E-Governance, E-Participation, and their Effect on Citizen Satisfaction with Government Services in Kenya

Fred Siambe Omweri[1], Brian Besigye[2], Orisiima Milton[3], Juliet Tushemereirwe[4]

[1]Lecturer, Department of Social Sciences, Machakos University, Kenya

[2]Department of Public Administration & Development Studies, Kampala International University, Uganda.

[3]Department of Public Administration & Management, Kampala International University, Uganda.

[4]Department of Public Administration & Management, Kabale University, Uganda.

DOI: https://doi.org/10.47772/IJRISS.2026.100600211

Received: 08 May 2026; Accepted: 14 May 2026; Published: 20 June 2026

ABSTRACT

Kenya's digital transformation has shifted public service delivery from analog bureaucracy to platforms such as eCitizen and Huduma. While these innovations expand access, their effects on civic engagement and citizen satisfaction, especially among marginalized groups, remain uneven. Using nationally representative Afrobarometer Round 10 data and a cross-sectional design, this study quantitatively examines how digital access, socio-demographic factors, and institutional trust shape e-participation and satisfaction with government services. Findings reveal persistent barriers, including digital literacy gaps, affordability challenges, and limited awareness of participatory tools, which disproportionately affect low-income and rural populations. These constraints undermine the democratizing potential of e-governance. Anchored in participatory governance theory and digital inclusion frameworks, the study demonstrates that inclusive platform design, mobile-based civic education, and equity-centered reforms are essential to strengthening citizen satisfaction and democratic engagement in Kenya.

Keywords: E-governance, E-participation, Citizen Satisfaction, Digital inclusion, Participatory governance

INTRODUCTION

Digital governance has reshaped how governments manage public affairs and engage with citizens, shifting from analog bureaucracy to responsive, technology-enabled service delivery. In Kenya, platforms such as *eCitizen* and *Huduma* have modernized public sector operations and expanded access to essential services (Hassan, 2019; Meru & Kinoti, 2022). These digital tools promise improved administrative efficiency and transparency (Omweri, 2024; Maina & Otieno, 2024), yet citizen satisfaction with government services remains uneven.

While e-government initiatives have emphasized transactional service provision, the transition toward e-participation—where citizens actively engage in governance processes—raises concerns about inclusive representation. Despite technological gains, structural barriers persist, disproportionately affecting youth, women, and rural communities (Djatmiko et al., 2025; Pollicy, 2025a; Omweri, 2024). Challenges such as digital literacy gaps, affordability constraints, poor infrastructure, and limited awareness hinder meaningful engagement. Moreover, citizens' willingness to participate is closely tied to institutional trust and perceptions of responsiveness (MIT GOV/LAB & Busara, 2024).

These issues are sharply illustrated by Kenya's rising public dissatisfaction. The 2024 Gen Z-led protests against the Finance Bill revealed deep-seated frustrations with economic injustice and governance inefficiencies (Omweri, 2024). Afrobarometer (2023) data showed declining trust levels: only 34% of Kenyans trusted the police, 44% the judiciary, and 52% the presidency.

Despite ongoing digital reforms—including broadband expansion, ICT policy updates, and digital taxation systems (Government of Kenya, 2021; ITU, 2022; World Bank, 2021)—technological access alone cannot guarantee democratic participation. E-governance success demands civic capacity-building, digital inclusivity, and institutional accountability (OECD, 2020; UNDP, 2021).

Grounded in participatory governance theory and digital inclusion models, this study interrogates how access to digital platforms, socio-demographic factors, and institutional trust shape e-participation and citizen satisfaction with government services. Drawing on Afrobarometer Round 10 data, it offers evidence-based insights and proposes context-sensitive reforms aligned with Kenya's Open Government Partnership commitments (OGP, 2023).

EMPIRICAL LITERATURE REVIEW

Citizen Satisfaction with E-Government Services

Kenya's evolving e-government ecosystem—exemplified by Huduma Centres and the eCitizen portal—has substantially improved bureaucratic efficiency, transactional responsiveness, and urban service delivery outcomes (Hassan, 2019; Maina & Otieno, 2024). These platforms have become emblematic of digital public service innovation. However, enduring infrastructural disparities, cybersecurity vulnerabilities, and uneven digital literacy—particularly in rural and marginalized regions—continue to inhibit equitable access and inclusivity (Ondego, 2016; Wasunna, 2018; Meru & Kinoti, 2022). This is further complicated by limited integration of accessibility innovations, such as inclusive user interface design or linguistically adaptive platforms, into mainstream e-government rollouts (Sala et al., 2021; Communications Authority of Kenya, 2023).

While prevailing scholarship increasingly situates citizen satisfaction within governance frameworks anchored in public trust, political efficacy, and institutional responsiveness (Morgeson et al., 2011; OECD, 2022), empirical studies in Kenya rarely disaggregate findings across socio-regional divides—obscuring generational, linguistic, and cultural digital competencies. This constrains the capacity of evaluative models to capture nuanced determinants of satisfaction, especially among digitally disenfranchised groups. Consequently, there is a compelling need for intersectional research frameworks that conceptualize satisfaction not solely as a function of service efficiency but as a dynamic proxy for institutional legitimacy, inclusive democratic engagement, and digital rights realization. Such reframing should align with Sustainable Development Goal 16.6, which calls for responsive, inclusive, participatory, and representative decision-making at all levels. In this regard, citizen satisfaction becomes not just a metric of technological performance but a mirror of governance equity and digital justice in an increasingly networked society.

E-Participation among Marginalized Groups

Empirical literature on Kenya's digital governance reflects a dual evolution: the institutional rollout of e-government platforms such as Huduma Centres and eCitizen, and the emergent paradigms of e-participation aimed at deepening citizen engagement. Studies by Hassan (2019), Maina and Otieno (2024), and Meru and Kinoti (2022) underscore improved transactional efficiency and policy coordination, yet reveal persistent infrastructural and cybersecurity challenges that dampen overall citizen satisfaction. Complementing this, scholars like Wirtz and Daiser (2018), Sala et al. (2021), and Pollicy (2025b) highlight design-centric limitations in digital participation, particularly for marginalized groups. Exclusionary platform logic, low digital literacy, and affordability constraints continue to alienate youth, women, and persons with disabilities, revealing a paradox between service expansion and equitable uptake.

However, despite these contributions, a clear literature gap remains in systematically examining how marginalized populations interact with digital governance systems within their socio-cultural contexts. Existing studies tend to generalize citizen dissatisfaction without unpacking the relational, intersectional, and experiential dimensions of exclusion. Very few empirically connect platform architecture with the lived realities of access and adaptation among vulnerable groups. This gap calls for context-sensitive platform design, inclusive digital literacy initiatives, and intersectoral governance frameworks that bridge the divide between digitization and satisfaction—not only as a service metric but as a function of agency and digital equity.

Digital Inclusion among Marginalized Groups

E-governance research has evolved from early digitization efforts focused on administrative efficiency and service delivery, as described by Heeks (2006) and Norris (2001), to more participatory and equity-driven frameworks. Scholars such as Bertot, Jaeger, and Grimes (2010) and Bwalya and Mutula (2014) noted that disparities in digital implementation often arise from geographic, infrastructural, and socio-economic gaps. More recent analyses by Wirtz and Daiser (2018) and Scholl and Scholl (2014) emphasize that successful digital governance depends not just on technical access but also on trust, digital literacy, and inclusive institutional design.

Increasingly, researchers are focusing on how e-governance platforms impact marginalized populations. Yüksel-Arslan, Muriithi, and Tanaka (2025) highlighted barriers faced by persons with disabilities in navigating e-government services, while Hutchinson and Ahmad (2024) exposed algorithmic biases affecting refugees. Djatmiko, Muriuki, and Ndlovu (2025) underscored how elderly users in sub-Saharan Africa encounter challenges due to age-related digital illiteracy. Raihan, Chen, and Moyo (2025) offered a framework for understanding the digital divide across literacy, affordability, and cultural relevance, while Pérez-Escolar and Canet (2023) linked digital exclusion to broader vulnerability and justice concerns. These studies support the argument by Zheng and Walsham (2021) that digital inclusion must go beyond access to foster agency, feedback mechanisms, and co-creation of public value. For example, Diakite and Wandaogo (2024) found that when e-governance platforms are contextually designed and inclusive, citizen satisfaction with public services improves. Nonetheless, in Africa, the World Bank (2023) reports persistent gender and age disparities in access to digital financial tools. Taken together, the evidence positions e-governance as both a technological innovation and a governance reform mechanism, with success contingent on inclusive design and alignment with SDGs—particularly goals on reducing inequality and strengthening institutions.

Digital Literacy among Marginalized Groups

Recent scholarship across diverse socio-political contexts reveals a growing empirical consensus: digital literacy functions not merely as a technical skillset, but as a gateway to civic empowerment among marginalized populations. Schröder and Neumayr (2023), through a systematic synthesis of European data, show that socioeconomic inequalities dampen civic participation, moderated by education and digital competence. De Coninck et al. (2025) provide longitudinal evidence across six European countries linking enhanced digital skills to sustained civic engagement among groups facing social exclusion and health disparities. Cleofas (2025), in a robust survey of Filipino youth, finds that digital citizenship strongly predicts cross-border civic activism. Allaste and Waechter (2025) advocate embedding civic reasoning within digital education frameworks, promoting ethically grounded digital engagement. From a Kenyan perspective, Pyarali (2021) highlights the digital awareness of young people, yet reveals persistent gaps in media literacy and content verification. Despite these contributions, empirical studies remain limited in their representation of intersectionally marginalized populations—such as women, disabled persons, and those in geographically isolated areas—particularly within African contexts. Further, pedagogical evidence on the effective integration of civic reasoning into digital curricula in under-resourced settings remains scarce. This review identifies an urgent need to extend digitally inclusive research and curriculum design across broader axes of marginalization and civic potential.

Public Trust in Digital Governance

Public trust in institutional performance is increasingly recognized as a cornerstone of civic engagement in digital governance. Ustera, Vigoda-Gadot, and Cohen (2025), drawing on longitudinal data from Israel, demonstrate that trust in central government and perceptions of managerial quality significantly shape local participation, especially among minority and low-education populations. Preecha (2025) identifies cybersecurity vulnerabilities as a decisive barrier to trust in digital public services, with users citing system fragility as a deterrent to engagement. Asmawanti et al. (2025), through a systematic review of citizen satisfaction metrics, conclude that service quality, reliability, and transparency are key drivers of institutional legitimacy. OECD (2025), synthesizing cross-national survey data, highlights integrity, responsiveness, and openness as the most impactful trust determinants across member states. Despite these contributions, empirical studies remain limited in their coverage of intersectionally marginalized populations and underrepresented regions. This review underscores the need for inclusive, context-sensitive research that links digital trust to civic agency across diverse governance environments.

METHODOLOGY

Research Design and Study Area

The Afrobarometer Round 10 survey employs a **cross-sectional research design**, which captures data at a single point in time across a representative sample of Kenya's population. This design enables comparative analysis of public attitudes, experiences, and perceptions on governance, digital participation, and service delivery—both within Kenya and across other African countries included in the survey.

Sampling

The survey employs a stratified, multi-stage, clustered, area probability sample covering adult Kenyan citizens aged 18+. Stratification was by sub-national units and urban–rural residence. Enumeration areas (Primary Sampling Units) are selected using probability proportional to population size (PPPS), with eight households randomly selected per cluster. Within each household, one respondent is purposefully alternated by gender to ensure gender balance—male and female interviews rotate sequentially. Kenya's sample size was 2,400 respondents, offering national representativeness and a margin of error of approximately ±2 percentage points at 95% confidence.

Data Collection and Instrumentation

The fieldwork for Afrobarometer's Round 10 survey in Kenya was conducted through face-to-face interviews, typically lasting about an hour and administered in the respondent's preferred language. Interviewers used electronic tablets and followed strict training protocols covering ethical standards, sampling procedures, and multilingual questionnaire delivery. Supervised for quality assurance, the fieldwork relied on a standardized questionnaire comprising three components: household and consent introduction, core attitudinal and demographic items (Q1–Q100), and contextual field details (Q101–Q123). Although the broader Afrobarometer methodology incorporates both interviews and questionnaires, this study exclusively analyzes the quantitative data to assess how e-governance and e-participation influence citizen satisfaction with government services in Kenya

Data Analytical Techniques

The study employed a hybrid analytical approach that integrated descriptive and inferential statistics to explore the multidimensional relationship between digital governance and citizen satisfaction. Descriptive statistics—including frequencies, percentages, means, and standard deviations—were used to profile respondent demographics and assess distributions across key variables such as mobile internet access, digital literacy, and trust in institutions. This enabled a clear visualization of access disparities and behavioral trends within urban-rural and generational divides. Building on these insights, multinomial logistic regression was applied to test the predictive strength of digital inclusion, e-participation, and literacy levels on citizen satisfaction outcomes. The inferential results revealed statistically significant associations ($p < .05$) for all predictors except public trust, which showed a non-significant coefficient, suggesting its nuanced or possibly mediating role. Together, the combined techniques provided both foundational and explanatory power, linking individual digital behaviors to broader governance perceptions.

VARIABLES AND OPERATIONALIZATION

The primary outcome variable is **citizen satisfaction with government services**. This is assessed through self-reported evaluations of service efficiency, responsiveness, and accessibility. Scaled survey items are used to reflect perceptions of service quality, capturing experiences with both digital and conventional public service delivery channels.

Two core independent variables—**e-governance** and **e-participation**—anchor the analytical framework. *E-governance* is operationalized by measuring citizens' exposure to and interaction with government digital platforms. Key indicators include frequency of online service access, perceived usefulness of digital portals, and ease of navigation within e-government systems. These measures provide insight into how digital tools facilitate public service delivery. *E-participation* is conceptualized as digital civic engagement and is captured using binary

indicators that record whether respondents have contacted public officials electronically, accessed online government information, or expressed policy views through digital media platforms.

To support and contextualize these relationships, the study includes **digital access, institutional trust,** and **socio-demographic attributes** as additional explanatory variables. Digital access is gauged through respondents' internet use frequency, types of devices owned, and connectivity reliability, collectively serving as a proxy for digital readiness. Institutional trust is assessed via Likert-scale responses evaluating perceptions of government transparency, integrity, and responsiveness—factors that are widely recognized as influencing satisfaction and digital engagement. Socio-demographic characteristics such as age, gender, educational attainment, and residence type (urban vs. rural) are included as controls to account for variations in digital behavior and service expectations across Kenya's diverse population.

ETHICAL CONSIDERATIONS

The study utilized publicly available, anonymized secondary data from Afrobarometer, which adheres to international ethical standards in survey research. No personally identifiable information was accessed, and all analyses were conducted in accordance with ethical guidelines for secondary data use

RESULTS

Demographic Overview

Demographic characteristics of survey participants form a critical foundation for evaluating Kenya's digital governance transformation. Drawing on data from the 2024 Afrobarometer Survey, this section outlines key elements such as residential location, gender, and age—factors that shape patterns of digital access, trust in e-government services, and depth of online civic engagement. This overview enables a clearer understanding of who is most involved in digital governance efforts and who may face barriers, offering valuable insights for designing inclusive digital infrastructure and participatory strategies across diverse population segments.

Table 1: Residential Area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	1032	43.0	43.0	43.0
	Rural	1368	57.0	57.0	100.0
	Total	2400	100.0	100.0	

Source: Afro Barometer Survey (2024)

Table 1 presents the residential distribution of respondents in the study, revealing that 57% reside in rural areas while 43% are from urban settings, based on a total sample size of 2,400 individuals. This demographic spread underscores the importance of evaluating Kenya's digital governance transformation through a lens that captures both urban and rural experiences. The predominance of rural respondents highlights the need to address infrastructural and digital literacy disparities that may hinder equitable access to e-government services and meaningful e-participation.

Table 2: Respondents Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	1280	53.3	53.3	53.3
	Woman	1120	46.7	46.7	100.0
	Total	2400	100.0	100.0	

Source: Afro Barometer Survey (2024)

In examining Kenya's digital governance transformation through the lens of gender representation, data from the 2024 Afrobarometer Survey reveals a nearly balanced respondent distribution—53.3% men and 46.7% women—

among 2,400 participants. This equitable sampling highlights the growing inclusivity within e-government and e-participation efforts, suggesting that both male and female voices are increasingly being considered in shaping digital public service delivery. However, this balance also invites a deeper interrogation into gendered experiences with digital platforms—particularly regarding access, literacy, and trust.

Table 3: Age Group Summary Breakdown

Age Group	Frequency	Percent
Youth (18–35)	1,418	59.1%
Middle Age (36–60)	672	28.0%
Older Persons (61+)	310	12.9%
Total	**2,400**	**100%**

Source: Afro Barometer Survey (2024)

The data in Table 3 reveals that youth aged 18–35 comprise the majority of respondents (59.1%), indicating that Kenya's digital governance transformation must be youth-driven and responsive to their digital fluency and preferences. Middle-aged individuals (36–60) represent 28%, highlighting the need to engage experienced, institutionally embedded citizens through secure and structured platforms. Older persons (61+) form the smallest group at 12.9%, signaling a critical need for inclusive strategies that accommodate low digital literacy and promote accessible e-participation tools.

Descriptive Statistics

Digital inclusion on citizen satisfaction

Table 4: Digital inclusion on citizen satisfaction

	N	Min	Max	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Q90h. Mobile phone access to internet	2400	0	9	1.03	1.585
Q90h1-ken. Main use of mobile phone beyond calls	2400	-1	9	1.97	1.343
Q90H2-ken. Main challenge in using mobile phone	2400	-1	9	2.55	1.584
Q90i. How often use a mobile phone	2400	0	9	3.81	.705
Valid N (listwise)	2400				

Source: Afro Barometer Survey (2024)

Drawing on the 2024 Afrobarometer survey data, the findings suggest substantive limitations in digital inclusion among citizens. The notably low mean score for mobile internet access (M = 1.03, SD = 1.585) underscores constrained connectivity, while the relatively modest usage of mobile phones beyond voice communication (M = 1.97, SD = 1.343) signals limited digital engagement and functionality. Moreover, the prevalence of challenges associated with mobile phone usage (M = 2.55, SD = 1.584)—potentially encompassing affordability, network reliability, and device-related constraints—highlights structural impediments to equitable access. Interestingly, although respondents report frequent mobile phone use (M = 3.81, SD = 0.705), the low variability and context imply basic or routine utilization rather than substantive digital participation.

Digital Literacy among Marginalized Groups

Table 5: Digital Literacy among Marginalized Groups

	N	Min	Max	Mean	Std. Dev.
	Statistic	Statistic	Statistic	Statistic	Statistic
Q90d. Own computer	2400	0	9	.62	1.161
Q90f. Own mobile phone	2400	0	9	1.94	.456

Q90g. Own mobile money account	2400	0	9	2.00	.975
Q90j. How often use the internet	2400	0	9	2.34	1.796
Valid N (listwise)	2400				

Source: Afro Barometer Survey (2024)

The data presented in Table 5 reveals critical disparities in digital literacy among marginalized groups, highlighting both opportunities and persistent barriers. Mobile phone ownership shows a high mean (1.94) with low standard deviation (SD = 0.456), suggesting that access is widespread and relatively consistent across respondents—making mobile platforms an effective vehicle for inclusive digital service delivery. In contrast, computer ownership presents both a low mean (0.62) and a higher SD (1.161), indicating significant variation and deep inequities in access, likely shaped by socio-economic status and geographic location. Similarly, mobile money account ownership (mean = 2.00, SD = 0.975) suggests moderate uptake with some variability, implying uneven financial digitalization across subgroups. Most notably, internet usage frequency, despite having the highest mean (2.34), exhibits the widest variation (SD = 1.796), reflecting irregular digital engagement—possibly driven by affordability constraints, literacy gaps, or unstable connectivity infrastructure.

Public Trust on Governance and Civic Institutions

Table 6: Public Trust on Governance and Civic Institutions

	N	Min	Max	Mean	Std. Dev.
	Statistic	Statistic	Statistic	Statistic	Statistic
Q37a. Trust president	2400	0	9	1.51	1.361
Q37b. Trust parliament/national assembly	2400	0	9	1.53	1.470
Q37d. Trust your elected local government council	2400	0	9	1.45	1.477
Q37d1-ken. Trust your county governor	2400	0	9	1.56	1.447
Q37e. Trust the ruling party	2400	0	9	1.40	1.568
Q37f. Trust opposition political parties	2400	0	9	1.52	1.572
Q37g. Trust police	2400	0	9	1.14	1.194
Q37i. Trust courts of law	2400	0	9	1.74	1.547
Q37m. Trust non-governmental organizations or civil society organizations	2400	0	9	2.35	2.162
Valid N (listwise)	2400				

Source: Afro Barometer Survey (2024)

The Afrobarometer data in Table 6 reveals a widespread deficit in public trust across key governance institutions in Kenya, as reflected in consistently low mean scores. The **police** register the lowest trust rating (M = 1.14, SD = 1.194), underscoring not only public skepticism but also a relatively uniform view of law enforcement across respondents. Similarly, low scores for the **ruling party** (M = 1.40, SD = 1.568), **local councils** (M = 1.45, SD = 1.477), and **the president** (M = 1.51, SD = 1.361) reflect entrenched disillusionment with formal political leadership. Although trust in **opposition parties** (M = 1.52, SD = 1.572) and **parliament** (M = 1.53, SD = 1.470) is similarly low, the higher standard deviations suggest more polarized views—perhaps shaped by partisan dynamics or regional variation. Slightly higher trust levels for **county governors** (M = 1.56, SD = 1.447) and **courts of law** (M = 1.74, SD = 1.547) point to modest legitimacy gains, albeit still below meaningful thresholds. Notably, **non-governmental organizations/civil society organizations** receive the highest trust rating (M = 2.35, SD = 2.162), with the greatest variability, signaling their potential as both a conduit for participatory governance and a site of contested perceptions.

E-Participation Patterns among Marginalized Groups

Table 7: E-Participation Patterns among Marginalized Groups

	N	Min	Max	Mean	Std. Dev
	Statistic	Statistic	Statistic	Statistic	Statistic
Q11a. Joined others to request action from government	2400	0	9	.42	.853
Q11b. Contacted media to share your views	2400	0	9	.12	.499
Q11c. Posted about politics or community affairs on social media	2400	0	9	.23	.701
Q11d. Attend a demonstration or protest march	2400	0	8	.12	.487
Valid N (listwise)	2400				

Source: Afro Barometer Survey (2024)

The data in Table 7 reveals minimal levels of e-participation among marginalized groups in Kenya across various civic engagement modalities. The mean scores are uniformly low, with the highest—joining others to request government action—averaging only 0.42, and other activities such as contacting media (0.12), posting on social media (0.23), and attending protests (0.12) registering even lower frequencies.

Inferential Statistics

Multinomial Logistic Regression Analysis on E-Governance Dimensions and Citizen Satisfaction in Kenya

To explore how dimensions of digital governance impact citizen satisfaction with government services in Kenya, a multinomial logistic regression was conducted. The analysis specifically examined the influence of e-participation, digital literacy, digital inclusion, and public trust as predictors within a model framed by Kenya's evolving e-governance landscape.

Table 8 Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	4485.997			
Final	4397.261	88.736	36	.000

Source: Researchers, 2025

The improvement from the intercept-only model to the final model ($\Delta = 88.736$, $p < .001$) confirms the statistical significance of including digital governance indicators in predicting levels of citizen satisfaction. This evidences that Kenya's digital governance initiatives—when operationalized through variables like e-participation and digital capacity—have measurable effects on public perceptions of service quality.

Table 9 Pseudo R-Square

Cox and Snell	.036
Nagelkerke	.040
McFadden	.015

Source: Researchers, 2025

The pseudo R-square values in Table 9 provide a measure of the explanatory power of the logistic regression model, although they do not carry the same interpretation as traditional R-square in linear regression. The Cox and Snell value of 0.036 and the Nagelkerke value of 0.040 suggest that the model explains approximately 3.6% to 4.0% of the variance in the dependent variable. The McFadden value, at 0.015, indicates a relatively modest improvement over the intercept-only model, but still supports the model's statistical significance as seen in the

likelihood ratio test. While the pseudo R-square values are modest, ranging from 1.5% to 4.0%, such figures are not uncommon in social science models dealing with multifaceted human behavior. These results suggest that while digital governance factors are statistically significant, they are part of a broader constellation of influences.

Table 10 Likelihood Ratio Tests

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	4591.506	194.245	12	.000
Digital Inclusion	4418.756	22.479	12	.021
E-Participation	4420.687	23.426	12	.024
Digital Literacy	4437.518	40.257	12	.000
Public Trust	4414.850	17.589	12	.129
The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.				

Source: Researchers, 2025

Table 10 presents the Likelihood Ratio Tests examining the contribution of each predictor to the logistic regression model's overall fit. Significant chi-square values for Digital Inclusion ($\chi^2 = 22.479$, $p = .021$), E-Participation ($\chi^2 = 23.426$, $p = .024$), and Digital Literacy ($\chi^2 = 40.257$, $p < .001$) confirm their statistically meaningful roles in predicting citizen satisfaction with government services. These constructs underscore the importance of inclusive platforms, digital competence, and participatory mechanisms within the digital governance framework, suggesting that citizens who can access and engage meaningfully are more likely to express satisfaction. In contrast, Public Trust yields a non-significant chi-square of 17.589 ($p = .129$), indicating limited contribution to model fit. This may reflect conceptual redundancy with other indicators or empirical challenges in capturing trust within Kenya's evolving digital governance landscape, warranting further scrutiny.

DISCUSSION

This study explores the interplay between digital inclusion, e-participation, and citizen satisfaction with government services in Kenya using Afrobarometer Round 10 data. Findings offer a nuanced reflection of the country's digital governance transformation and reveal structural inequalities that inform engagement outcomes.

Digital Inclusion and Citizen Satisfaction

Although mobile phone ownership is widespread, the low mean scores for internet access and advanced mobile usage point to significant constraints in digital functionality and engagement. These findings substantiate earlier scholarship by Ondego (2016), Wasunna (2018), and Skariah et al. (2024), who emphasize that digital infrastructure and affordability barriers remain potent inhibitors of equitable access. Norris (2001) and Robinson et al. (2015) similarly argue that digital inclusion must be understood beyond mere connectivity, incorporating usability, content relevance, and socio-cultural adaptability.

In contrast to techno-centric evaluations (Heeks, 2006), this study demonstrates that citizen satisfaction with government services is not solely a function of infrastructure, but of inclusive design and engagement depth. It reinforces the assertion by Pérez-Escolar and Canet (2023) that satisfaction emerges from contextually usable platforms that reflect digital justice.

Digital Literacy Patterns and Their Civic Implications

Pronounced disparities in digital literacy—reflected in limited access to computers and irregular patterns of internet use—represent a structural constraint within Kenya's digital governance ecosystem. Rather than serving merely as a technical metric, digital competence emerges as a socially embedded capacity, shaped through geography, age, and educational exposure. These patterns, consistent with the perspectives of Bertot et al. (2010)

and Raihan et al. (2025), illustrate how digital fluency conditions opportunities for civic engagement and public service access.

Scholars such as Cleofas (2025) and Schröder & Neumayr (2023) underscore the civic potential unlocked through digital skills, while Allaste and Waechter (2025) champion the integration of civic reasoning into digital education to cultivate active participation. Literacy gaps, as evidenced in this study, signal more than a digital divide—they reveal inequities in democratic agency. Strengthening digital competence therefore becomes central to enhancing citizen satisfaction, not only in terms of usability and access but also through fostering trust, responsiveness, and legitimacy within e-governance platforms

Trust in Institutions and Civic Engagement

The observed deficit in public trust toward formal governance institutions—particularly the police and political leadership—carries significant implications for the trajectory of Kenya's digital governance reforms. Since e-governance hinges on the perceived credibility and reliability of state actors, weakened trust may dampen user uptake of e-government platforms and dilute the impact of e-participation initiatives. This aligns with Christensen & Lægreid (2005) and Preecha (2025), who underscore the centrality of transparency and service delivery in trust-building.

Conversely, the relatively higher trust levels in civil society organizations—non-state actors often involved in digital literacy, civic tech, and policy advocacy—suggest that these entities may serve as key enablers of citizen satisfaction within the digital public service ecosystem. Their legitimacy, as highlighted by Morgeson et al. (2011) and Asmawanti et al. (2025), could foster trust-transfer mechanisms where citizens engage with e-governance platforms through intermediaries they perceive as more accountable or user-centric.

The regression model's non-significant trust variable may signal a deeper conceptual entanglement: trust might not directly predict satisfaction with digital government services, but rather influence it through mediating channels like platform usability, responsiveness, or collaborative design. These nuances point to the need for triangulated studies that blend statistical inquiry with qualitative insight—particularly to trace how trust dynamics shape digital engagement and ultimately affect perceptions of service legitimacy and effectiveness.

E-Participation and Democratic Engagement

E-participation indicators registered uniformly low frequencies across actions such as digital outreach, media contact, and social advocacy. This affirms Macintosh's (2004) contention that e-participation tools often fall short of influencing policy. Pollicy (2025b) critiques this as a structural limitation inherent in exclusionary platform designs and low digital literacy among vulnerable groups.

The present study reinforces Wirtz and Daiser's (2018) paradox: infrastructural expansion without participatory architecture may deepen democratic deficits rather than alleviate them. Furthermore, by operationalizing e-participation through civic actions and correlating them with satisfaction, this study contributes to a replicable evaluative framework and complements Pérez-Escolar & Canet's (2023) taxonomy of inclusive digital citizenship.

Multinomial Regression Implications

Digital literacy, inclusion, and e-participation emerged as statistically significant predictors of citizen satisfaction. Although pseudo R^2 values were modest, this outcome aligns with Estevez & Janowski (2013), who advocate interpreting e-governance within broader ecosystems rather than isolated metrics. The limited explanatory power of trust underscores the complexity of capturing institutional legitimacy within quantitative models.

These insights reinforce calls by Hutchinson & Ahmad (2024) and MIT GOV/LAB (2024) for mixed-methods approaches to unpack participatory dynamics—especially in low-trust and digitally stratified environments. Taken together, the study strengthens arguments for adaptive governance models grounded in inclusion, responsiveness, and co-creation.

CONCLUSION

This study critically examined the interplay between e-governance, e-participation, and citizen satisfaction with government services in Kenya, drawing on nationally representative Afrobarometer Round 10 data and anchored in participatory governance and digital inclusion frameworks. The findings reveal that while Kenya has made notable strides in digitizing public service delivery through platforms like eCitizen and Huduma Centres, the democratizing potential of these innovations remains constrained by persistent structural inequalities—particularly among youth, women, and rural populations.

Empirical evidence underscores that digital inclusion, literacy, and e-participation are statistically significant predictors of citizen satisfaction, affirming the centrality of access and competence in shaping public perceptions of service quality. However, the modest pseudo R-square values suggest that these digital governance dimensions, while impactful, operate within a broader constellation of socio-political and infrastructural factors. Notably, public trust in formal institutions—although conceptually vital—did not emerge as a significant predictor in the regression model, pointing to its complex and possibly mediating role in digital engagement.

The study's descriptive statistics further illuminate deep disparities in digital access and literacy, with rural and low-income communities facing pronounced barriers to meaningful participation. Despite high mobile phone ownership, limited internet access and low engagement with digital civic tools reflect a digital ecosystem that is not yet fully inclusive or participatory. E-participation indicators registered uniformly low frequencies, reinforcing critiques of exclusionary platform design and the need for civic capacity-building.

These findings carry profound implications for Kenya's digital governance trajectory. First, they call for a shift from techno-centric service delivery models toward equity-centered digital reforms that prioritize usability, cultural relevance, and inclusive design. Second, they highlight the urgency of embedding civic reasoning and participatory logic into digital literacy initiatives—particularly for marginalized groups. Third, they suggest that civil society organizations, which enjoy relatively higher public trust, could serve as strategic intermediaries in fostering digital engagement and co-creating public value.

In sum, the study advances a multidimensional understanding of citizen satisfaction as both a governance metric and a reflection of digital justice. It argues that successful e-governance in Kenya must transcend infrastructure and efficiency to embrace inclusivity, responsiveness, and democratic agency. Future research should adopt mixed-methods approaches to unpack the relational dynamics of trust, participation, and satisfaction, and explore how digital governance can be reimagined to serve not only as a tool of administration but as a platform for inclusive citizenship and sustainable development.

DECLARATIONS

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Competing Interests

The authors declare no competing interests.

Data Availability

The data used in this study are publicly available from the Afrobarometer Round 10 survey. The dataset can be accessed through the Afrobarometer data portal at: https://www.afrobarometer.org/data

Authors' Contributions

Fred Siambe Omweri led the conceptualization and execution of the study. He was responsible for drafting the introduction, conducting the literature review, analyzing the data, and writing the discussion and conclusion sections.

Besigye Brian contributed to the theoretical conceptualization, synthesizing participatory governance frameworks and situating e-governance within the digital inclusion discourse that anchored the study's analytical foundation.

Orisiima Milton supported methodological design and data interpretation, providing critical analysis of institutional trust mechanisms and their implications for citizen engagement with digital public service delivery.

Juliet Tushemereirwe contributed to thematic analysis of equity-centered governance reforms, critically examining socio-demographic determinants of e-participation and their relationship to citizen satisfaction in digitally transitioning contexts.

REFERENCES

1. Afullo, T. J. O. (2019). *Digital infrastructure and e-governance in sub-Saharan Africa: Challenges and prospects*. African Journal of Information Systems, 11(2), 45–62.
2. Allaste, A.-A., & Waechter, N. (2025). Digital citizenship and digital literacy: Key themes in current debates and empirical contributions. *Journal of Applied Youth Studies, 8*, 163–171. https://doi.org/10.1007/s43151-025-00182-1
3. Asmawanti, D., Afiah, N. N., Ritchi, H., & Suharman, H. (2025). Literature review of government digital services based on public value theory and citizen perspectives. *Cogent Business & Management, 12*(1), Article 2518494. https://doi.org/10.1080/23311975.2025.2518494
4. Asmawanti, D., et al. (2025). Trust and legitimacy in civil society organizations: A comparative study. *Journal of Civil Society Studies, 19*(2), 211–229.
5. Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly, 27*(3), 264–271. https://doi.org/10.1016/j.giq.2010.03.001
6. Brezzi, M., & González, S. (2025). Government analytics using citizen surveys: Lessons from the OECD Trust Survey. In *The Government Analytics Handbook: Leveraging Data to Strengthen Public Administration* (Chapter 28). World Bank. https://openknowledge.worldbank.org/bitstreams/116057de-c6f9-4da1-9e32-cc6b842bd772/download
7. Bwalya, K. J., & Mutula, S. M. (2014). *E-government: Implementation, adoption and synthesis in developing countries*. De Gruyter.
8. Christensen, T., & Lægreid, P. (2005). Trust in government: The relative importance of service satisfaction, political factors, and demography. *Public Performance & Management Review, 28*(4), 487–511.
9. Cleofas, J. V. (2025). Kabataang Pinoy online: Digital citizenship and global civic engagement among Filipino youth. *Journal of Applied Youth Studies, 8*(1), 45–62. https://doi.org/10.1007/s43151-025-00165-2
10. De Coninck, D., Waechter, N., & d'Haenens, L. (2025). Unraveling the engagement paradox: High civic engagement among vulnerable European youth in the digital age. *Journal of Applied Youth Studies, 8*(2), 249–267. https://doi.org/10.1007/s43151-024-00129-y
11. Diakite, M., & Wandaogo, A. (2024). Citizen satisfaction and trust in West African e-governance systems. *International Journal of Public Sector Performance, 6*(3), 101–118.
12. DiMaggio, P., & Hargittai, E. (2001). From the 'digital divide' to 'digital inequality': Studying Internet use as penetration increases. *Princeton Center for Arts and Cultural Policy Studies Working Paper Series*.
13. Djatmiko, G. H., Muriuki, G., & Ndlovu, T. (2025). Digital literacy and age-sensitive design in African e-government platforms. *Journal of Digital Inclusion and Governance*, 8(1), 22–39.
14. Djatmiko, G. H., Sinaga, O., & Pawirosumarto, S. (2025). Digital transformation and social inclusion in public services: A qualitative analysis of e-government adoption for marginalized communities in sustainable governance. *Sustainability, 17*(7), 2908. https://doi.org/10.3390/su17072908
15. Djatmiko, H., Muriuki, G., & Ndlovu, T. (2025). Digital literacy and age-sensitive design in African e-government platforms. *Journal of Digital Inclusion and Governance, 8*(1), 22–39.
16. Estevez, E., & Janowski, T. (2013). Electronic governance for sustainable development—Conceptual framework and state of research. *Government Information Quarterly, 30*(Suppl. 1), S94–S109. https://doi.org/10.1016/j.giq.2012.11.001

17. Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.
18. Ferro, E., Helbig, N., Gil-García, J. R., & Luna-Reyes, L. F. (2011). The role of IT in the transformation of the public sector: A multi-level, multi-theory framework. *Government Information Quarterly, 28*(2), 89–97. https://doi.org/10.1016/j.giq.2010.05.002
19. Gil-García, J. R., Helbig, N., & Ojo, A. (2014). Being smart: Emerging technologies and innovation in the public sector. *Government Information Quarterly, 31*(S1), S1–S8. https://doi.org/10.1016/j.giq.2014.09.001
20. Government of Kenya. (2021). *National ICT Policy: Towards a digitally empowered Kenya*. Ministry of ICT, Innovation and Youth Affairs.
21. Graham, M., Sabbata, S., & Zook, M. (2015). Towards a study of information geographies: (Im)mutable augmentations and a mapping of the geographies of information. *Geo: Geography and Environment, 2*(1), 88–105.
22. Hassan, A. M. (2019). *Effect of e-government on service delivery in the public service of Kenya* [Doctoral dissertation, Jomo Kenyatta University of Agriculture and Technology]. JKUAT Institutional Repository. https://ir.jkuat.ac.ke/handle/123456789/5117
23. Heeks, R. (2006). *Implementing and managing e-government: An international text*. SAGE Publications.
24. Helsper, E. J. (2012). A corresponding fields model for the links between social and digital exclusion. *Communication Theory, 22*(4), 403–426.
25. Hutchinson, J., & Ahmad, S. (2024). Algorithmic bias and digital exclusion in refugee e-service access. *Technology and Society, 19*(2), 77–94.
26. Hutchinson, K., & Ahmad, N. (2024). Mixed-methods approaches to participatory governance in low-trust environments. *Journal of Development Policy and Practice, 9*(1), 33–52.
27. ITU. (2022). *Bridging the digital divide: Connecting the unconnected*. International Telecommunication Union. https://www.itu.int
28. Macintosh, A. (2004). Characterizing e-participation in policy-making. In *Proceedings of the 37th Annual Hawaii International Conference on System Sciences* (pp. 10–pp). IEEE. https://doi.org/10.1109/HICSS.2004.1265300
29. Maina, L. W., & Otieno, G. O. (2024). Leveraging technology for government service delivery: Suggestions for securing the eCitizen services in Kenya. *East African Journal of Information Technology, 7*(1), 81–91. https://doi.org/10.37284/eajit.7.1.1757
30. Meru, A. K., & Kinoti, M. W. (2022). Digitalisation and public sector service delivery in Kenya. In *Digital service delivery in Africa: Platforms and practices* (pp. 229–248). Springer International Publishing.
31. MIT GOV/LAB & Busara. (2024). *Building trust in government in a digital world: Insights from Kenya*. MIT GOV/LAB. https://mitgovlab.org/news/building-trust-in-government-in-a-digital-world/
32. MIT GOV/LAB & Busara. (2024). *Building trust in government in a digital world*. https://mitgovlab.org/news/building-trust-in-government-in-a-digital-world/
33. MIT GOV/LAB. (2024). *Participatory governance in practice: Mixed-methods insights from Africa*. https://mitgovlab.org
34. Morgeson, F. V., VanAmburg, D., & Mithas, S. (2011). Misplaced trust? Exploring the structure of the e-government–citizen trust relationship. *Journal of Public Administration Research and Theory, 21*(2), 257–283. https://doi.org/10.1093/jopart/muq006
35. Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. Cambridge University Press.
36. OECD. (2020). *Digital government strategies for transforming public services in the welfare sectors*. https://doi.org/10.1787/4c8a0f8a-en
37. OECD. (2021). *Digital inclusion for all: Empowering people through technology and skills*. https://www.oecd.org
38. OECD. (2025). *Government at a Glance 2025: Trust, accessibility, responsiveness, and quality of justice services*. https://www.oecd.org/en/publications/government-at-a-glance-2025_0efd0bcd-en/full-report/trust-accessibility-responsiveness-and-quality-of-justice-services_d04411e8.html
39. Omweri, F. S. (2024). A systematic literature review of e-government implementation in developing countries: Examining urban-rural disparities, institutional capacity, and socio-cultural factors in the context of local governance and progress towards SDG 16.6. *International Journal of Research and*

Innovation in Social Science, 8(8), 1173–1199.

40. Omweri, F. S. (2024). Youth-led policy advocacy in Africa: A qualitative analysis of Generation Z's mobilization efforts against fiscal legislation in Kenya and its implications for democratic governance in the continent. *International Journal of Innovative Scientific Research, 2*(3), 1–22. https://ijisr.net/ijisr/article/view/8
41. Ondego, B., & Moturi, C. (2016). Evaluation of the implementation of the e-Citizen in Kenya. *International Journal of Applied Information Systems, 10*(4), 13–21. https://doi.org/10.5120/ijais2016451486
42. Open Government Partnership. (2023). *Kenya's Open Government Partnership National Action Plan V (2023–2027)*. Government of Kenya. https://www.opengovpartnership.org/documents/kenya-action-plan-2023-2027-december/
43. Pérez-Escolar, M., & Canet, F. (2023). Research on vulnerable people and digital inclusion: Toward a consolidated taxonomical framework. *Universal Access in the Information Society, 22*(3), 1059–1072. https://doi.org/10.1007/s10209-022-00867-x
44. Pollicy. (2025b). *Rethinking digitisation: A toolkit for inclusive digital governance in Kenya*. https://pollicy.org/resource/rethinking-digitisation/
45. Pollicy. (2025a). *Digital democracy in Africa: Platform design and exclusion*. https://pollicy.org
46. Preecha, J. (2025). Cybersecurity and public trust in digital governance: Focusing on citizen trust. *Proceedings of the International Conference on Social Science and Humanity, 2*(2), 26–37. https://doi.org/10.61796/icossh.v2i2.27
47. Preecha, N. (2025). Public trust and service reliability in Kenya's Huduma Centres. *Transparency International Kenya Report*. https://tikenya.org
48. Pyarali, M. (2021). Digital media literacy and youth civic reasoning in Kenya: Baseline report. *The Youth Café*. https://theyouthcafe.com
49. Raihan, M. M. H., Chen, Y., & Moyo, T. (2025). Dimensions and barriers for digital (in)equity and digital divide: A systematic integrative review. *Digital Transformation and Society*. https://doi.org/10.1007/s44204-024-00025-3
50. Robinson, L., Cotten, S. R., Ono, H., Quan-Haase, A., Mesch, G., Chen, W., Schulz, J., Hale, T. M., & Stern, M. J. (2015). Digital inequalities and why they matter. *Information, Communication & Society, 18*(5), 569–582. https://doi.org/10.1080/1369118X.2015.1012532
51. Sala, A., Arrue, M., Pérez, J. E., & Espín-Tello, S. M. (2021). Automated adaptations for improving the accessibility of public e-services based on annotations. In C. Ardito et al. (Eds.), *Human-Computer Interaction – INTERACT 2021* (pp. 373–382). Springer. https://doi.org/10.1007/978-3-030-85610-6_22
52. Scholl, H. J., & Scholl, M. C. (2014). Smart governance: Using information technologies to support citizen engagement and public service delivery. *Information Polity, 19*(1–2), 37–50.
53. Schröder, T., & Neumayr, M. (2023). Conceptions of digital competence in transformation—The perspective of democracy-related (civic) education. In N.-E. Zimmermann (Ed.), *Inclusive Citizenship* (pp. 349–365). Springer. https://doi.org/10.1007/978-3-658-45757-0_23
54. Selwyn, N. (2004). Reconsidering political and popular understandings of the digital divide. *New Media & Society, 6*(3), 341–362.
55. Skariah, J., Joseph, J., Jose, J. J., Antony, M., Joseph, N., & Joseph, S. G. (2024). Barriers to e-governance adoption in rural and marginalized communities: Challenges and strategies for digital inclusion. *International Research Journal on Advanced Engineering and Management, 2*(12), 3809–3817. https://doi.org/10.47392/IRJAEM.2024.0566
56. Tambouris, E., Macintosh, A., & de Bruijn, H. (2012). E-participation: From engagement to influence. *European Journal of ePractice, 17*, 1–11.
57. UNESCO. (2021). *A global framework for digital inclusion*. https://unesdoc.unesco.org
58. United Nations Development Programme (UNDP). (2021). *Digital inclusion and governance in Africa: Policy pathways for equitable transformation*. UNDP Regional Bureau for Africa.
59. United Nations. (2022). *E-Government Survey 2022: The future of digital government*. United Nations Department of Economic and Social Affairs. https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2022
60. Ustera, A., Vigoda-Gadot, E., & Cohen, N. (2025). Local civic engagement in turbulent times: Trust in governance, managerial quality, ethnicity, and education during polycrises. *Public Performance &*

Management Review, 48(1), 97–123. https://doi.org/10.1080/15309576.2025.2510977

61. Van Dijk, J. A. G. M. (2006). *The network society: Social aspects of new media*. Sage.
62. Warschauer, M. (2003). *Technology and social inclusion: Rethinking the digital divide*. MIT Press.
63. Wirtz, B. W., & Daiser, P. (2018). A meta-analysis of e-government research: Trends, structures, and gaps. *International Review of Administrative Sciences, 84*(1), 71–90. https://doi.org/10.1177/0020852317699308
64. Wirtz, B. W., & Kurtz, O. T. (2017). Determinants of citizen satisfaction with e-government: An empirical analysis. *Public Management Review, 19*(5), 710–733. https://doi.org/10.1080/14719037.2016.1209239
65. World Bank. (2021). *Digital taxation systems in Kenya*. https://www.worldbank.org
66. World Bank. (2021). *Kenya digital economy assessment: Catalyzing inclusive growth through technology*. World Bank Group. https://www.worldbank.org
67. World Bank. (2023). *Digital financial inclusion in Africa: Gender and age disparities*. https://www.worldbank.org/en/topic/financialinclusion/publication/digital-financial-inclusion-in-africa
68. Wyber, R., Vaillancourt, S., Perry, W., Mannava, P., Folaranmi, T., & Celi, L. A. (2015). Big data in global health: Improving health in low- and middle-income countries. *Bulletin of the World Health Organization, 93*(3), 203–208.
69. Xia, S. (2025). Digital government construction and civic policy participation: Evidence from China. *Policy Sciences, 58*(2), 345–367. https://doi.org/10.1007/s11077-025-09576-7
70. Yüksel-Arslan, P., Muriithi, M., & Tanaka, Y. (2025). Inclusive digital transformation: Lessons from disability-inclusive e-government initiatives. *Journal of Inclusive Technology Policy, 9*(1), 12–29.
71. Zheng, Y., & Walsham, G. (2021). Inclusive innovation for sustainable development: Theory and practice. *Information Technology for Development, 27*(1), 1–20. https://doi.org/10.1080/02681102.2020.1837731