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Abstract
This study evaluates digital governance initiatives and equitable and inclusive service delivery within the Kenyan context with a focus on Kisumu, Busia, and Kakamega counties. The study employs a convergent parallel mixed-methods design, and triangulates data from two complementary sources: (i) citizen surveys, (ii) semi-structured interviews with key county officials. Surveys with citizens across the three counties capture patterns of awareness, usage, and satisfaction with digital government services. On the other hand, Key Informant Interviews (KIIs) with county officials provide insider perspectives on policy implementation, operational challenges, and capacity issues. Survey data is analysed using descriptive statistics, while interview data is subjected to thematic analysis, with findings integrated through triangulation. The findings establish that in these counties, citizens perceive digital governance initiatives as contributing to enhanced efficiency of service delivery through shorter service processing times, greater transparency in service processes, and reduced reliance on physical visits. However, substantial inequalities persist in access and utilisation. In other words, digital governance visibility is outpacing digital inclusion, a trend associated with poor digital infrastructure, lack of digital affordability, digital literacy gaps, technological complexity, and social and demographic inequalities across the counties. The study concludes that for digital governance to be truly inclusive, targeted investments in digital infrastructure, affordable connectivity, digital literacy, user-centred platform design, and citizen awareness initiatives are required at the county-level.

Introduction
The transition towards digital governance, also known as e-governance, has become an important component of public sector reform around the globe. These digital governance initiatives aim to enhance efficiency, transparency, and citizen engagement (Barasa & Ngure, 2025). In Kenya, the push for digitalisation is anchored in the National ICT Policy and the Kenya Digital Masterplan 2022-2032, which seek to steer the country towards a knowledge-based economy (Kithure & Muchelule, 2025). Consequently, there have been substantial strides in integrating digital technologies into public service delivery, notably through platforms such as eCitizen, KRA iTax, and the Social Health Insurance Fund (SHA). These platforms are designed to streamline access to government services,

reduce bureaucratic inefficiencies, and enhance citizen participation (Nkanata & Ocholla, 2022). Also, the government's commitment to digital governance is reflected in its Vision 2030 initiative, which emphasises the role of information and communication technology (ICT) for socio-economic development (Republic of Kenya, 2007).

While the digitisation of service delivery in Kenya has achieved significant visibility, it has also faced significant challenges. Ideally, equitable service delivery means that all citizens, regardless of their geographic location, socio-economic status, or physical ability, can access public services with the same ease (Warkentin et al., 2002). In Kenya, however, the primary challenge remains in ensuring that these digital strides translate into equitable and inclusive service delivery. For instance, existing research points towards a large rural/urban digital divide in Kenya, where urban areas have higher levels of internet penetration compared to rural areas (Okello, 2024; Onyango & Ondiek, 2023; Ondiek & Onyango, 2024). This disparity raises concerns about the inclusivity of digital governance initiatives, as marginalised populations may lack the necessary resources to access online services (Bhatti et al. 2025). Furthermore, factors such as high data costs, intermittent internet penetration, limited citizen engagement, and varying levels of digital literacy continue to hinder the marginalised - including the elderly and Persons with Disabilities (PWDs) - from fully benefiting from digital governance (Kithure & Muchelule, 2025).

Thus, while the digitisation of county-level governments was envisaged as a transformative mechanism for improving the delivery of essential public services, its implementation is still an uphill task, with systemic barriers that undermine both equitable access to essential services and the overall effectiveness of digital governance in the devolved context. In this study, access refers to citizens' ability to independently utilise available digital government services. Access is measured through indicators such as awareness of digital services, ability to use digital platforms, affordability of internet and devices, and frequency of service utilisation. Equity, on the other hand, refers to the fairness with which digital government services are distributed and accessed across different social groups and is assessed by disparities in access and utilisation among older persons, persons with disabilities (PWDs), low-income populations, and residents of remote areas. Inclusivity refers to the extent to which digital government services accommodate the needs of diverse population groups and is measured through indicators such as accessibility for vulnerable groups, affordability, digital literacy, language accessibility, and the availability of support mechanisms that enable meaningful participation in digital governance.

To unpack the complexities of effective digital governance in Kenya, this study poses the following overarching research question: What are the levels of awareness of and access to digital government services across the counties of Kisumu, Busia, and Kakamega? To what extent do digital government services in Kenyan county governments ensure inclusive access, usability, and support for older persons, persons with disabilities, and other vulnerable groups? What are the technical constraints and accessibility barriers affecting digital governance in the selected county governments? Which policy and practical strategies can be put in place to strengthen digital engagement, accountability, and equity in Kenya? To address these questions, the study pursued the following objectives: to assess the levels of awareness and access to digital government services across Kisumu, Busia, and Kakamega counties, to examine the extent to which digital government services provide equitable and inclusive access across socio-economic and vulnerable groups, to explore the technical constraints and accessibility barriers affecting digital governance in the selected county governments and to recommend policy and practical strategies for strengthening digital engagement, accountability, and equity.



Literature Review

Digital governance represents a paradigm shift in public administration, utilising information and communication technologies (ICT) to enhance governmental efficiency, transparency, and citizen engagement (Hilbert, 2016). Characterised by decentralised systems, it promotes interactive and participatory governance models, thereby redefining traditional bureaucratic structures (Bouzada and Viana, 2025). Beyond mere technological adoption, a critical dimension of digital governance lies in its ability to cultivate public value by enhancing the accessibility of government services to citizens (Guo and Zhang, 2024).

As governments worldwide increasingly embrace digital governance modalities, this subject has emerged as pivotal in contemporary scholarship. Various studies elucidate the multifaceted impacts of digital technologies across diverse socio-political contexts. For instance, Savoldelli et al. (2014) highlight that although e-governance initiatives are widely implemented, evidence of their impact on service delivery remains mixed due to challenges in adoption and evaluation. Elsewhere, open government initiatives are widely argued to enhance transparency and enable citizen participation in governance processes, although the extent of accountability outcomes depends on institutional capacity and digital readiness (Matheus et al., 2021; Schwoerer, 2022). Stotzel (2024) examines the transformative effects of mobile technology on governance in Kenya, where platforms like M-Pesa have revolutionised access to financial services. Their findings suggest that these technological innovations not only enhance service delivery but also foster financial inclusion among marginalised populations, addressing longstanding disparities in access to economic resources.

The role of social media as a conduit for citizen engagement is another critical area of inquiry in the literature of digital governance. Manor et al (2015) highlight how social platforms, such as Twitter and Facebook, have been leveraged by governmental entities to enhance communication and facilitate dialogue with citizens. Their research posits that such digital engagements not only bolster trust in public institutions but also catalyse active participation in policy-making processes.

While the affirmative outcomes of digital governance are extensively documented, a burgeoning body of literature has also scrutinised its limitations and potential pitfalls. Ochieng and Ngware (2023) and Okello (2024) examine the digital divide in Kenya. They reveal that socio-economic disparities critically hinder access to technology and online services, thereby exacerbating inequality in service delivery and further alienating marginalised communities from governance processes. In addition, persistent gaps in ICT skills and institutional capacity constrain the effective adoption of e-government systems within public institutions (Olatokun and Adebayo, 2020). Furthermore, concerns such as data privacy and cybersecurity have also gained prominence, with evidence that weak data protection frameworks can undermine citizen trust and system legitimacy (Bannister and Connoly, 2020).

Despite the substantial literature on the implementation of digital technologies and their associated impacts, there exists an exigent need for a more nuanced exploration of contextual factors, specifically, the social and economic dynamics that shape governance practices and outcomes. Moreover, existing research frequently relies on single methodologies, which may inadequately capture the complexities inherent in digital governance. This study addresses these critical gaps by employing a triangulated methodological approach by integrating quantitative survey data and qualitative interviews to examine both patterns of access and the contextual explanations behind them.



Theoretical Framework

This study is anchored in two complementary perspectives, namely the Capability Approach and the E-Government Theory. The Capability Approach, developed by Amartya Sen (1985, 1999) and further elaborated by Martha Nussbaum (2000, 2003), is a normative evaluative framework for assessing human well-being, social arrangements, policy design, and proposals for societal change (Robeyns, 2006).

Within the context of digital governance, the Capability Approach provides a lens for assessing whether technological initiatives genuinely expand citizens' freedoms and participation in governance. Consistent with Robeyns' (2005) characterisation of the Capability Approach as a 'mode of thinking,' this study employs it as a normative and evaluative framework for interpreting whether digital governance initiatives expand citizens' substantive opportunities to access and benefit from public services. We draw on some fundamental concepts of Sen's work - such as an alternative space for assessing digital governance - to provoke some reflections on the place of digital governance Initiatives on equitable and inclusive service delivery in Kenya.

In parallel, E-Government Theory, advanced by Richard Heeks (2001, 2006), offers a complementary framework for understanding how digital technologies reshape government processes, service delivery, and citizen engagement. Heeks' Design-Reality Gap model is particularly instructive, as it highlights the frequent disconnects between the intended design of digital systems and the realities of institutional capacity, infrastructure, and citizen needs. The strength of this theory lies in its applicability to explaining successes and failures in digital governance within Kenya's local governments' space.

The dual theoretical framing in this study provides a comprehensive lens by examining both the procedural and distributive dimensions of digital governance. The Capability Approach, for instance, ensures that the assessment of digital governance initiatives in Kisumu, Kakamega, and Busia Counties is anchored in questions of inclusion and justice. E-Government Theory, on the other hand, complements this by providing tools to analyse the technical and institutional processes of digital governance implementation, including potential design-reality gaps.

Methodology

To capture both systemic trends and lived experiences of digital governance in Kenya, the study employed a convergent parallel mixed-methods design with quantitative priority (QUAN + qual), as described by Creswell and Plano Clark (2011). Quantitative and qualitative data were collected concurrently, analysed independently, and integrated during interpretation to facilitate triangulation and provide a comprehensive understanding of digital governance implementation across the selected counties. While the quantitative strand constituted the primary source of evidence, the qualitative strand played a complementary role by providing institutional and contextual explanations for the observed quantitative patterns.

The target population for this study comprised citizens and county officials across the selected administrative regions. Based on the 2019 Kenya Population and Housing Census, the estimated total population across the three study areas is approximately 2.9 million, distributed among Kisumu (approx. 1.1 million), Kakamega (approx. 1.8 million), and Busia (approx. 890,000) counties. The study was conducted in Kisumu, Kakamega, and Busia counties in Western Kenya. The three counties were purposively selected to represent urban, peri-urban, and rural administrative contexts, respectively. The intention was also to capture variations in digital infrastructure, socio-economic characteristics, and patterns of utilisation of digital government services. The study population comprised adult

residents who had interacted with, or were potential users of, county digital government services, as well as county government officials directly involved in the planning, implementation, and management of digital governance initiatives.

Given the exploratory and comparative nature of the study, a total of 60 citizens (20 respondents per county). This sample size of 60 participants was determined using a non-probabilistic convenience approach tailored to the exploratory nature of this study (cf. Mandillah et al. 2022). Given resource, time, and logistical constraints during the field phase, this sample size serves as an initial pilot baseline to establish exploratory statistical trends rather than to yield statistically representative generalisations for the entire regional population. Quantitative data were collected using a structured questionnaire comprising multiple items measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Prior to the main survey, the questionnaire was pre-tested with ten respondents from the neighbouring Bungoma County, which shares socio-economic and administrative characteristics with the study area. The intention of the pilot study was to assess the clarity, relevance, and sequencing of the items. Feedback from the pilot informed minor revisions to improve question wording, reduce ambiguity, and enhance the instrument's logical flow before the main data collection. Content validity was established through expert review by two specialists in digital governance and research methodology from Masinde Muliro University of Science and Technology, while the internal consistency of the Likert-scale items was assessed using Cronbach's alpha. The instrument demonstrated acceptable internal consistency (Cronbach's $\alpha = 0.81$). Responses relating to awareness, access, and satisfaction were aggregated into composite indices by summing item scores and converting them into percentage scores using the formula (obtained score ÷ maximum possible score) × 100.

Qualitative data were collected through semi-structured interviews with six purposively selected county officials (two from each county). These officials were drawn from the County ICT and Digital Transformation functions. The selection of exactly 2 officials per county (totalling 6 interviews) was determined by data saturation principles for highly specialised key informants, as well as the limited organisational structure of the respective county ICT departments, where only a few personnel hold high-level policy and administrative oversight.

Quantitative data were coded and analysed using descriptive statistics in IBM SPSS Statistics Version 27. The analysis summarised patterns of awareness, access, and utilisation of digital government services. Qualitative interview data, on the other hand, were transcribed verbatim and analysed using Braun and Clarke's (2006, 2021) reflexive thematic analysis. Given the qualitative strand's complementary role, coding was primarily deductive and guided by the study objectives and emerging quantitative findings. Interview excerpts were organised into themes relating to digital literacy, affordability, accessibility, institutional capacity, and technical constraints to provide contextual explanations for the survey results. The findings from the quantitative and qualitative strands were subsequently integrated during interpretation to identify areas of convergence, complementarity, and divergence, thereby strengthening the credibility and overall interpretation of the study findings.

Ethical Procedures

To ensure adherence to responsible research ethics, ethical approval for the study was obtained from the Masinde Muliro University of Science and Technology Institutional Scientific and Ethics Review Committee (MMUST-ISERC), while a research permit was secured from the National Commission for Science, Technology and Innovation (NACOSTI). Prior to data collection, all participants were informed of the purpose, procedures, and voluntary nature of the study, and written informed consent

was obtained from each respondent. Participants were assured of their right to decline to participate or withdraw from the study at any stage without negative consequences. To protect the privacy and confidentiality of the respondents, no personally identifiable information was recorded in the survey instruments or interview transcripts, and all responses were anonymised during analysis and reporting. Moreover, interview recordings and research data were securely stored and accessed only by the research team.

Results and Discussion

The results of this study are presented according to the three study objectives. Consistent with the convergent parallel mixed-methods design, quantitative results are triangulated with qualitative evidence from citizens and county ICT officers to provide a comprehensive understanding of digital governance and inclusive service delivery in Kisumu, Busia and Kakamega counties.

Objective one sought to assess levels of awareness and access to digital government services across Kisumu, Busia, and Kakamega counties. From the capability Approach perspective (Sen, 1999), this study interprets awareness and access as indicators of citizens' freedoms to achieve functionings in accessing public services, while conversion barriers such as digital literacy, digital infrastructure, and digital affordability shape whether these capabilities are realised. Awareness and access were each measured through multiple questionnaire items rated on a five-point Likert scale (ranging from strongly disagree to strongly agree). The items captured respondents' perceived knowledge of available digital government services and their ability to utilise them independently. It was established that although a high percentage of citizens were aware of the available digital services in their respective counties, a significant population were still unable to effectively access or utilise them, as shown in Table 1 below.

Awareness and Access to Online Services

Table 1: Awareness and access of online services in Kisumu, Busia and Kakamega

County	Awareness index score	Access index score	Awareness-Access Gap (percentage points
Kisumu	83%	71%	12%
Busia	57%	28%	29%
Kakamega	71%	58%	13%

Note: Values represent composite Likert-scale index scores derived from 20 respondents per county across multiple items, computed as (obtained score ÷ maximum possible score) × 100.

The findings illustrated in Table 1 above, which show that digital awareness does not necessarily translate into access, suggest that the mere existence or promotion of digital platforms does not automatically lead to meaningful citizen participation and service uptake. These findings also reflect a design-reality Gap (Heeks, 2006), where the intended results of digital governance do not align with citizens' lived realities, particularly in rural and low-literacy contexts. This disparity was particularly evident in Busia County, where awareness levels were substantially higher than actual access rates, suggesting structural barriers that continue to impede effective engagement with digital government services. The findings support the argument that the digital divide has evolved beyond questions of physical access to encompass issues of digital skills, affordability, usability, and social inclusion. According to Ebbers et al. (2016), the adoption of digital governance is increasingly influenced by citizens' digital competencies rather than by the mere availability of technological infrastructure. Similarly, Friemel (2016) argues that awareness of digital technologies does not necessarily lead to their utilisation, particularly among older populations who may experience low levels of digital

confidence, limited technical skills, and a preference for traditional forms of interaction. Qualitative findings corroborated these results. While younger interviewees repeatedly attributed the gap to inadequate infrastructure and low digital literacy, the older population attributed the gap to a 'psychological access barrier', by placing access preference to traditional authority over digital engagement. This sentiment was best captured by a Kisumu resident, who, when asked about his experience with digital platforms, remarked,

> *No, I have never used those things, and to be honest, I don't see why I would start now. 'If I need something from the government, I know where the Chief's office is. I walk there, and we greet each other, and he tells me what paper I need (Kisumu resident 3)*

Similarly, a county ICT officer from Busia noted that despite increased investment in digital platforms, a significant proportion of residents still preferred traditional service channels because they perceived them as more trustworthy and easier to navigate.

The triangulation of survey and interview findings implies that successful digital governance should not be measured solely by the visibility or availability of digital services, but by the extent to which diverse categories of citizens can equitably access, navigate, and benefit from those services. These findings reinforce the need for a citizen-centred approach to digital transformation that prioritises inclusion, usability, affordability, and digital capability alongside technological expansion.

Digital Inclusivity

Objective two examined the extent to which digital government services in Kenyan county governments ensure inclusive access, usability, and support for older persons, persons with disabilities, and other vulnerable groups. Inclusivity was defined as the extent to which digital government services accommodated the needs of diverse population groups and was measured using indicators such as digital accessibility for vulnerable groups, affordability, digital literacy, language accessibility, and the availability of support mechanisms that enabled meaningful participation in digital governance. The study found that older people, people with disabilities (PWDs) and those in remote areas in the three counties were aware of digital and online services, but they did not find it easy to access government services. Also, older people, particularly in remote areas, faced higher levels of digital illiteracy and often relied on younger people and cyber operators for assistance. On the other hand, PWDs, especially those with visual or hearing impairments, had difficulty accessing government services on their own unless they incurred the cost of travelling to Huduma centres or cyber cafes in urban areas (see Table 2).

Table 2: Awareness and Digital Access Levels by Vulnerable Groups across Counties

Population	**Kisumu**		**Busia**		**Kakamega**	
	Awareness index scores	Access Index scores	Awareness index scores	Access index scores	Awareness index scores	Access index scores
Older persons	75%	55%	52%	25%	65%	42%
People with Disabilities(PWDs)	72%	50%	50%	20%	62%	38%
Residents in Remote Areas	78%	60%	55%	18%	68%	40%

Note: Values represent composite Likert-scale index scores derived from 20 respondents per county across multiple items, computed as (obtained score ÷ maximum possible score) × 100.

The quantitative findings in Table 2 above indicate a gap between awareness of and effective access to digital government services across Kisumu, Kakamega, and Busia counties, with inequities intensifying along both geographic and vulnerability dimensions. Across all counties, older persons reported reduced access relative to awareness and low digital literacy, resulting in reliance on intergenerational mediation. This finding was consistent with the second-order digital divide framework by Van Dijk (2020) and Helsper (2021), which conceptualise digital inequality not merely as disparities in physical access, but as differentiated capacities that shape the effective use of digital services. Further findings under this objective also indicated that PWDs experienced the most pronounced exclusion, particularly in rural contexts, where accessibility constraints in platform design and limited assistive infrastructure were said to significantly hinder independent use, a subject reinforced by Jaeger (2008). In line with the capability approach, these disparities suggest unequal conversion of digital service availability into actual functionings. Furthermore, residents in remote areas reported relatively stable awareness but sharply reduced access, underscoring the potential influence of infrastructural inequality and spatial exclusion on digital citizenship. The various reasons for the inaccessibility of digital services are summarised in Table 3 below.

Table 3: Main Equity Barriers Identifies Across Counties per Vulnerable Group

Population	Main Barrier
Older Persons	- Limited Digital Literacy - Low technological Confidence
People with Disabilities	- Accessibility limitations - Assistive technology gaps
Low-Income Citizens	- Weak infrustructure - Connectivity challenges - Data Costs

What was remarkable about the inclusion of PWDs was that qualitative data from a Kakamega County official suggested measures to include such citizens in county governance platforms, including providing Braille sections. Notably, the quantitative data showed that residents were unaware that such services existed. This discrepancy adds an important governance-citizen perception disjuncture that helps unpack the findings of objective 2 in two major ways. Firstly, the discrepancy introduces an institutional claim of inclusion (institutional intent), while, secondly, exposing the demand-side (citizenry) failure of visibility and uptake. In essence, it demonstrates that digital inclusion is not about whether accessibility measures exist, but rather, whether they are known, trusted, and usable by intended beneficiaries. Overall, this is a critical implementation-to-awareness breakdown, a recognised challenge in digital governance inclusivity (see Warf, 2019).

To examine economic equity, the study assessed whether the costs of internet access, devices, and data prevented people from accessing government digital services. The results in the three counties showed that the cost of devices and data remained a primary barrier to economic equity in digital access to government services. According to the respondents, internet costs were too high, and a large population in remote areas had only basic feature phones. Most low-income users, therefore, viewed internet data and sophisticated devices as a luxury. One resident explained,

> *Data and internet connection costs are very high. I would rather buy food for my children than buy data or a smartphone* (Kakamega resident 6).

The sentiment above reinforces the quantitative findings in Table 3 above, which indicate that affordability remains a significant determinant of digital participation among citizens across the three

counties. All county ICT officers similarly acknowledged that data costs were high and that discussions were underway to explore partnerships with telecommunications providers to reduce connectivity costs. However, implementation had not yet occurred. Overall, the integration of quantitative and qualitative findings under this objective suggests that digital exclusion is not merely a technological issue but also a socio-economic challenge. Even where digital services exist, affordability constraints prevent equitable utilisation. This suggests that as long as digital services require high-end devices and expensive data, a large section of the population will remain excluded from digital governance

Challenges for Digital Governance

Findings under objective 3, which focused on exploring technical constraints and barriers to digital governance in Kenya, indicated that the main challenges included system downtime, language barriers, and technological barriers (see Table 4 below). Users in the three counties who encountered system downtime observed that it frequently occurred during KRA tax deadlines or school placement periods. Furthermore, respondents reported that, despite seeking assistance from technical personnel, these encounters remained unresolved until the system stabilised. This finding resonates with Anthopoulos & Fitsilis (2016), who argue that inadequate server capacity and peak-load failures are significant deterrents to e-government adoption in developing economies. In the same vein, Kamau et al. (2016) argue that intermittent system failures and document upload errors force users into repetitive, frustrating loops, highlighting that a system's theoretical accessibility does not always translate to practical usability.

Apart from system downtime, it was realised that, because English was the main language on most digital platforms, language became a barrier, especially for older people and PWDs. Those who encountered this hurdle said they sought the help of a translator or a cybercafé operator. This empirical evidence supports the concept of the Grey Digital Divide (Friemel, 2016), which suggests that age-related factors, combined with linguistic exclusion, aggravate digital marginalisation.

Notably, citizens across the three counties reported experiencing technical constraints as the most challenging encounter. The respondents said that on some digital platforms, they struggled with multi-step authentication and document uploading. The resolution was to visit a Huduma centre help desk or the services of a cyber-café operator. At Huduma centres, perceived complexity and fear of technical glitches would be addressed more conveniently. A respondent succinctly captures the frustration felt by many when navigating independent digital access:

> *Why should I struggle with a small screen and passwords that I will forget, only to wait for a message that might not come? When I visit Huduma Centre, I can ask questions and get my answers right there. I never worry about logging in to the government portals because I go where the services are provided without network issues (* Busia resident 17*)*

The above experience demonstrates that, for a segment of the population, digital access is not perceived as easier when it requires managing technical risks on one's own. From a Design-Reality gap perspective (Heeks, 2006), these technical and usability constraints highlight a persistent mismatch between system design complexity and users' technical capabilities, reinforcing exclusion, even with formal digital availability.

Table 4: Technical Constraints and Barriers for Digital Services

User Accessibility Barrier	User Digital Service Encounter	User Strategy to Resolve Barrier
Syetem Downtime	- Surges during deadlines	- wait for system stability -Access sites during off peak
Language Barrier	- English use on many platforms	- Help from cyber operators -Help from well wishers
Technological Barrier	- Multi-stage verification -Complex upload requirements -Lack of skills for complex sites -Inadequate server capacity	-Visit cyber cafes -Visit huduma centres -Try several times -rely on tech-savvy agents

The combined findings, discussed in this section, suggest that while the county governments under study are making notable progress in expanding digital governance initiatives, equitable and inclusive service delivery remains constrained by infrastructural, economic, educational and technical barriers. On the one hand, the quantitative data in this study reveal clear disparities between awareness and access, while the qualitative data explain why these disparities persist, as shown in Table 5 below. Although the convergent mixed-methods design strengthened the interpretation of the findings through triangulation, the study is subject to certain limitations. The cross-sectional design captured perceptions at a single point in time and therefore does not permit causal inferences regarding the relationship between digital governance initiatives and service delivery outcomes. Furthermore, the study was confined to three counties in Western Kenya and involved a relatively small sample, meaning that the findings should be interpreted as context-specific rather than nationally representative. Nevertheless, integrating quantitative and qualitative evidence provides valuable insights into the contextual factors shaping digital governance and offers a useful basis for future longitudinal and large-scale studies.

Table 5: Triangulation of Quantitative and Qualitative Findings

Quantitative Findings	Qualitative Evidence	Integrated Interpretation
High awareness and low access	Citizens prefer traditional channels and they have challenges with digital literacy	Awareness does not guarantee digital inclusion
Cost barriers affect utilisation	Residents view data and digital gadgets as unaffordable	Economic inequality constrains access
PWDs, Older people, and residents in local areas face challenges	Accessibility challenges reported	Inclusion measures remain insufficient
Technical barriers persist	Citizens rely on huduma centres and cybercafes	Physical and digital channels remain complementary

Conclusion and Recommendations for Policy Change

This study has argued that Kenya's shift toward digital governance has provided a robust platform for public administration and its interaction with citizens. However, the success of digital governance in achieving equitable and inclusive service delivery remains a work in progress. Overall, the findings of this study reveal a significant disparity between awareness and actual digital access, attributable to a pronounced rural/urban divide, a lack of digital infrastructure, expensive digital services, and limited digital literacy. For marginalised populations, including the elderly, low-income earners, and Persons with Disabilities (PWDs), the country's digital transition appears to have introduced new forms of exclusion. These groups frequently rely on third-party intermediaries, such as cyber-café

operators or Huduma Centre staff, to access complex interfaces and overcome language barriers, highlighting that a 'digital-first' approach does not yet mean 'digital-for-all'.

It is, therefore, imperative that both national and county governments move beyond mere platform deployment toward holistic digital inclusion. This requires strategic investments in rural ICT infrastructure and policy interventions that move beyond technical deployment toward a holistic framework of integrity, accessibility, and community empowerment. Thus, the study recommends the following,

Firstly, the disparity in access across urban Kisumu, peri-urban Kakamega, and rural Busia highlights the urgent need for localised digital infrastructure. County governments should collaborate with private telecommunications providers to expand broadband penetration into rural areas. To address the prohibitive cost of data, which remains a primary barrier for low-income households, counties should explore zero-rating specific government domains (such as business licensing portals). To help such counties, the government can decouple essential service delivery from the user's economic ability to purchase data bundles through free access to these sites on mobile networks.

Secondly, the study reveals a heavy reliance on cyber-café operators as the de facto face of digital governance. Rather than viewing this as a failure of the system, policy should lean into this reality by formalising these operators as certified digital agents within a hybrid service delivery model. This would require structured accreditation linked to mandatory data protection training, identity verification, and strict compliance with Kenya's Data Protection Act of 2019. This way, the government can ensure that citizens receive assistance while their personal data is handled in accordance with legal and ethical standards.

Notably, the study revealed the obscurity of county-specific digital portals and the services rendered on these platforms. To remedy this, counties should launch hyper-local sensitisation campaigns using vernacular radio, community barazas, and mobile SMS alerts. These campaigns should go beyond telling citizens that a portal exists; they must demonstrate *how* to use it. Moreso, establishing community-based digital hubs, essentially localised versions of Huduma Centre, within ward offices can provide a safe space for training. These hubs can serve as permanent helpdesks where PWDs and the elderly can receive hands-on guidance, ensuring that the shift to digital does not result in the physical abandonment of marginalised constituents.

Finally, digital governance should adopt a Universal Design philosophy. Currently, language barriers and complex multi-step authentication processes alienate many users. Future iterations of county portals should prioritise mobile-first, lightweight designs that function on basic smartphones and low-speed connections. Also, efforts to integrate Kiswahili and local dialects into the user interface, alongside audio-guided features for visually impaired citizens, should be made to ensure that inclusive service delivery is a functional reality rather than a theoretical goal.

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