

EFFECT OF DIGITAL INNOVATION ON ORGANIZATIONAL PERFORMANCE IN KISII, KISUMU, AND NYAMIRA COUNTIES

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ABSTRACT

Digital innovation has become a critical driver of organizational performance by enabling improved operational efficiency, enhanced service delivery, effective communication, automation of processes, and data-driven decision-making. Despite significant efforts by the Kenyan government through initiatives such as the Digital Economy Blueprint and the National Digital Master Plan to promote digital transformation, county governments continue to experience challenges in adopting and effectively utilizing innovative digital solutions. This study examined the effect of digital innovation on organizational performance in Kisii, Kisumu, and Nyamira Counties. The study was anchored on the Diffusion of Innovation Theory (DIT) and the Unified Theory of Acceptance and Use of Technology (UTAUT). Primary data were collected using structured questionnaires administered to county government employees selected through stratified random sampling and purposive sampling, yielding a sample size of 325 respondents. A pilot study was conducted in Homabay County due to its comparable administrative and demographic characteristics. Content and construct validity were established through expert review and Principal Component Analysis (PCA), while reliability was assessed using Cronbach's alpha coefficient with a threshold of 0.70. Data were analyzed using

Statistical Package for Social Sciences (SPSS) Version 25.0 through descriptive statistics, Pearson product-moment correlation analysis, and simple linear regression. Diagnostic tests were conducted to confirm the assumptions underlying regression analysis. The findings established that digital innovation had a positive and statistically significant effect on organizational performance, explaining 38.2% of the variation in organizational performance ($R^2 = 0.382$, $p < 0.05$). The study concluded that adoption and effective utilization of digital innovations significantly enhance organizational performance by improving operational processes, service delivery efficiency, communication, and information management within county governments. The study recommends strengthening digital innovation initiatives through investment in emerging technologies, promotion of digital systems integration, enhancement of employee digital competencies, and development of supportive policies to facilitate sustainable digital transformation and improved organizational performance in county governments.

Keywords: Digital Innovation, Organizational Performance, Digital Transformation, Technology Adoption, Operational Efficiency, Diffusion of Innovation Theory (DIT).

INTRODUCTION

Background of the Study

Digital innovation strategies involve adopting novel solutions like automated workflows, mobile apps, and e-services to transform public sector performance. These strategies aim to streamline operations, reduce delays, and enhance citizen engagement. Norway's Altinn platform processed 15 million transactions in 2016, saving €200 million annually through innovative e-services (Ly, 2023). In Africa, Rwanda's Irembo platform, launched in 2015, digitized over 100 services, cutting processing times by 70% by 2022 (Luvembe & Mutai, 2019). Such innovations require aligning digital tools with public needs to maximize impact. However, bureaucratic resistance and limited technical expertise often stall progress, particularly in resource-constrained settings (Koech & Bett, 2023). Strategic leadership is essential to foster a culture of innovation, promote cross-departmental collaboration, and ensure user-centric design. For example, South Africa's Cape Town used cloud-based billing innovations to boost revenue by 15% by 2020 (Mittal, 2020). By prioritizing data-driven and scalable digital solutions, these strategies enhance service quality, accessibility, and public trust, enabling public organizations to adapt to dynamic digital demands and achieve sustainable performance improvements.

Concept of digital innovation in the public sector refers to the development and application of new or significantly improved digital technologies, processes, services, or business models that transform how organizations operate and deliver value. In the public-sector context, digital innovation goes beyond automation to include rethinking service delivery, citizen engagement, data use, and governance through digital means. It often involves experimentation, co-creation with users, and adaptive leadership to respond to complex social and administrative challenges. For county governments in Kenya, digital innovation manifests in areas such as e-revenue systems, integrated service portals, mobile-based citizen engagement platforms, digital health records, smart agriculture solutions, and data-driven planning tools. These innovations are central to improving efficiency, transparency, accountability, and inclusiveness under the devolved governance framework.

Kenya is widely recognized as one of Africa's digital innovation hubs, driven by early mobile-money innovations (e.g., M-Pesa), a vibrant technology ecosystem, and supportive national ICT policies. The Kenya Digital Master Plan (2022–2032) explicitly positions digital innovation as a catalyst for public-sector transformation, economic growth, and inclusive development. The plan emphasizes innovation ecosystems, public–private partnerships, use of emerging technologies (such as cloud computing, data analytics, and AI), and innovation-driven public service delivery. National institutions such as the ICT Authority, Konza Technopolis Development Authority, and innovation hubs (e.g., iHub, Gearbox, Nailab) create an enabling environment that counties can leverage. However, the extent to which counties translate this national innovation momentum into local digital adoption varies significantly, reflecting differences in leadership commitment, capacity, and resource availability.

Performance of County governments in Kenya

In Kenya, the 47 county governments established under the 2010 Constitution are central to decentralized service delivery, yet their performance varies significantly. While some counties like Mombasa and Kiambu have made considerable progress in service innovation, others such as Kisii, Nyamira, and Kisumu continue to struggle with core service delivery mandates, including healthcare, infrastructure, and administration (Daud, Ouma, & Ong'era, 2022). A 2018 survey by Transparency International Kenya found that 41% of citizens expressed dissatisfaction with county services, especially citing delays in healthcare and infrastructure (Jonyo, Jonyo, & Manyara, 2018). These concerns remain particularly acute in Kisii, Nyamira, and Kisumu, where overreliance on manual administrative systems has caused significant service inefficiencies for instance, land title processing still takes several months. These setbacks are further aggravated by poor ICT infrastructure, low digital literacy among staff, and limited uptake of digital innovations (Koech & Bett, 2023). Unlike counties that have strategically deployed technology to enhance operational efficiency, the persistent gaps in these counties reflect not just technical constraints but also leadership and institutional weaknesses in driving digital transformation.

A national framework helped Kiambu's e-revenue system enhance revenues by 35% by 2021 (Jonyo, Jonyo, & Manyara, 2018). However, Kisii, Nyamira, and Kisumu still use manual methods, delaying vital services like land title processing. Digital infrastructure, institutional capacity, and workforce ICT skills are still lacking (Osebe, Maina, & Kurgat, 2018). Bureaucratic lethargy and low digital competences, common in African subnational administrations, exacerbate such inefficiencies, according to Koech and Bett (2023). The national digital ambition-sub-county execution divide highlights the necessity for context-specific studies. Thus, Kisii, Nyamira, and Kisumu are strategic instances to examine how digital technology and strategic leadership might improve public sector performance. Leadership accounts for up to 69.2% of performance variation in counties (Kithama, 2023), but little research has studied how it moderates digital adoption implications in these counties. Their ongoing healthcare, fiscal, and development project issues make them good cases for studying this dynamic in Kenya's devolved government.

Lake Region Economic Bloc

The Lake Region Economic Bloc (LREB) is a consortium of 14 counties in Western Kenya established to promote economic cooperation and regional integration under Kenya's devolved governance framework. LREB uses common resources to address regional issues like poverty, low industrialization, and inefficient public services. The Lake Region Economic Bloc (LREB) is a regional economic cooperation framework bringing together counties in western Kenya with the objective of accelerating socio-economic development through regional integration, resource sharing, economies of scale, and coordinated development planning (Kamau, 2025). The Bloc focuses on key sectors such as agriculture, trade, health, transport, tourism, and industrialization, all of which increasingly rely on digital technologies for efficiency and competitiveness. The member counties include Kisii, Nyamira, Kisumu, Homa Bay, Migori, Siaya, Busia, Vihiga, Kakamega, Bungoma, Bomet, Kericho, Nandi, and Trans Nzoia. These

goals require digital adoption to expedite resource management and increase citizen engagement.

Digital technology adoption acts as an enabler of regional integration (Kamau, 2025). One of the core goals of LREB is to reduce fragmentation among member counties. Digital technologies such as shared information systems, interoperable platforms, and regional data repositories facilitate horizontal integration across counties. Adoption of common digital platforms enables counties to share data on trade, agriculture, health, and infrastructure, coordinate policies and development initiatives, harmonize service delivery standards. Without digital adoption, regional integration remains largely administrative and policy-based; with digital systems, it becomes operational and measurable.

LREB seeks to strengthen regional competitiveness by improving productivity and market access. Digital technology adoption supports this by enabling digital trade platforms and e-payments that reduce transaction costs across counties, supporting digitized agricultural value chains, including extension services, market information systems, and logistics coordination, improving access to regional and national markets through online platforms. Counties that adopt digital technologies more effectively contribute to stronger intra-regional trade and collective economic performance within the Bloc. Many public services prioritized by LREB healthcare, revenue administration, transport regulation, and land management are increasingly digital. Adoption of digital technologies allows counties to standardize service delivery processes across the region, reduce duplication of systems and costs through shared platforms, improve transparency and accountability in public administration. For example, interoperable health information systems enhance patient referrals across county borders, while digital revenue systems improve efficiency and reduce leakages at the regional level.

LREB faces severe digital adoption challenges despite its aspirations. The bloc's rural internet penetration is 20%, compared to Kenya's 42% national average, worsening the digital divide (Communications Authority of Kenya, 2022, referenced in Koech & Bett, 2023). Low employee ICT skills and bureaucratic resistance restrict the bloc's capacity to match Canada's 40% e-governance penetration by 2022 (Qiao et al., 2024). To solve these problems, strategic leadership must prioritize digital infrastructure, skills training, and future technologies like AI and cloud computing (Muchelule, 2020). A digital-first culture may improve transparency, service efficiency, and economic growth for LREB, making it a model for decentralized governance in Africa.

For devolved units such as county governments, including those in the LREB, the Kenya National Digital Master Plan 2022-2032 offers a structural basis for digital transformation. By extending broadband and fiber infrastructure, improving connectivity, and committing to interoperable digital systems across national and subnational governments, the Master Plan seeks to lower traditional barriers to digital adoption (connectivity gaps, legacy manual systems, weak ICT infrastructure).

At the same time, actual implementation at the county and regional level appears to be increasingly supported via public-private partnerships. A notable example is a partnership between Safaricom and the Lake Region Economic Bloc (LREB), announced in 2023, which aims to accelerate digital transformation in the region via the rollout of the myCounty App. Under this agreement, Safaricom committed to provide connectivity for county sites, fiber connectivity (bridging the “digital superhighway”), secure communications, public Wi-Fi, e-services (e.g., revenue management, healthcare management), data security and cyber-security services across the 14 counties in the bloc.

Such collaboration reflects a broader strategy: leveraging private-sector capacity in ICT infrastructure, network provision, platform development to supplement county governments’ limited budgets and technical capacity. For devolved governance, this helps translate national-level digital ambitions into operational county-level service delivery and citizen access to digital government services.

Nevertheless, challenges remain. Implementation across all LREB counties requires not only infrastructure, but also capacity building i.e. digital skills among staff and citizens, integration of county systems with national backends, data protection and interoperability, ongoing funding, and political will to sustain digitization beyond pilots. In some counties, evidence suggests early steps: for example, in 2024 Stanbic Bank Kenya and Kisii County launched a digital skills program targeting youth, women, and small businesses to bridge the digital divide and strengthen local digital infrastructure (including donation of computers).

Hence, for the LREB counties, the national-level blueprint, combined with donor/private-sector partnerships and county-level initiatives, creates a favorable environment for digital adoption. Yet realizing enhanced “organizational performance” through service delivery, transparency, revenue, and citizen satisfaction will depend heavily on the strength of strategic leadership at county level, effective implementation plans, resource mobilization, and sustained capacity development.

Digital technology adoption plays a critical role in advancing the objectives of the Lake Region Economic Bloc by enabling regional integration, coordinated service delivery, and enhanced economic competitiveness among member counties. Through shared digital platforms, interoperable systems, and data-driven decision-making, counties within the Bloc can harmonize policies, reduce duplication, and improve organizational performance. Consequently, digital adoption serves as a strategic mechanism linking county-level leadership and innovation to regional development outcomes within the Lake Region Economic Bloc. This makes a study examining digital adoption strategies, strategic leadership, and organizational performance especially relevant: it straddles national vision, regional/regional-blocs collaboration, private-sector partnerships, and local governance dynamics capturing the complexity of devolved digital transformation.

Statement of the Problem

Digital innovation has become a critical driver of organizational performance by enabling organizations to develop and implement new digital solutions that improve operational efficiency, service delivery, decision-making, and citizen engagement. Globally, innovations such as artificial intelligence, cloud computing, big data analytics, mobile applications, and digital platforms have transformed public administration by streamlining organizational processes, increasing transparency, and enhancing responsiveness to citizens' needs (De Magalhães-Santos, 2023). In Kenya, the Government has promoted digital innovation through Vision 2030, the Digital Economy Blueprint, and other national ICT initiatives aimed at modernizing public service delivery and improving organizational performance across national and county governments (Koech & Bett, 2023).

Despite these initiatives, many county governments continue to experience poor organizational performance characterized by delayed service delivery, low development budget absorption, inefficient revenue collection, lengthy administrative procedures, and limited accessibility of public services. According to the Controller of Budget (2025), several county governments recorded low absorption of development budgets, with expenditure on development projects remaining below the legally recommended threshold. In addition, many counties failed to achieve their own-source revenue targets, while slow implementation of development projects continued to undermine service delivery. These challenges are particularly evident in Kisii, Kisumu, and Nyamira Counties, where limited implementation of innovative digital solutions has constrained operational efficiency and organizational effectiveness.

Although the national government has invested in ICT infrastructure and digital transformation, the adoption and implementation of digital innovations remain uneven across county governments. Many counties continue to rely on manual or partially digitized systems for revenue administration, records management, procurement, and service delivery, limiting process automation, innovation, and timely decision-making. Existing empirical studies have largely focused on ICT adoption, e-government implementation, or digital transformation in general, without specifically examining the contribution of digital innovation to organizational performance within county governments. Furthermore, most previous studies have concentrated on relatively technologically advanced counties, leaving limited empirical evidence on the influence of digital innovation in Kisii, Kisumu, and Nyamira Counties.

Consequently, there remains insufficient empirical evidence on the effect of digital innovation on organizational performance within these counties. This study therefore sought to examine the effect of digital innovation on organizational performance in Kisii, Kisumu, and Nyamira Counties, with the aim of generating evidence to inform policy decisions and investments that promote digital innovation and improve service delivery within Kenya's devolved system of government.

Objective of the Study

- i. To examine the effect of digital innovation on organizational performance in Kisii, Kisumu, and Nyamira counties.

Research Hypothesis

H₀₁: Digital innovation has no statistically significant effect on organizational performance in Kisii, Kisumu, and Nyamira counties.

Significance of the study

This study is significant to policymakers, county government officials, digital transformation practitioners, researchers, and citizens by providing empirical evidence on the effect of digital innovation on organizational performance in Kisii, Kisumu, and Nyamira Counties. The findings provide insights that can support informed decision-making, policy development, and investment in digital transformation initiatives within county governments.

For county governments, the study highlights how digital innovations, including e-government platforms, artificial intelligence, cloud computing, mobile applications, big data analytics, and integrated information systems, can improve operational efficiency, employee productivity, service delivery, revenue management, and decision-making processes. The findings will assist county administrators in identifying and implementing appropriate digital solutions that enhance organizational performance.

To policymakers and national government agencies, the study provides evidence that can inform the development and implementation of digital transformation policies and strategies aligned with national initiatives such as the Kenya Digital Economy Blueprint, Vision 2030, and the National Digital Master Plan. The findings can guide resource allocation and investment priorities aimed at strengthening digital innovation adoption in county governments.

Academically, the study contributes to the existing body of knowledge on digital innovation and organizational performance within the public sector. It addresses a contextual research gap by examining the relationship between digital innovation and performance outcomes in county governments in Kenya, providing a reference point for future scholars undertaking studies in digital transformation, innovation management, and public sector performance.

For citizens, the study provides insights into how digital innovation can improve the quality, accessibility, transparency, and efficiency of county government services. The findings can support initiatives that promote citizen-centered service delivery, reduce operational delays, and enhance public satisfaction through the effective application of digital technologies.

REVIEW OF LITERATURE

Diffusion of Innovation Theory (DIT)

Diffusion of Innovation Theory (DIT) was developed by Everett Rogers (1962) and later refined in the fifth edition of *Diffusion of Innovations* (Rogers, 2003). The theory explains how innovations spread and become adopted within organizations and social systems over time. According to Rogers (2003), the rate of innovation adoption is influenced by five key characteristics: relative advantage, compatibility, complexity, trialability, and observability. Innovations that are perceived as offering greater benefits than existing practices, are compatible with organizational processes, are easy to use, can be tested before full implementation, and produce visible results are more likely to be adopted successfully. The theory further classifies adopters into innovators, early adopters, early majority, late majority, and laggards, and proposes that adoption occurs through the stages of knowledge, persuasion, decision, implementation, and confirmation.

Diffusion of Innovation Theory assumes that organizations make rational decisions regarding the adoption of innovations after evaluating their expected benefits relative to existing practices. The theory further assumes that adequate communication channels, organizational support, and technological infrastructure exist to facilitate the diffusion and implementation of innovations. Successful diffusion is expected to improve organizational processes, efficiency, and overall performance by enabling organizations to utilize innovative technologies effectively (Rogers, 2003).

Despite its extensive application in studies of innovation and technology adoption, the theory has several limitations. First, it assumes that innovation adoption follows a relatively linear process, whereas implementation within public sector organizations is often influenced by institutional bureaucracy, political priorities, financial constraints, and organizational resistance to change (Muchelule, 2020). Second, the theory gives limited attention to contextual challenges such as inadequate ICT infrastructure, limited financial resources, and low digital capacity, which may constrain the implementation of digital innovations regardless of their perceived benefits (Osebe, Maina, & Kurgat, 2018). Furthermore, while DIT effectively explains how innovations are adopted, it provides limited explanation of the organizational performance outcomes that result from successful implementation. Consequently, complementary perspectives may be required to explain how digital innovation translates into improved organizational performance.

Nevertheless, Diffusion of Innovation Theory provides an appropriate theoretical foundation for this study because digital innovation represents an organizational innovation that county governments adopt to improve service delivery and operational performance. Innovations such as cloud computing, artificial intelligence, integrated information systems, digital platforms, big data analytics, and mobile government applications have the potential to transform administrative processes, improve communication, enhance decision-making, and increase efficiency in public service delivery. Counties that successfully adopt and implement these digital innovations are expected to achieve higher levels of employee productivity, improved

accessibility of public services, more efficient revenue collection, and enhanced organizational performance. In Kisii, Kisumu, and Nyamira Counties, differences in the implementation of digital innovation may therefore explain variations in organizational performance. Accordingly, Diffusion of Innovation Theory provides a suitable theoretical lens for examining the effect of digital innovation on organizational performance within county governments.

Empirical Literature Review

Digital innovation and Organizational Performance

Rubio-Andrés et al. (2024), examined how digital innovation strategy affects Spanish SME innovation and performance. The hypotheses were tested using structural equation modeling (SEM) via Smart PLS 4.0.9.9, drawing on data from 1,113 SMEs within the SABI database. The analysis revealed that digital transformation strategy (DTS) enhances organizational effectiveness across economic performance, human resource development, and internationalization. Firms focusing on DTS showed improved effectiveness, particularly through the stimulation of innovation, which was found to partially mediate this relationship. The study contributes to literature by highlighting the direct and indirect effects of DTS on organizational effectiveness, an area that has received limited attention. It also extends organizational effectiveness theory by illustrating the role of digital transformation and innovation in the SME context, where most prior research has focused on larger enterprises.

Suhari, et al. (2024), analyzed the impact of digital innovation on organizational performance through a meta-analysis of 37 journal articles published between 2016 and 2023. Employing a literature review method, they explored how digital transformation, encompassing process changes, business model shifts, and cultural adaptations, enhanced performance. Findings confirmed a significant, positive effect on efficiency, productivity, and competitiveness, though the relationship was not always linear. Factors such as organization size, industry, culture, competitiveness, technological change, and management capability moderated the impact. The study emphasized the need for organizations to tailor digital strategies to these variables for optimal outcomes. Its broad organizational focus left public sector applications, such as county governments, underexamined, indicating a research gap.

Kagendo et al. (2024) evaluated how digital organizational changes affect Kenyan commercial banks' financial performance. Positivist study based on Evolutionary Theory of Economic Change targeted 1,470 personnel from 39 commercial banks. Stratified random selection chose 315 senior, supervisory, and junior management participants. Structured questionnaires and supervisory reports were used in a descriptive study design. Using panel linear regression analysis, digital innovations explained 76% of differences in return on equity (ROE) and had a substantial positive association with financial success ($R^2 = 0.761$, $F = 822.691$, $P < 0.0001$). The report advises banks to use new technology, collaborate, and comply with regulations to improve financial performance.

Talafidaryani (2023), used a dynamic capabilities-based model to study how digital innovation affects organizational performance. To explain how digital innovation improves performance, the study proposed that dynamic capabilities specifically sensing, grasping, and transforming

mediate this relationship. These qualities allow firms to sense, seize, and transform digital possibilities to stay competitive, according to the theoretical model. The report explains how digital transformation improves organizational performance using this paradigm. Dynamic capabilities help firms maximize digital transformation value, as this study shows.

Njau & Kimencu (2022), examined how digital innovation affects Nairobi City County Kenya Commercial Bank (KCB) branches' organizational performance. Based on the Technology Acceptance Model (TAM), the descriptive study targeted 24 KCB branches and collected 96 semi-structured questionnaires. Response rate was 77.08%, with 74 valid responses. Digital innovation positively and significantly impacted performance, with a correlation coefficient of $r = .849$ and a regression coefficient of $\beta = 8.101$, $p < 0.05$. This indicates that 79.8% of performance variations in KCB branches were due to digital innovation elements. The study found that internet, mobile, and bank agent use raised income and cut expenditures. The authors advised KCB and other financial institutions to adopt digital technologies to adapt to market changes and improve performance.

Al-Husban et al. (2021), explored digital leadership's role in organizational performance in Jordanian firms. The study investigated digital innovation as a mediating variable. The study employed a survey and SEM analysis. It involved a survey of 248 senior managers. According to the study, digital leadership positively influenced performance and innovation. Digital leadership also positively influenced digital innovation, which in turn had a positive impact on performance. The study recommends that firms invest in research and design and creating an innovation culture. This study supports the previous one, but with the shortcoming of focusing on the private sector. A study analyzing digital leadership, innovation, and performance in the Jordanian government would help provide insights that are more in line with our present study. Khin & Ho (2020), investigated digital innovation's impact on SMEs performance in Malaysia. To achieve this, the study used a descriptive method. It surveyed 105 IT firms. The methodology involved a PLS-SEM analysis. They found out that digital orientation and capability positively affected digital innovation which in turn positively improved performance. Digital innovation mediated the relationship. Thus, the study pointed towards digital innovation having a positive relationship with a firm's financial and non-financial performance. The focus on SMEs provides an important insight. However, there is need for a similar study that focuses on government organizations.

Khin and Ho (2020), analyzed the effect of digital innovation on organizational performance. The study found that digital innovation mediates the relationship between digital technology, digital capacity, and organizational performance. The study used structural equation modeling (SEM) via partial least squares (PLS) to assess the suggested framework using survey data from 105 Malaysian small to medium-sized IT enterprises. Findings show that digital orientation and capability boost digital creativity. Digital innovation mediated the relationship between digital orientation, capacity, and financial and non-financial corporate success. According to the report, organizations should adopt new digital technologies and improve their digital skills to generate creative digital products and services and raise performance. This

study fills gaps in comprehension of digital innovation's drivers and role as a mediator in organizational success.

Chege et al. (2020), examined how information technology innovation affects the performance of Kenyan enterprises. ICT has enabled modern employment choices through networking sites, enabling easy interaction. ICT adoption and implementation vary based on entrepreneur creativity, which impacts technological innovations and business success. The study analyzed 240 firms and found that technology innovation greatly impacted firm performance. Entrepreneurs are encouraged to create innovative strategies and products, while the government improves ICT infrastructure to help SMEs implement technological advancements and enhance performance.

Izadi et al. (2020), examined how innovation and capacity management affect organizational performance. The study aimed to assess how intellectual and emotional assets affect marketing capacity and organizational effectiveness. Researchers conducted in-depth interviews with 35 managers and academics from international companies. The study found that digital technology adoption, employee knowledge and competency, and firm reputation significantly impact company success. This study highlights the growing importance of digital innovation and its impact on sustainability. The use of innovation and digital technology by businesses and SMEs leads to increased knowledge, competencies, and reputation, resulting in improved performance.

Mayowa, et al. (2019), investigated how Nigerian commercial banks perform better when they go digital. The study's goal was to look at the connection between commercial banks' performance and digitization. 370 non-managerial workers from a commercial bank made up the study's population. Both a survey approach and a quantitative research design were employed. The primary tool for gathering data was a self-structured questionnaire, which SPSS version 25 was used to analyze. The results showed that the performance of commercial banks and the digitalization process had a positive, mildly significant association. Additionally, there is a strong positive correlation between Nigerian commercial banks' success and product innovation.

Mutie (2018), examined how digital advances affect Kenyan government organization performance. Technical advances such system upgrades, IT innovations, digital tools, and process integration were investigated on government agency performance. The researcher collected primary data from government employees. Technological advances, system advancements, IT-based innovations, digital tools, and process integration accounted for 75.9% of government agency performance, according to the report. System development, IT innovations, digital technologies, and process integration improved Kenyan government agency performance, according to the report. Technology and digitalization need more resources to improve service delivery.

Scott, et al. (2017), analyzed the long-term impact of digital innovation on bank performance, focusing on the SWIFT financial services network. SWIFT, a network-based technological system, facilitates secure interbank communication globally. The researchers utilized

secondary data to create a longitudinal dataset comprising 6,848 banks across 29 European countries and the United States, all of which had adopted SWIFT since its introduction in 1977. The study found that digital innovation adoption significantly enhances bank performance over the long term. Consequently, the researchers recommended that banks adopt and sustain digital innovations to ensure continuous performance improvements.

RESEARCH METHODOLOGY

Research Design

This study used cross-sectional research to collect data from Lake Region Economic Bloc counties at once. This strategy is cost-effective and suitable for studying digital adoption, abilities, and strategic leadership without changing factors. Cross-sectional analysis of institutional performance and technological uptake in devolved governance allows timely comparison across departments and counties. It also statistically analyses digital infrastructure, new technologies, and public sector leadership. Previous empirical research supports this design. Masungu and Lilungu (2015) used a cross-sectional descriptive methodology to assess leadership in public service delivery in Kenyan counties, showing its potential for capturing leadership-performance indicator connections. Aggarwal and Ranganathan (2019) and Siedlecki (2020) emphasize that dependable and legitimate data gathering instruments ensure accurate descriptive research representation.

Study area

This study covered counties in the Lake Region Economic Bloc (LREB). LREB uses common resources to address regional issues like poverty, low industrialization, and inefficient public services. The Lake Region Economic Bloc (LREB) is a regional economic cooperation framework bringing together counties in western Kenya with the objective of accelerating socio-economic development through regional integration, resource sharing, economies of scale, and coordinated development planning (Kamau, 2025). The Bloc focuses on key sectors such as agriculture, trade, health, transport, tourism, and industrialization, all of which increasingly rely on digital technologies for efficiency and competitiveness. The member counties include Kisii, Nyamira, Kisumu, Homa Bay, Migori, Siaya, Busia, Vihiga, Kakamega, Bungoma, Bomet, Kericho, Nandi, and Trans Nzoia.

Target Population

This study targeted an estimated population of 3,642 executives and top management across devolved county governments in the Lake Region Economic Bloc. The study went further to purposively sample Kisii, Nyamira and Kisumu counties. These counties were purposively selected to reflect both high and low levels of digital adoption and performance diversity. Nyamira spent 72% of its development budget in FY 2022/2023 on manual systems and struggles with digital adoption and institutional efficiency (Controller of Budget, 2023). Procurement delays and limited automation in key services have plagued Kisii County (Office of the Auditor-General, 2023). Both counties report ICT infrastructure and personnel digital competence deficiencies. Kisumu County, however, has made advances in digital platforms for planning, service delivery, and public participation. Its enhanced openness and system

automation make it a good benchmark for learning how strategic leadership and digital technologies improve organizational performance across devolved units.

The population included County Executive Committee Members (CECMs), Chief Officers, Directors and Departmental Managers across functional departments central to digital governance. Its active involvement in strategic leadership, policy execution, and digital tool and service operationalization makes this group targeted. Departmental managers implement institutional direction and ICT priorities in public service processes, whereas executives and Chief Officers set them. Comparative comparison with respondents from higher- and lower-performing counties strengthens the findings' relevance to county government reforms. In this study, the unit of analysis is the individual employee or executive within the county governments of Nyamira, Kisumu, and Kisii.

Table 1: Target Population Distribution

DEPARTMENTS	LEVEL OF MANAGEMENT IN COUNTY			
	CECs	Chief Officers	Directors and Managers	Total
KISII COUNTY				
Agriculture, livestock & fisheries	1	2	18	21
Finance, ICT & economic planning	1	3	20	24
Gender, youth, sports, culture & social services	1	2	19	22
Roads, transport, public works & disaster mgt	1	1	18	20
Trade, tourism & cooperative development	1	2	18	21
Lands, housing & urban development	1	1	15	17
Education & vocational training	1	1	15	17
Public service mgt	1	3	20	24
Health services	1	1	25	27
Envt, water, energy, mining & natural resources	1	1	15	17
NYAMIRA COUNTY				
Agriculture, livestock & fisheries	1	2	24	25
Finance, ICT & economic planning	1	1	20	22
Gender, youth, sports, culture & social services	1	1	19	21
Roads, transport, public works & disaster mgt	1	1	20	22
Trade, tourism & cooperative development	1	1	22	24
Lands, housing & urban development	1	1	20	22
Education & vocational training	1	2	16	19
Public service mgt	1	1	16	18
Health services	1	1	20	22
Envt, water, energy, mining & natural resources	1	2	20	23
KISUMU COUNTY				
Agriculture, livestock & fisheries	1	1	17	19
Finance, ICT & economic planning	1	1	17	19
Gender, youth, sports, culture & social services	1	1	13	15
Roads, transport, public works & disaster mgt	1	1	17	19
Trade, tourism & cooperative development	1	1	15	17
Lands, housing & urban development	1	1	13	15
Education & vocational training	1	1	13	15

Public service mgt	1	1	15	17
Health services	1	1	20	22
Envt, water, energy, mining & natural resources	1	1	17	19
Total	30	40	537	607

Source: county government human resource department, 2025

Sampling Design and Sampling Size

According to Bryman and Bell (2017), sampling is the process of breaking down and selecting a small number of population components. Sampling is the process of choosing a subset of components that are typical of a population (Leedy & Ormrod, 2019). Focusing on a limited number of items or individuals, accelerating the process of data collection, analysis, and interpretation, and gathering pertinent data are the goals. It was conceivable that there was duplication if the entire population was included in the study. The sample should have characteristics that are similar to those of the complete population to be considered representative of the population.

Sampling frame

The sampling frame includes all population units from which the sample is drawn (Saunders et al., 2019). In this study, the sampling frame comprised all executives, managers, and senior staff across three selected county governments in the Lake Region Economic Bloc: Nyamira, Kisii, and Kisumu. These personnel were identified through official human resource records maintained by each county's Department of Public Service Management or Human Resources. The study targeted staff in core administrative and service delivery departments, including Health, Finance and Economic Planning, ICT, Roads and Infrastructure, Agriculture, Lands and Housing, and Trade. These departments were purposefully selected for their strategic relevance in county operations and active involvement in digital transformation initiatives. As Kothari (2014) emphasizes, a diverse and functionally distributed sample enhances representativeness, enabling the research to capture meaningful variations in digital adoption, strategic leadership, and organizational performance across different departmental contexts.

Sampling Procedure and Sample Size

This is a method of selecting a portion of the population selected to represent the target population for purposes of inquiry (Mugenda & Mugenda, 2013). The following Yamane's formula was used for sample size.

$$n = N / (1 + N(e)^2)$$

Where n = Sample size from the total population, N = Total population, and e = nonresponse rate: 5%.

The total target population across the three counties (Nyamira, Kisii, and Kisumu) is 607 (comprising 30 County Executive Committee Members, 40 Chief Officers, 537 departmental directors and managers) and the 70 executive members (30 CECs and 40 Chief Officers) who will be selected through purposive sampling, the remaining population for stratified random sampling becomes 537. The researcher used purposive sampling for the CECs and Chief

Officers as they were considered to have crucial information and they were directly involved in formulation of strategies and policies for the county governments.

Substituting the values:

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{537}{1 + 537(0.05)^2}$$

$$n = \frac{537}{1 + 537 \times 0.0025}$$

$$n = \frac{537}{1 + 1.3425}$$

$$n = \frac{537}{2.3425}$$

$$n \approx 229.24$$

Therefore, the sample size is approximately 229 while catering for non-response of 10% (Mugenda & Mugenda, 2003) as a buffer gave a sample size of 254 respondents. Table 2 presents the sample size distribution. Adding the purposively selected 70 executives (30 CECs and 40 Chief Officers), the final sample size is: 324.

Table 2: Sample Size Distribution

DEPARTMENTS	CECs	Chief Officers	Directors and Managers	Total
KISII COUNTY				
Agriculture, livestock & fisheries	1	2	9	12
Finance, ICT & economic planning	1	3	9	13
Gender, youth, sports, culture & social services	1	2	9	12
Roads, transport, public works & disaster mgt	1	1	8	10
Trade, tourism & cooperative development	1	2	8	11
Lands, housing & urban development	1	1	8	10
Education & vocational training	1	1	8	10
Public service mgt	1	3	9	13
Health services	1	1	9	11
Envt, water, energy, mining & natural resources	1	1	8	10
NYAMIRA COUNTY				
Agriculture, livestock & fisheries	1	2	9	12
Finance, ICT & economic planning	1	1	9	11
Gender, youth, sports, culture & social services	1	1	8	10
Roads, transport, public works & disaster mgt	1	1	9	11
Trade, tourism & cooperative development	1	1	8	10
Lands, housing & urban development	1	1	8	10
Education & vocational training	1	2	8	11
Public service mgt	1	1	8	10
Health services	1	1	9	11
Envt, water, energy, mining & natural resources	1	2	9	12
KISUMU COUNTY				
Agriculture, livestock & fisheries	1	1	9	11
Finance, ICT & economic planning	1	1	9	11
Gender, youth, sports, culture & social services	1	1	8	10

Roads, transport, public works & disaster mgt	1	1	8	10
Trade, tourism & cooperative development	1	1	8	10
Lands, housing & urban development	1	1	8	10
Education & vocational training	1	1	8	10
Public service mgt	1	1	9	11
Health services	1	1	9	11
Env't, water, energy, mining & natural resources	1	1	8	11
Total	30	40	254	324

Source: Researcher, 2025

Sample procedure

This study adopted a mixed sampling strategy—purposive sampling for senior leadership and stratified random sampling for the rest of the population. County Executive Committee Members (CECMs) and Chief Officers were selected purposively due to their policy-making roles and unique insights into strategic leadership and digital transformation. Their positions necessitated deliberate inclusion to capture informed perspectives on institutional direction and resource allocation. Directors, department heads, ICT officers, and administrative staff were sampled using stratified random sampling. Function was used to group the population for proportional representation across organizational levels. Random selection in these strata improves generalizability and reduces bias (Kara, 2015). To account for non-response, the sample was 10% larger than calculated to ensure enough respondent representation for statistical analysis.

Data analysis and presentation

This study analyzed questionnaire data using SPSS Version 25.0 and Microsoft Excel 2019. Descriptive statistics, including means, frequencies, and standard deviation summarized digital adoption, leadership, and performance variables (Saunders et al., 2019; Creswell & Creswell, 2023). Inferential analysis, specifically regression, tested hypotheses by assessing the influence of digital infrastructure, innovation, skills, emerging technologies, and leadership on organizational performance (Bryman & Bell, 2015). Findings were presented in tables and charts.

Regression Models

To examine the effect of digital innovation adoption on organizational performance, this study will test the first four hypotheses using simple linear regression equations as follows:

Objective 1: Effect of Digital Innovation on Organizational Performance

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon \dots\dots\dots i$$

Where:

- Y - Organizational Performance
- X₁ - Digital Innovation
- B₀ - Intercept
- B₁ - Regression coefficient for X₁
- ε - Error term

RESEARCH FINDINGS AND DATA ANALYSIS

Descriptive Statistics

Descriptive Analysis for Digital Innovation

Respondents were asked to indicate their level of agreement with statements relating to digital innovation using a five-point Likert scale. The responses were analyzed using mean scores and standard deviations to establish the overall level of agreement and the degree of variation in respondents' perceptions. The results of the descriptive analysis are presented in Table 3.

Table 3: Descriptive Statistics for Digital Innovation

	N	Minimum	Maximum	Mean	Std. Deviation
C1:The county actively adopts innovative digital solutions to improve service delivery.	276	1	5	2.97	1.139
C2:Digital innovations (e.g., automated systems, online services) have enhanced efficiency.	276	1	5	3.26	1.228
C3:The county's digital initiatives align with citizen needs and service delivery goals.	276	1	5	3.00	1.192
C4:Cross-departmental collaboration is supported by innovative digital platforms	276	1	5	2.78	1.163
Average Mean				3.00	1.181

Researcher,2026

The descriptive results for digital innovation indicate a moderate level of digital innovation adoption within the selected county governments, as reflected by an overall mean score of 3.00 and a standard deviation of 1.181. The average mean suggests that respondents were generally neutral regarding the extent to which digital innovation has been embraced and integrated into county operations. The moderate standard deviation indicates some variation in respondents' perceptions, reflecting differences in experiences and views regarding the implementation and effectiveness of digital innovation initiatives across departments.

The statement that *digital innovations (e.g., automated systems and online services) have enhanced efficiency* recorded the highest mean score ($M = 3.26$, $SD = 1.228$). This finding suggests that respondents generally agreed that digital innovations have contributed to improving operational efficiency within county governments. The result is consistent with Suhari et al. (2024), who established that digital innovation positively influences organizational efficiency, productivity, and competitiveness. Similarly, Njau and Kimencu (2022) found that digital innovation significantly improved organizational performance by enhancing operational effectiveness and reducing service delivery costs. The finding also supports Mutie (2018), who

reported that digital innovations and technological advancements positively influence the performance of government organizations in Kenya.

The statement that *the county's digital initiatives align with citizen needs and service delivery goals* recorded a mean score of 3.00 (SD = 1.192), indicating a neutral assessment among respondents. While some respondents perceived digital initiatives as responsive to public service needs, others appeared uncertain about the extent to which digital programs are designed around citizen expectations. This suggests that although digital initiatives exist, their alignment with service delivery objectives may not be consistently evident across all county functions.

Similarly, the statement that *the county actively adopts innovative digital solutions to improve service delivery* achieved a mean score of 2.97 (SD = 1.139). The finding indicates that respondents were generally undecided regarding the county governments' commitment to adopting innovative digital technologies. This moderate rating suggests that while some digital innovations have been introduced, the pace and scope of adoption may not yet be sufficient to create a strong perception of digital transformation. The finding partially contrasts with Rubio-Andrés et al. (2024), who found that organizations pursuing comprehensive digital transformation strategies experience significant improvements in effectiveness and innovation outcomes.

The lowest-rated statement was that *cross-departmental collaboration is supported by innovative digital platforms*, which recorded a mean score of 2.78 (SD = 1.163). This suggests that respondents generally disagreed that digital platforms adequately facilitate collaboration across departments. The finding points to potential challenges in integrating digital systems across organizational units, which may limit information sharing, coordination, and collective decision-making. Such limitations could reduce the overall effectiveness of digital innovation initiatives and hinder the realization of broader organizational benefits.

Overall, the findings suggest that digital innovation within the selected county governments has achieved only a moderate level of implementation. The strongest evidence of digital innovation is reflected in perceived improvements in operational efficiency through automated systems and online services. However, respondents expressed reservations regarding the adoption of innovative solutions, the alignment of digital initiatives with citizen needs, and the use of digital platforms to support collaboration across departments.

The findings generally agree with existing literature, which consistently demonstrates that digital innovation contributes positively to organizational performance. Studies by Kagendo et al. (2024), Talafidaryani (2023), Khin and Ho (2020), Chege et al. (2020), Mayowa et al. (2019), and Scott et al. (2017) all found that digital innovation enhances efficiency, competitiveness, service delivery, and overall organizational performance. However, the current study reveals that county governments have not yet fully realized these benefits due to moderate levels of digital innovation adoption and integration.

Descriptive Analysis for Organizational Performance

Respondents were asked to indicate their level of agreement with statements relating to organizational performance the results of the descriptive analysis are presented in Table 4.

Table 4: Descriptive Statistics for Organizational Performance

	N	Minimum	Maximum	Mean	Std. Deviation
G1: The county prepares realistic credible budgets	276	1	5	3.01	1.198
G2: Budget absorb rates satisfactory	276	1	5	2.58	1.127
G3: Own-source revenue targets are constantly achieved	276	1	5	2.59	1.186
G4: Service delivery processes have improved over time	276	1	5	2.96	1.202
G5: Complaints and feedbacks are addressed promptly	276	1	5	2.65	1.161
G6: Service standards are consistently applied across departments	276	1	5	2.82	1.096
G7: The county is well positioned to achieve its development	276	1	5	3.01	1.204
Average Mean				2.80	1.168

Researcher, 2026

The descriptive results for organizational performance indicate a generally moderate-to-low level of performance across the selected county governments, as reflected by an overall average mean score of 2.80 and a standard deviation of 1.168. Since the composite mean is below the neutral benchmark of 3.0, the findings suggest that respondents were generally uncertain or mildly dissatisfied with the effectiveness of organizational performance outcomes in the county governments. The relatively high standard deviation further indicates considerable variation in perceptions, implying uneven performance experiences across departments and respondents. The statement “*The county prepares realistic credible budgets*” recorded a mean score of 3.01 (SD = 1.198), indicating a generally neutral to slightly positive perception. This suggests that while budgeting processes may exist and function to some extent, their credibility and realism are not strongly affirmed by respondents. Similarly, the statement “*The county is well positioned to achieve its development goals*” also recorded a mean of 3.01 (SD = 1.204), indicating that respondents were moderately optimistic about long-term institutional positioning, although without strong conviction.

The statement “*Service delivery processes have improved over time*” recorded a mean score of 2.96 (SD = 1.202), suggesting that respondents were almost neutral but slightly leaned toward disagreement regarding improvements in service delivery. This implies that any

improvements in service delivery may be incremental or not uniformly experienced across departments.

The statement “*Service standards are consistently applied across departments*” recorded a mean of 2.82 (SD = 1.096), indicating a moderate perception that standardization of service delivery is not fully achieved. This suggests inconsistencies in how services are delivered across departments, which may affect equity, efficiency, and public trust in county operations. The statement “*Complaints and feedback are addressed promptly*” recorded a mean score of 2.65 (SD = 1.161), indicating that respondents generally disagreed that citizen feedback mechanisms are effective. This suggests weaknesses in responsiveness and accountability systems, which are critical components of public sector performance and citizen satisfaction. The statement “*Own-source revenue targets are constantly achieved*” recorded a mean of 2.59 (SD = 1.186), indicating that respondents generally disagreed that counties consistently meet their revenue targets. This finding points to challenges in revenue mobilization, which may constrain service delivery and development financing.

Similarly, the statement “*Budget absorption rates are satisfactory*” recorded the lowest mean score of 2.58 (SD = 1.127). This suggests inefficiencies in the utilization of allocated funds, potentially reflecting delays in project implementation, procurement bottlenecks, or weak financial management systems.

Overall, the findings indicate that organizational performance in the selected county governments is moderately weak, particularly in financial management, revenue generation, responsiveness to citizens, and efficiency in service delivery. While budgeting credibility and long-term positioning show relatively better perceptions, the remaining indicators suggest systemic inefficiencies that may hinder effective public service delivery.

These findings are consistent with existing literature that links organizational performance in public institutions to governance quality, resource management, and leadership effectiveness. Studies such as those by Paul et al. (2025) and Ali & Kinyuru (2025) emphasize that strong strategic leadership enhances budget utilization, service delivery efficiency, and institutional accountability. Similarly, Masungu & Lilungu (2015) found that leadership practices significantly influence the performance of devolved governments in Kenya through improved coordination and resource management.

However, the current findings suggest that despite existing leadership structures, performance outcomes remain constrained, particularly in financial execution and service responsiveness. This aligns with broader concerns raised in public sector governance literature that many county governments face implementation challenges even when strategic frameworks exist. Overall, the results highlight the need for strengthened financial management systems, improved accountability mechanisms, and enhanced service delivery structures to improve organizational performance outcomes.

Correlation Analysis

Pearson's Product Moment Correlation Coefficient (r) was used to examine the relationship between the study variables. In this study, it was employed to determine the extent of association between Digital Infrastructure and Organizational Performance. The results of the correlation analysis are presented in Table 5.

Table 5: Pearson Product Moment Correlation Matrix for Digital Innovation and Organizational Performance

		Digital Innovation	Organizational Performance
Digital Innovation	Pearson Correlation Sig. (2-tailed)	1	
	N	276	
Organizational Performance	Pearson Correlation Sig. (2-tailed)	.618** .000	1
	N	276	276

Researcher, 2026

Table 5 presents the Pearson correlation analysis between Digital Innovation and Organizational Performance based on data collected from 276 respondents. The results indicate a Pearson correlation coefficient ($r = .618$) with a significance level ($p = .000$), which is statistically significant at the 0.01 level (2-tailed). A Pearson correlation coefficient of 0.618 indicates a strong positive relationship between digital innovation and organizational performance. This implies that increased implementation and utilization of digital innovations—such as artificial intelligence, cloud computing, digital platforms, mobile applications, and integrated information systems—are associated with higher levels of organizational performance. County governments that effectively embrace digital innovation are therefore more likely to experience improvements in employee productivity, service accessibility, operational efficiency, and revenue collection. Conversely, lower levels of digital innovation are associated with comparatively lower organizational performance.

Regression Analysis

Effect of Digital Innovation on Organizational Performance

The objective of the study was to determine the effect of digital innovation on organizational performance in the county governments of Nyamira, Kisii, and Kisumu. To achieve this objective, a simple linear regression analysis was conducted, with digital innovation as the independent variable and organizational performance as the dependent variable. The analysis sought to establish the extent to which digital innovation predicts organizational performance and whether the relationship is statistically significant.

The corresponding null hypothesis stated that:

H₀₁: Digital innovation does not have a statistically significant effect on organizational performance in the county governments of Nyamira, Kisii, and Kisumu.

Table 6: Model Summary on Digital Innovation and Organizational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618 ^a	.382	.380	.73754

a. Predictors: (Constant), Digital Innovation

Researcher, 2026

The results in Table 6 indicate that digital innovation had a strong positive relationship with organizational performance ($R = 0.618$). The coefficient of determination ($R^2 = 0.382$) showed that digital innovation explained 38.2% of the variation in organizational performance, while the remaining 61.8% was attributed to other factors not included in the model. The adjusted R^2 value of 0.380 confirmed that the model had good explanatory power and that digital innovation was an important predictor of organizational performance.

Table 7: ANOVA on Digital Innovation and Organizational Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	92.189	1	92.189	169.476	.000 ^b
	Residual	149.047	274	.544		
	Total	241.236	275			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Digital Innovation

Researcher, 2026

The ANOVA results presented in Table 7 revealed that the regression model was statistically significant ($F = 169.476$, $p = 0.000$). Since the p-value was less than 0.05, the model was considered appropriate for predicting organizational performance. This implied that digital innovation significantly contributed to variations in organizational performance and that the relationship observed was unlikely to have occurred by chance.

Table 8: Coefficients^a on Digital Innovation and Organizational Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.088	.139		7.822	.000
	Digital Innovation	.571	.044	.618	13.018	.000

a. Dependent Variable: Organizational Performance

Researcher, 2026

The coefficient results in Table 8 showed that digital innovation had a positive and statistically significant effect on organizational performance ($\beta = 0.618$, $t = 13.018$, $p = 0.000$). This implied that improvements in digital innovation were associated with corresponding increases in organizational performance. For every one-unit increase in digital innovation, organizational performance increased by 0.571 units, holding other factors constant. The regression equation

was based on the unstandardized coefficient ($B = 0.571$), as it reflected the actual change in organizational performance for a unit change in digital innovation.

The data used in the study were not standardized prior to regression analysis because the variables were measured on similar Likert scales, making standardization unnecessary for estimating regression coefficients. However, standardized coefficients (Beta) were reported to facilitate comparison of the relative strength of predictors. Therefore, the regression equation was of the form:

$$Y = 1.088 + 0.571X_1 \text{ (Model 1)}$$

Where:

- Y = Organizational Performance
- X_2 = Digital Innovation
- **1.088** = Constant (intercept)
- **0.571** = Unstandardized coefficient for Digital Innovation

The standardized coefficient ($Beta = 0.618$) was used to assess the relative strength of the relationship but was not used in constructing the regression equation. The unstandardized coefficient was used to construct the regression equation because it reflected the actual unit change in the dependent variable, while the standardized coefficient was used for comparing the relative strength of predictors. The standardized coefficient of 0.618 meant that a one standard deviation increase in digital innovation led to a 0.618 standard deviation increase in organizational performance. This indicates a strong positive relationship, suggesting that organizations that embrace and implement digital innovations are likely to achieve higher levels of performance.

The findings are consistent with those of Rubio-Andrés et al. (2024), who found that digital transformation strategy enhanced organizational effectiveness through improved innovation, economic performance, human resource development, and internationalization. Similarly, Suhari et al. (2024), through a meta-analysis of 37 studies, established that digital innovation significantly improves organizational efficiency, productivity, and competitiveness. The current findings also align with those of Kagendo et al. (2024), who reported that digital innovations explained 76.1% of variations in financial performance and had a significant positive effect on return on equity among Kenyan commercial banks.

Further, the findings support the work of Njau and Kimencu (2022), who found that digital innovation positively and significantly influenced organizational performance in KCB branches in Nairobi County, with digital innovation accounting for 79.8% of performance variations. The results are also in agreement with Khin and Ho (2020), who established that digital innovation mediates the relationship between digital capabilities and organizational performance, leading to improvements in both financial and non-financial outcomes.

Additionally, the findings corroborate those of Mutie (2018), who reported that technological advancements, IT innovations, digital tools, and process integration significantly improved the

performance of Kenyan government agencies. The results further support the dynamic capabilities perspective advanced by Talafidaryani (2023), which posits that organizations that effectively sense, seize, and transform digital opportunities are better positioned to enhance organizational performance. Therefore, the present study confirms that digital innovation is a critical driver of organizational performance and that organizations should continue investing in innovative digital technologies, processes, and capabilities to achieve sustainable performance improvements.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concluded that digital innovation adoption within the selected county governments of Kisii, Kisumu, and Nyamira is at a moderate level. Although digital innovations such as automated systems, online services, and integrated digital platforms have contributed to improved operational efficiency, county governments have not fully leveraged the potential of digital innovation to transform service delivery and organizational processes. Challenges remain in areas such as cross-departmental digital collaboration, alignment of digital initiatives with citizen needs, and the broader adoption of innovative digital solutions.

The study further concluded that organizational performance among the selected county governments remains moderate, with notable challenges in financial management, budget absorption, revenue generation, service consistency, and responsiveness to citizen feedback. While some improvements have been observed in budgeting processes and strategic positioning, the overall performance outcomes indicate the need for enhanced systems and approaches to improve efficiency, accountability, and service delivery.

The correlation findings established that digital innovation has a strong positive and statistically significant relationship with organizational performance ($r = 0.618$, $p < 0.001$). This implies that increased adoption and utilization of digital innovations are associated with improved organizational outcomes. County governments that effectively implement digital solutions are more likely to experience enhanced operational efficiency, improved service accessibility, better communication, and stronger decision-making processes.

Regression analysis further confirmed that digital innovation has a positive and statistically significant effect on organizational performance ($\beta = 0.618$, $B = 0.571$, $p < 0.001$). Digital innovation explained 38.2% of the variation in organizational performance ($R^2 = 0.382$), demonstrating that it is an important predictor of performance in county governments. The study therefore concluded that digital innovation is a strategic capability that can significantly enhance organizational effectiveness when supported by appropriate systems, resources, and institutional commitment.

Overall, the study concluded that digital innovation plays a critical role in improving organizational performance within county governments. However, achieving the full benefits of digital innovation requires moving beyond the adoption of isolated technologies toward

integrated digital transformation approaches that promote collaboration, citizen-centered services, process automation, and data-driven decision-making. The findings support the Diffusion of Innovation Theory (DIT) and the Unified Theory of Acceptance and Use of Technology (UTAUT) by demonstrating that effective adoption and utilization of innovative technologies contribute to improved organizational outcomes.

Recommendations

Based on the findings of the study, it is recommended that county governments should strengthen digital innovation adoption by investing in innovative technologies such as integrated digital platforms, automated service systems, artificial intelligence applications, and data-driven solutions that improve operational efficiency and service delivery. County governments should also ensure that digital innovations are aligned with citizen needs and departmental objectives to maximize their contribution to organizational performance.

The study recommends that county governments enhance digital integration and collaboration by developing interoperable digital systems that enable seamless information sharing across departments. Improving coordination among departments through innovative digital platforms will enhance decision-making, reduce operational inefficiencies, and support more consistent and responsive service delivery.

Finally, county governments should develop supportive digital transformation frameworks by increasing investment in employee digital skills, strengthening ICT governance structures, and creating policies that encourage continuous innovation. Building employee capacity and establishing effective implementation strategies will ensure that digital innovations are effectively utilized to improve financial management, accountability, citizen engagement, and overall organizational performance.

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