

The Role of the E-Citizen Portal in Enhancing Public Service Delivery in Kenya: Perspectives from the Ministry of Information, Communications and Digital Economy

Immaculate Makena¹, Dr. Henry Kegoro²

¹School of Business and Management, Kiriri Women's University of Science and Technology, Kenya

²School of Business and Management, Kiriri Women's University of Science and Technology

Abstract

This study explored the role of the e-Citizen portal in enhancing public service delivery at the Ministry of Information, Communications and the Digital Economy (MICDE) in Kenya. Anchored on the Technology Acceptance Model, Diffusion of Innovations Theory and Public Value Theory, the study used a mixed-methods design. The target population was 328 MICDE employees, and a sample of 180 was drawn through proportional stratified sampling. Data were collected using structured questionnaires, and 150 were returned, giving an 83% response rate. Data were analysed using descriptive statistics, correlation and regression analysis, with thematic analysis of the qualitative responses. Respondents moderately agreed that the portal made it easier to register businesses ($M = 3.30$), file taxes ($M = 3.39$), renew driving licences ($M = 3.26$) and access services ($M = 3.23$). Prompt autogenerated responses scored lowest ($M = 2.93$). Regression results showed a strong positive relationship between the e-Citizen portal and service delivery ($R = 0.812$; $R^2 = 0.660$), indicating that the portal explains 66% of the variation in service delivery. Correlation analysis also showed a significant positive relationship ($r = 0.683$, $p < 0.001$). Despite these gains, network failures, system downtime, interrupted transactions and delayed one-time passwords (OTPs) limited user satisfaction. The study concludes that the e-Citizen portal significantly enhances service delivery, but its full benefits depend on better system reliability, infrastructure and user support.

Keywords: e-Citizen portal, public service delivery, e-government, digital transformation, Kenya

1.0 Introduction

The rapid advancement of information and communication technologies (ICTs) has transformed the way governments provide public services. E-government platforms have increasingly been adopted to improve the efficiency, accessibility, transparency, accountability, and responsiveness of public service delivery. By enabling citizens to access government services electronically, digital platforms can reduce physical visits to government offices, minimize administrative delays, lower service delivery costs, and improve convenience. In developing countries such as Kenya, digital government has become an important strategy for addressing challenges associated with traditional service delivery, including long queues, lengthy administrative procedures, geographical barriers, and limited access to government

information. The e-Citizen portal represents a significant component of Kenya's digital transformation efforts by providing a centralized platform through which citizens and other users can access various government services electronically. The integration of Digital innovation in public administration is changing the way government ministries provide services and/or handle projects, particularly in developing countries (KIPPRA, 2024).

The Ministry of Information, Communications and the Digital Economy plays an important role in advancing Kenya's digital transformation agenda and promoting the use of ICTs in government service delivery (KIPPRA, 2024). The e-Citizen portal has the potential to enhance public service delivery by improving accessibility, efficiency, transparency, and responsiveness. However, the effectiveness of digital government platforms may be affected by factors such as system reliability, internet connectivity, digital literacy, usability, data privacy, cybersecurity, and availability of supporting infrastructure. Therefore, it is important to examine the extent to which the e-Citizen portal contributes to improved public service delivery within the Kenyan government context. This study seeks to explore the role of the e-Citizen portal in enhancing public service delivery in Kenya, with particular focus on the Ministry of Information, Communications and the Digital Economy.

1.1 Statement of the Problem

Despite the increasing adoption of digital government initiatives in Kenya, public service delivery continues to face challenges related to delays, accessibility, efficiency, transparency, and responsiveness. The introduction of the e-Citizen portal was intended to address some of these challenges by providing citizens with centralized and convenient online access to government services. The e-Citizen portal has facilitated over 1.2 million transactions monthly and about 5,000 services (ICT Authority, 2023), the digital gateway Kenya prefers. However, concerns regarding system accessibility, reliability, digital literacy, internet connectivity, usability, data privacy, and the ability of users to effectively access and complete services may limit the extent to which the platform achieves its intended outcomes. In addition, there is limited empirical evidence on the extent to which the e-Citizen portal has contributed to improved public service delivery within the Ministry of Information, Communications and the Digital Economy. This creates a need to examine the role of the e-Citizen portal in enhancing public service delivery and establish the extent to which its adoption has improved the efficiency, accessibility, transparency, and responsiveness of government services in Kenya.

1.2 Objective of the Study

The objective of the study was to explore the role of the e-citizen portal in enhancing service delivery in the Ministry of Information, Communications and the Digital Economy.

2.0 Literature Review

2.1 Theoretical Literature

2.1.1 Technology Acceptance Model (TAM)

The model created by Fred Davis in 1989 is known as Technology Acceptance Model (TAM), and is one of the most widely used paradigms in the study of individual and organizational acceptance of Information Technology (IT) (Davis, 1989). This theory proposes that perceived usefulness and perceived ease of use both directly affect intention to use and perceived ease of use and actual use of technology directly. With regard to the adoption of e-government systems, TAM uses the idea that citizens and civil servants are likely to use an e-government system like the e-Citizen portal when they believe that it will be beneficial to them, in terms of providing access to services and being easy to use.

This is the power of TAM's simplicity and its empirical underpinning in a wide variety of contexts, from health and education to government. In Kenya, for instance, research has demonstrated that if the ministry officials have access to e-Citizen and find it useful, chances of extensive uptake and persistent usage are high, benefitting directly service delivery (Wanjohi et al., 2019). Diffusion of Innovations also provides a complementary perspective on how innovations are adopted and diffused over time (Rogers, 2003).

2.1.2 Public Value Theory

The focus of Public Value Theory, as described by Mark H. Moore in 1995, is on the broader issue of how public administrators create value for citizens by being effective and innovative in their management practices (Moore, 1995). Unlike private corporations, public agencies are expected to prove the value of innovations in ways that go beyond efficiency or cost to the public, as a whole. Public Value Managers are public value creators who would create, execute and maintain services for citizens based on their needs, foster openness and earn citizens' trust in the government.

Public Value Theory is used in e-government to assert that all attempts at digitization should be appraised based on the public value delivered, such as better service delivery, simpler access to government services, better citizens' satisfaction and better use of taxpayer money (Moore, 1995; KIPPRA, 2024). The theory offers a rationale for the investment of governments in digital change beyond efficiency, as to promote accountability and responsiveness. With respect to the context of Kenya's ministry, this theory highlights the need for investment and rollout of digital platforms to be aligned to strategic priorities such as Vision 2030 and the National Digital Master Plan. It also refers to continuous engagement with stakeholders to involve citizens and frontline workers in the implementation of e-government in order to guarantee that e-government investments bring measurable and tangible benefits to public health (ICT Authority, 2023).

2.2 Empirical Literature

E-Citizen Portal and Service Delivery

Kenya's centralized one-stop e-Citizen portal provides online access to a wide variety of government services. Empirical research has explored the impact of this portal on service delivery and each study sheds light on both aspects and brings to light other enduring gaps in knowledge. Munyua (2019) carried out an in-depth study of the experiences of urban and peri-urban users of the e-Citizen portal. Overall, the study found users to be satisfied with the convenience and time-saving aspects of the portal, especially when it comes to registering businesses and getting passports. However, Munyua said that she had encountered “challenges” of frequent service downtimes and inadequate integration with some of the government's backend systems that prevented benefits of digital service delivery from being realised in full. An additional challenge was the digital divide, with most of the rural users unable to use services on a regular basis, because of being unable to afford connectivity costs or lack of digital literacy. This demonstrates a lack of inclusive access, with much of the research focusing primarily on the inclusion of urban users and the lack of attention paid to the inclusion of marginalised and remote populations.

This was followed by Ndungu & Wanjohi (2020) who did this analysis for civic engagement and transparency after e-Citizen utilization. The authors showed how the portal increased transparency of government services and decreased bribery cases by making payments electronic through mixed methods, including questionnaires and interviews. A study conducted by Mutiso (2022) set out to identify the issues of data security and privacy concerns on the e-Citizen platform, and found that

citizens' trust in the platform was compromised by concerns about identity theft and weak protection against it, which made the platform harder to use. Although confirming the worth of the platform, the study found hesitation among potential users due to perceived exposure of their personal information, an indication of a lack of trust and security pillars of Kenya's digital public services.

Wambui & Mwangi (2023) conducted further research measuring users' satisfaction with and awareness of services in relation to the e-Citizen platform. In general, the platform has been well appreciated by its known users, but awareness of the extent of services (and how to use them) was widespread even among regular users. However, Wambui & Mwangi states that this cannot be fully achieved if there are not sustained awareness and capacity building programmes; there is a lack of public education. To date, these studies have confirmed the benefits of the e-Citizen portal in terms of efficiency, transparency and user satisfaction, but major gaps remain in knowledge exist. Very little extensive studies exist in marginalized and rural communities; little research exists to ensure effective interagency integration; and little evaluation of the impact of digital insecurity and awareness gaps on long-term adoption. The impact of using e-Citizen on service delivery is under-researched, for individual ministries (such as the Ministry of Information, Communications and the Digital Economy).

2.3 Conceptual Framework

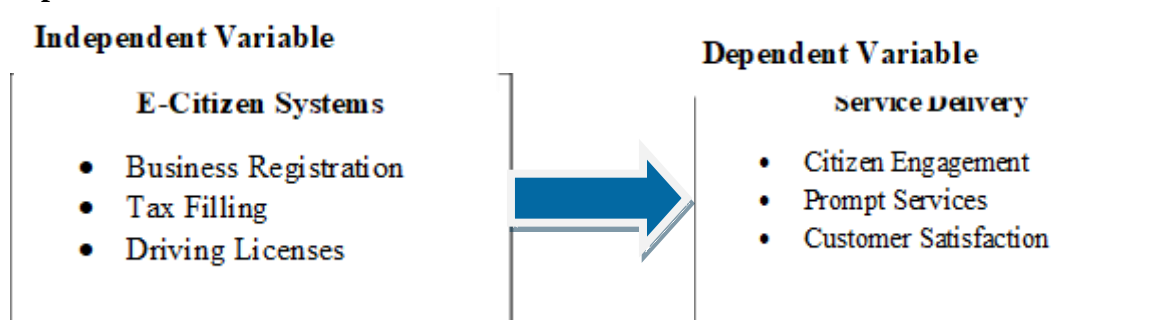


Figure 1: Conceptual Framework

3.0 Methodology

The study adopted a mixed-methods research design, integrating quantitative and qualitative approaches to examine the role of the e-Citizen portal in enhancing public service delivery in Kenya. The target population comprised 328 employees of the Ministry of Information, Communications and the Digital Economy (MICDE), consisting of 33 Directors, 33 Deputy Directors, 43 Managers, and 219 Officers. A sample of 180 respondents was selected using proportional stratified sampling to ensure representation of the four staff categories. Primary data were collected using a structured questionnaire comprising mainly five-point Likert-scale items and a few open-ended questions focusing on the accessibility, efficiency, reliability, responsiveness, and convenience associated with the e-Citizen portal and public service delivery. The validity of the instrument was established through expert review and a pilot study, while reliability was assessed using Cronbach's alpha, with a coefficient of 0.70 or above considered acceptable. Quantitative data were analyzed using descriptive statistics, including frequencies, percentages, and means, while simple linear regression analysis was used to determine the influence of the e-Citizen portal on public service delivery. Qualitative responses were analyzed thematically to provide contextual explanations of the quantitative findings. The regression model was specified as $Y = \beta_0 + \beta_1 X + \epsilon$, where Y represents public service delivery, X represents the e-Citizen portal, β_0 is the constant, β_1 is the regression coefficient, and ϵ is the error term. The findings were presented using tables

and appropriate graphical illustrations, while ethical principles, including voluntary participation, informed consent, confidentiality, anonymity, and use of data strictly for academic purposes, were observed throughout the study.

4.0 Findings, Analysis and Discussion

The response rate, was determined by taking into account the quantity of questionnaires that were sent as well as those respondents returned after completing them. 150 of the 180 surveys the researcher distributed were completed, resulting in an 83% response rate, as shown in table 3 above. These findings corroborate Holtom et al. (2022) assertion that a response rate of 70% or over is a reliable predictor of research participation. Similar to this, Beehr et al. (2024) suggested that while a study with a 50% response rate is still enough for data analysis, 60% and 70% response rates are considered acceptable and very good, respectively.

4.1 Descriptive Statistics

4.1.1 E-Citizen Portal

Respondents were asked to indicate the extent to which customers accessed services through the e-citizen portal. The findings were summarized as shown in Table 1.

Table 1: Descriptive Statistics for E-Citizen Portal

Statement	N	Mean	Std. Deviation
Citizens register their businesses using e-citizen portal with less difficulty	150	3.3000	1.21925
Citizens file their taxes using e-citizen portal with less difficulty	150	3.3867	1.18597
Citizens receive autogenerated responses through the e-citizen portal promptly	150	2.9333	1.12725
E-citizen services are always accessible	150	3.2333	1.21189
Citizens can renew their driving licenses through the e-citizen portal	150	3.2600	1.22299
Valid N (listwise)	150		

Source: Research Data (2026)

As shown in Table 1, citizens registered their businesses using e-citizen portal with less difficulty ($M = 3.30$, $SD = 1.21$) and that citizens filed their taxes using e-citizen portal with less difficulty ($M = 3.39$, $SD = 1.19$), citizens received autogenerated responses through the e-citizen portal promptly ($M = 2.93$, $SD = 1.13$), E-citizen services were always accessible ($M = 3.23$, $SD = 1.21$), Additionally, respondents ($M = 3.30$, $SD = 1.22$) agreed that citizens could renew their driving licenses through the e-citizen portal. The findings indicated that the system downtime, poor network and slow performance were some of the major challenges faced by the respondents. There were also challenges with the OTPs while they were completing the online transactions. This affected the efficiency and the delivery of the services.

These findings are in consistent with Xin et al. (2022) who asserted that when the citizen is willing to accept usage of e-government services, its usually influenced by the quality of the services being provided, trust and simplicity of the platform. According to Sabani et al. (2023), the acceptance of government digital platforms is influenced by performance, system quality and transparency. These findings are consistent with evidence that government digital platforms can improve efficiency, transparency and accessibility when system quality and implementation conditions are adequate (Sabani et al., 2023).

4.2 Inferential Statistics

4.2.1 Multiple Regression Analysis

This section shows the relationships between the various independent and dependent variables. The objective of the study was to explore the role of the e-citizen portal in enhancing service delivery in the Ministry of Information, Communications and the Digital Economy was investigated using multiple linear regression analysis.

Table 2: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812 ^a	.660	.650	.61772
a. Predictors: (Constant), E-citizen Portal b. Dependent Variable (Service Delivery)				

Source: Research Data (2026)

The regression results indicate a strong positive relationship between the e-Citizen portal and service delivery ($R = 0.812$). The coefficient of determination ($R^2 = 0.660$) shows that the e-Citizen portal explains 66.0% of the variation in service delivery, while the remaining 34.0% is attributable to other factors not included in the model. The adjusted R^2 of 0.650 indicates that the model retains substantial explanatory power after adjustment for the model characteristics. The findings therefore suggest that the e-Citizen portal has a substantial association with public service delivery in the Ministry of Information, Communications and the Digital Economy.

4.2.2 Correlation Analysis

Table 3: Correlation Analysis

Variable	E-Citizen Portal	Service Delivery	Sig. (2-tailed)
E-Citizen Portal	1.000	0.683**	< 0.001
Service Delivery	0.683**	1.000	< 0.001
N	150	150	

Note. ** Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis established a strong positive and statistically significant relationship between the e-Citizen portal and service delivery ($r = 0.683$, $p < 0.001$, $N = 150$). This finding indicates that increased effectiveness and utilization of the e-Citizen portal are associated with improved public service delivery. The statistically significant relationship at the 0.01 level provides evidence that the e-Citizen portal is significantly associated with service delivery in the Ministry of Information, Communications and the Digital Economy.

5.0 Summary of Findings

The results indicated that the e-Citizen portal has significantly improved service delivery through improved access to government services for the citizens. The respondents agreed that the platform made it easier to register a business, file taxes, renew driving licenses and provided automated responses which improved convenience and efficiency. Findings suggest that the portal has enhanced the delivery of digital services by making government services more accessible, transparent and user friendly. However, the respondents identified some challenges affecting the effectiveness of the e-Citizen portal including network failures, system downtimes, interruptions in transactions and delays in receiving one-time passwords (OTPs). These challenges limit the user satisfaction and hinder the smooth delivery of service, which requires constant investment in ICT infrastructure, system reliability and technical support to improve the overall performance of the platform.

6.0 Conclusion and Recommendations

The study concludes that the e-Citizen portal plays a significant and positive role in enhancing service delivery at MICDE. The portal has made government services more accessible, convenient, transparent and efficient, particularly for business registration, tax filing and driving licence renewal (KIPPRA, 2024). The regression and correlation results confirm a strong, statistically significant relationship between use of the portal and service delivery outcomes. This supports the Technology Acceptance Model, since perceived usefulness and ease of use encourage adoption (Davis, 1989). It also supports Public Value Theory, since the portal delivers tangible benefits to citizens (Moore, 1995). However, the portal's potential is not fully realized. The low score on prompt automated responses, together with reported system downtime, network failures, interrupted transactions and OTP delays, shows that technical reliability remains a weak point. These problems reduce user satisfaction and undermine the efficiency gains the platform was designed to deliver. Digital service delivery is therefore only as strong as the infrastructure and support systems behind it.

6.1 Recommendations

Policy: The government should increase investment in ICT infrastructure and set minimum service-level standards for system uptime, response time and OTP delivery. Data protection laws should be strictly enforced, and interagency integration mandated so the portal connects seamlessly with backend systems. Digital inclusion measures, such as subsidized connectivity and community access points, should ensure rural and marginalized citizens benefit equally.

Practice: MICDE and the ICT Authority should strengthen system reliability through continuous monitoring, backup systems and prompt resolution of downtime. The OTP process should be improved by working with mobile operators and adding alternative authentication options such as email verification. Responsive user support, regular training and awareness campaigns, and routine feedback surveys should guide continuous improvement.

Further Research: Future studies should extend beyond MICDE to other ministries and counties and include citizens as respondents. Research should also examine how the digital divide, cybersecurity concerns and other variables, such as system quality and trust, affect adoption and service delivery. Longitudinal studies would help establish the portal's long-term effect on efficiency and public trust.

References

1. Al-Azawei, A., Serenelli, F., & Lundqvist, K. (2016). Universal design for learning (UDL): A content analysis of peer-reviewed journal papers from 2012 to 2015. *Journal of the Scholarship of Teaching and Learning*, 16(3), 39–56. <https://doi.org/10.14434/josotl.v16i3.19295>
2. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
3. Holtom, B., Baruch, Y., Aguinis, H., & Ballinger, G. A. (2022). Survey response rates: Trends and a validity assessment framework. *Human Relations*, 75(8), 1560–1584.
4. ICT Authority. (2023). *[Report on e-Citizen services and digital government—bibliographic details to be confirmed]*.
5. Kenya Institute of Public Policy and Planning. (2024). *Annual policy report*.
6. Moore, M. H. (1995). *Creating public value: Strategic management in government*. Harvard University Press.
7. Munyua. (2019). *[Study on user experiences, convenience, service downtime, and digital inclusion on the e-Citizen portal—bibliographic details to be confirmed]*.
8. Mutiso. (2022). *[Study on data security, privacy, and citizen trust in the e-Citizen platform—bibliographic details to be confirmed]*.
9. Mutua, & Mwanja. (2023). *[Study on public value and digital government—bibliographic details to be confirmed]*.
10. Ndungu, W., & Wanjohi, K. (2020). Citizen engagement and transparency through the e-Citizen portal in Kenya. *Public Management Review*, 22(5), 654–670.
11. Oseni, K. O. (2024). *Barriers facing e-service adoption and implementation at local environment level in Nigeria* [Doctoral research study].
12. Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
13. Sabani, A., Thai, V., & Hossain, M. A. (2023). Factors affecting citizen adoption of e-government in developing countries: An exploratory case study from Indonesia. *Journal of Global Information Management*, 31(1), 1–23. <https://doi.org/10.4018/JGIM.318131>
14. Wambui, & Mwangi. (2023). *[Study on awareness, user satisfaction, and capacity building relating to the e-Citizen platform—bibliographic details to be confirmed]*.
15. Wanjohi, R., Mwalili, T., & Mose, T. (2019). Influence of organizational technical capacity on delivery of e-government services in government ministries in Kenya. *International Journal of Economics, Commerce and Management*, 7(9), 79–99.
16. Xin, Y., Dilanchiev, A., Ali, M., Irfan, M., & Hong, Y. (2022). Assessing citizens' attitudes and intentions to adopt e-government services: A roadmap toward sustainable development. *Sustainability*, 14(22), Article 15183.
17. Zio Rodríguez, et al. (2022). *[Study on e-government projects and service efficiency in Monaco—bibliographic details to be confirmed]*.

18. Zuhura, R., & Koech, P. (2023). E-government and service delivery in Taita Taveta County Government, Kenya. *The Strategic Journal of Business & Change Management*, 10(4), 866–881.