Improvement of Service Delivery by E-Governance

E-governance improve democratic service delivery by enhancing efficiency, transparency and citizen participation through ICT tools by simplifying the governance process, reduce corruption and empower citizen easy access to information. Following the formation of National e-Government Strategies limited (NEGST) in 2007, a platform where three parties are involved, i.e. the government (represented as NITDA), the private and financial investors, and technology partners, whose share of the joint venture is 5, 15, and 80 percent, respectively (Omeire & Omeire, 2014).

There were also other e-government initiatives initiated and projected by the NeGST to enhance democratic service delivery in the country like; E-readiness: A programme that is aimed at equipping the Nigeria civil service to handle the e-governance through the use of ICTs; E-parliament: This is an initiative to bridge the gap between the citizens and lawmakers via the web and mobile telecommunication channels; E-passport: This ensures that the preparation and issuance of international passport is done electronically; E-NYSC: This is an initiative which is meant to enable the E-LGA: This aligns with the need to make local government area (LGA) live up to their mandate of being the closest to the people through the use of ICTs (Fraser-Moleketi & Senghor, 2011).

Adewale (2017) argues that the governments of Nigeria are exploiting the potential of information and communication technologies to transform it public sectors, private sectors and the citizens at large. With the introduction of ICT in Nigeria, government of all level, it is expected that the effectiveness of their service delivery will be improved and also avail reliable and current information to their citizens. This may be in the form of subsidizing or attracting privately owned investors to offer the services. Moreover, the rising popularity of e-governance means that the citizens feel that they belong and are entitled to access information about the government.

The use of ICT to impact policy is happening in numerous ways in both a direct and indirect manner. The definition of e-government interaction is traditionally based on government-to-government (G2G), government-to-citizen (G2C) and government-to-business (G2B). But there are attempts to use innovative, pro-active, bottom-up, grassroots-led methods by some certain nations to compel governments to interact with their citizens (Ahmed, 2006). The impact of e-participation on governance that could no longer be under-estimated in case of regular and productive contact that is to be established between the citizens and the office holders. The involvement of citizens in the decision-making process creates a sense of belonging and proper service delivery (Omilusi & Oguntuase, 2016).

The implementation of e-governance has a tremendous and positive impact on efficient service delivery, makes a significant contribution to effectiveness of the public services in a number of ways that include making government activities more visible and accessible to the people, which reduces the chances of corruption and enhances trust in governmental institutions (Ohwokevwu & Okereka, 2025).

According to the World Bank GovTech initiative which states that one of the most powerful applications of the digital governance is combating corruption. Governments can use red tape reduction, discretion minimization, and fraud exposure by computerizing processes,

automating permissions, real-time dashboards, and allowing citizens to audit. In Moldova, e-licensing has reduced the length of time spent in issuing the permits and also reduced the chances of bribery. In Nigeria, monitoring covid-19 relief funding was done through a public portal. In Brazil, land records are being tested to be made more secure using blockchain. In both cases, digital governance is transforming power relations rather than updating processes (Dhakal, 2025).

Transformation on Public Service Delivery

Governments all over the world are on a mission in search of a means of providing public service in a more efficient and effective way. E-governance is regarded as a means to enhance productivity and delivery of services to the people. Hassan, et al. (2021) point out that e-governance has played a significant role in enhancing the efficiency, transparency and accessibility of the services offered by the government worldwide.

The implementation of e-governance in Nigeria is picking up and different projects are undertaken to change the traditional administrative processes into more streamlined and technological driven operations. Nevertheless, issues like poor digital literacy, poor internet access, and poor coverage by mobile networks remain to be the challenges that hinder the successful delivery of services (Ajibade, 2017). Budi, et al., (2024) contended that the shift to digital governance, which is driven by the e-government efforts, has offered considerable opportunities to improve efficiency of the services given to the people. They have discussed four major areas of concentration namely, technological infrastructure, organizational flexibility, citizen response, policy alignment and concluded that e-government does not only make services easier to access, but also enhances accountability and transparency in the public institution.

According to Adenuga and Babawale (2025) implementation of the e-governance in government activities is central in fostering the accountability and increasing the effectiveness of service delivery to the people by the government. This change will entail the integration of digital technologies to facilitate the processes of administration, data management and communication among the stakeholders, unfavourable administrative efficiency, political influence, corruption, bureaucratic delays, staff resistance to changes, and insufficient capacity to manage the growth of staff numbers reveal that, prior to the installation of e-governance, the delivery of public services was affected by bureaucracy, political interference, corruption, bureaucratic bottlenecks, resistance to change, and the inability to manage the increase in the number of staff. They conclude that despite the fact that e-governance has greatly improved the work of the civil service, there is still the need to close the digital divide by using innovative policy structures that seek to increase the digital infrastructure in the country.

According to Sain et al. (2025), efficiency and accountability are enhanced by automation of activities in the government, real-time data sharing, transparency, and involvement of the people. This study concluded that digital transformation improves the efficiency and accountability of the administration of the people. E-government transformation and digital governance have been integrated as a pillar of reform in public administration both internationally and specifically in enhancing efficiency, transparency as well as accountability in delivering the public services (Nwambuko, et al., 2025). They disclosed that digital governance efforts have been effective in enhancing efficiency and transparency, specifically Treasury Single Account (TSA), Integrated Payroll and Personnel Information System (IPPIS), and Government Integrated Financial Management Information System (GIFMIS). Lastly, e-governance change is becoming pivotal to contemporary, responsive government administration providing quicker, more equitable, and more reliable services across the globe.

Sustainable Grassroots Development, E-Governance and Service Delivery

The delivery of e-governance, services and sustainable grassroots development helps each other. Sustainable grassroots development is concentrated on inclusive growth, equal availability of services and creation of local capacity. E-governance provides the institutional and technology resources that allow governments to decentralise and respond more to the needs of the local context (UN, 2020). It also employs information-led judgments and live tracking in order to make governmental establishments more in touch with the grassroots neighbourhoods.

Service delivery is the mandate of the local governments in Nigeria. Digital governance has the potential to dissolve the silos in the administration and enhance the coordination of the levels of government. Digital budgeting, e-health platforms, and social welfare databases are the examples of tools, which enhance the transparency and provide the possibility of targeted assistance in the community (FMCDE, 2021). The tools embrace sustainable development principles by enhancing efficiency, accountability and participation by the citizens.

Long-term outcomes are achievable by eliminating structural obstacles that undermine digital governance. It needs sufficient budget, continuous employee training, total computerisation of the institution, and universal internet penetration. In the absence of them, e-governance may only aggravate the existing inequalities rather than leading to the inclusion (Heeks, 2021). In conclusion, e-governance and e-service delivery are effective in enhancing social services as well as sustainable grassroots development in Nigeria. They have a chance to succeed only with the help of well-conceived implementation plans, effective institution-wide commitment, and constant investing in digital infrastructure and human capital.

METHODOLOGY

This study utilised the conceptual and empirical research approach which focuses on examining the existing data, established by seasoned academics on the issue under evaluation. The data for this study were obtained from secondary sources which comprise journals, published books, reports, and articles that dealt with issues on governance, e-government, and public service delivery; both in Nigeria and abroad.

Innovation of Digital Administration at the Heart of Governance

In an era defined by rapid technological advancement, the structure and function of governance must evolve to remain relevant and responsive. The concept of digital administration extends beyond digitizing paperwork and basic data entry systems, or introducing online services. It calls for a transformation in how public institutions think, operate, and serve. Innovation is no longer a supporting feature; it is the engine driving good governance in the digital age.

At the heart of this transformation lies a powerful truth: technology, when purposefully applied, can improve efficiency, effectiveness, transparency, ethical, participation, and accountability in governance. However, this requires more than the procurement of digital tools; it demands strategic thinking, capacity development, and an openness to data-driven methods.

One compelling way to strengthen digital administration is by building technical competencies within administrative bodies, especially in the areas of Information Technology (IT), statistics, data analytics and even e-governance. These areas are critical not only for managing digital systems but for interpreting data that informs policy making, policy implementation, policy evaluation and policy decision towards the provision of social service delivery. Broadening administrators understanding of data helps move governance from being reactive to proactive, enabling institutions to identify trends, predict challenges, and allocate resources effectively.

In addition to foundational IT literacy, administrators must be empowered to leverage innovative, technology-driven solutions that directly impact public engagement and policy execution. Two of such innovations include:

- 1) **Digital Citizen Feedback Systems:** These platforms allow real-time communication between citizens and administrative bodies. By digitizing feedback, complaint, and suggestion mechanisms, institutions can enhance transparency, track public sentiment, and respond swiftly to community needs.
- 2) **Predictive Analytics for Policy Development:** With the right data infrastructure in place, public administrators can harness predictive models to anticipate social and economic trends, assess policy impact, and fine-tune interventions before issues escalate. For example, predictive, hypothesis, assumption and forecast analytics can be used in social service delivery such education, healthcare and environment to anticipate outbreaks or in urban planning to manage infrastructure demands.

This bottom-up approach ensures that digital administration is not treated as a one-off reform, but as an ongoing process of adaptation and improvement. Thus, the rise in digital administration (e-governance) is a responsibility needed to keep governance effective and inclusive. In a fast-changing world, innovation must be embedded in both mindset and method. By embracing IT, data analytics, and citizen-centered technologies, we align governance with the realities of today and the possibilities of tomorrow.

CONCLUSION AND RECOMMENDATIONS

Based on the empirical discussion and analysis, this study therefore concluded that e-governance affects public service delivery positively in some areas which underscore the re-evaluating current implementation strategies regarding e-governance has slightly improve the social service delivery and capacity building in Nigeria. Thus, the study recommended that the Federal Government of Nigeria should design mandatory training programs for public servants focused on e-governance skills, and effective use of digital tools; include citizens in digital literacy campaigns through schools, community centers, and public service announcements; ensure digital platforms are user-friendly and available in multiple local languages to accommodate diverse populations; and provide support centers or helplines to assist citizens struggling with digital platforms.

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On behalf of all authors, the corresponding author states that there is no conflict of interest among the authors.

CONTRIBUTOR STATEMENT

All the authors contributed actively and meaningfully to the manuscript.

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