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## Digital Workplace and Productivity: Evidence from Public Sector in Kenya

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The digital workplace is a concept of how work is done while emphasizing the utilization of current technologies to enhance productivity, communication, and user satisfaction. Embracing the digital workplace is an important step toward improving service delivery in public sector entities. Public institutions in Kenya undeniably create a conducive environment for economic development. However, public sector productivity in Kenya remains a concern, hindering socio-economic transformation, global competitiveness, and job creation. There has been a long-term decline in overall productivity from 0.45 in 2009 to 0.40 in 2022 with both labor productivity and total factor productivity falling over several decades. Similarly, data showed that the productivity of government MDAs ranges from 45% - 65% which implies the existence of wastage in the majority of the MDAs assessed. It's against this backdrop that this study assesses the effect of digital workplaces on the national productivity of public sector institutions. The study population included 433 state departments and agencies that have mainstreamed national productivity as provided by the National Productivity and Competitiveness Centre (NPCC). The unit of analysis of the study was 433 MDAs that had mainstreamed national productivity while the unit of the observations was Heads of departments of performance monitoring units in the MDAs. The formula adopted yielded a sample of 204 respondents from the target population. The study further established that digital workplace adoption was a significant driver of productivity, with the strongest direct effect among the digital dynamics components. The regression coefficient for the digital workplace was  $\beta = 0.859$ ,  $p < 0.05$ , indicating a significant positive relationship. Public institutions that implemented digital workplace technologies, such as remote working platforms, collaborative tools, and digital communication channels, recorded better employee engagement and efficiency. Digital workplace innovations support a flexible and modernized work culture, critical for addressing emerging challenges such as remote operations and hybrid working arrangements.

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## INTRODUCTION

Public institutions are responsible for providing essential services like education, healthcare, and social security. Their productivity directly impacts citizen well-being and the development of a skilled workforce. Public resources come from taxpayer dollars. Measuring productivity ensures citizens receive the best possible value for their money, minimizing waste and inefficiency (Pidd, 2022). Measuring productivity allows for comparisons between institutions and across time. This data can be utilized to identify areas of improvement and measure progress toward specified targets. Productivity measurement promotes transparency and accountability in government institutions. Citizens can better understand how their tax dollars are being used and hold their leaders responsible for efficient service delivery (Harrison & Sayogo, 2018).

The productivity of public sector institutions in Kenya remains a critical factor in achieving national development goals. While the government has made significant strides through reforms such as performance contracting, anti-corruption measures, and challenges such as corruption, bureaucracy, and inadequate human resources continue to hamper productivity (World Bank, 2019). Continued efforts to address these challenges will be essential to ensure that public institutions are productive.

In the era of digital dynamics, emerging countries like Kenya are leveraging technology to revolutionize service delivery, unlocking significant

economic potential. Digital platforms automate processes, reducing paperwork and bureaucratic hurdles. Kenya's e-Citizen portal, for instance, allows citizens to access government services like birth certificate applications online, minimizing turnaround times and increasing transparency (Ndubai, 2016).

The digital workplace is described as an institution that utilizes tools, processes, and technology to create an integrated, efficient, and collaborative work environment for its employees. According to Selimović, Pilav-Velić and Krndžija (2021), the digital workplace is a concept of how work is done while emphasizing the utilization of current technologies to enhance productivity, communication, and user satisfaction. Embracing the digital workplace is an important step toward improving service delivery in public sector entities. A digitally connected work environment has the ability to improve operations, administrative job efficiency, and automation of routine processes. Furthermore, a digital workplace encourages access to services remotely with minimal disruption and enhanced continuity. According to Elyousfi, Anand and Dalmaso (2021), coordination between different departments with an aim to improve responsiveness to citizens in a public institution can only be enhanced if there are collaboration tools and improved communication. As indicated earlier, access to data and knowledge management tools is sufficient for data-driven decision-making, effective policy formulation and tailored service delivery.

The Kenyan government has implemented several policies that significantly influence how digital dynamics impact national productivity. "The National Broadband Strategy 2018-2023" aims to expand internet access and affordability across the country. This fosters innovation, empowers businesses, and improves service delivery (Government of Kenya, Ministry of ICT, Innovation and Youth Affairs, 2018). Ajira Digital Literacy Program was also launched to capacity-build citizens with digital skills for economic growth. It focuses on basic computer skills, online safety, and using digital tools for entrepreneurship.

The government supports innovation hubs like "NaiLab" and "Husub Center" to nurture tech startups and foster a culture of digital entrepreneurship, leading to job creation and economic growth. Data Protection Act (2019) established a legal framework for data protection, promoting trust in digital platforms and encouraging business adoption of digital technologies. The Kenyan government's policies create a supportive environment for digital dynamics to positively affect national productivity. Continued investment in infrastructure, skills development, and fostering innovation will be crucial for reaping the full benefits of the digital revolution.

Government policies related to e-government initiatives influence the extent and effectiveness of digital transformation in developing countries. Zhu, Li and Shi (2024) for instance explored the role of policies in promoting digital infrastructure, cybersecurity, data protection, and regulatory frameworks. It highlighted how government policies can either support or inhibit the adoption and application of digital technology, therefore affecting productivity in public sector entities. Zhao, Teng, Arkorful and Hu (2023) further used the operating environment as a moderation variable and highlighted the importance of regulatory frameworks, funding mechanisms, and incentives provided by governments in fostering innovation

within firms. They emphasized the significance of supportive government policies in driving technological innovation, which, in turn, can enhance productivity in public sector institutions through the adoption of digital solutions.

Public sector institutions in Kenya have battled with productivity issues for a long time. Ong'era, and Musili (2019) for instance argued that excessive bureaucracy in the public sector has slowed down decision-making processes and hindered the implementation of reforms. This has led to inefficiencies, delayed service delivery, and reduced productivity. Across the different sectors, key productivity issues in public sector institutions include inadequate compensation and benefits, resistance to change, poor leadership and management, insufficient resources, and constraints on research activities (Gikonyo, 2017; Oringo & Muia, 2016). Addressing these issues requires targeted interventions such as improving compensation packages, enhancing leadership capabilities, streamlining processes, and increasing investment in resources and development programs (Kamau, 2013; Ong'era & Musili, 2019).

By centralizing and digitizing government services, Huduma Kenya has significantly reduced waiting times and the need for citizens to visit multiple government offices (Mutia, 2018). This has streamlined service delivery and improved productivity across multiple government departments. The Ministry of Lands launched the ArdhiSasa platform, a digital system for land transactions, including title deed registration, transfers, and payments (Nyangweso, & Gede, 2022). This initiative aims to eliminate inefficiencies and corruption in land administration by providing a transparent and accessible online platform for land-related services.

In all the public institutions leveraging on digital dynamics, Government policy has played a crucial role in enabling public sector institutions in Kenya to leverage digital dynamics and enhance productivity. The Kenyan government developed

the Digital Economy Blueprint policy in 2019, which outlines the vision for transforming Kenya into a digitally empowered society. This policy framework delineates a strategy for public sector organizations to adopt digital technologies, emphasizing critical components such as digital governance, digital commerce, infrastructure, innovation-centric entrepreneurship, and digital competencies. By fostering a suitable climate for digital transformation, the government enables the use of technologies that streamline operations, improve service delivery, and boost efficiency across multiple sectors.

Public institutions in Kenya undeniably play a crucial role in creating a fertile ground for economic development. However, national productivity in Kenya remains a concern, hindering socio-economic transformation, global competitiveness, and job creation. The Logiso and Mung'ale (2024) report that multifactor productivity growth (which considers labour and capital inputs) has stagnated at around 2% since independence. Further, the World Bank estimates that Kenya's labour productivity growth averaged only 1.6% annually between 1995 and 2017 (World Bank, 2020). Despite recent economic growth, Kenya's national productivity remains below its potential. This translates to a situation where the economy is producing less output for the resources invested. According to the NPCC (2023) report, the productivity of government MDAs ranges from 45% - 65% which implies the existence of wastage in the majority of the MDAs assessed. A study by KIPPRA (2023) revealed a long-term decline in overall productivity from 0.45 in 2009 to 0.40 in 2022 with both labour productivity and total factor productivity falling over several decades. By the end of the financial year 2023-2024, the National Productivity and Competitiveness Centre (NPCC) was working on productivity mainstreaming within government ministries, departments, and agencies (MDAs) to address the overall low level of productivity among government institutions.

Recognizing the challenge, the Kenyan government has undertaken several initiatives. A National Productivity and Competitiveness Centre (NPCC) was created by the Ministry of Labor to support productivity improvement strategies across public institutions. Also adopted a performance contracting system of holding public institutions accountable for achieving specific targets, aiming to improve service delivery and resource utilization and other initiatives such as e-Citizen portal, aiming to streamline government processes and enhance efficiency (Ndubai, 2016).

Research on productivity in Kenya has primarily focused on broad economic sectors or aggregate national data. Esselaar, Stork, Ndiwalana and Deen-Swarray, (2007) examined the digital divide in Sub-Saharan Africa, including Kenya. It underscored inequalities in the accessibility and utilization of digital technology, which affect economic development and productivity. However, it focuses more on access metrics rather than productivity outcomes, indicating a gap in understanding how digital dynamics impact productivity within public sector institutions in Kenya. Melo, Caldeira, Diniz and Silva (2020) examined the link between ICT adoption and firm performance in developing countries, providing insights into the productivity implications of digital technologies. However, it focused on private sector firms in Brazil, leaving a gap in understanding how similar dynamics unfold within the public sector context in Kenya.

Dawes and Cresswell (2004) also studied the relationship between digital government initiatives and public sector productivity. While it offers insights into the potential tools through which digitalization can enhance productivity, it lacks a specific focus on Kenya or other developing countries, indicating a gap in understanding how digital dynamics influence productivity in contexts characterized by unique institutional and economic challenges. Others include Nyangito and Odhiambo (2003) which focused on measuring and analyzing agricultural productivity in Kenya, Esaku (2020)

studied trade liberalization and productivity growth: a firm-level analysis from Kenya while Nyoro and Jayne, (2019) focused on trends in regional agricultural productivity in Kenya.

This demonstrated that there is a deficiency of studies specifically scrutinizing the productivity of individual public institutions hence there exist conceptual, contextual and methodological gaps among existing research. By focusing on the specific role of the digital workplace within public institutions, this research offers valuable insights to inform effective policy measures and accelerate Kenya's progress towards a more productive and competitive economy while addressing identified research gaps.

## LITERATURE REVIEW

### Theoretical Review

The study was anchored on the Diffusion of Innovation Theory. Everett M. Rogers created the Diffusion of Innovation (DOI) Theory in 1962, which explains the mechanisms, incentives, and speed with which fresh ideas and technologies spread throughout a society. The idea defines the mechanism by which an invention is propagated throughout time within a social system, emphasizing the participation of multiple stakeholders in the adoption process (Rogers, 2003). The productivity of public sector institutions directly impacts national productivity. By understanding and leveraging the principles of DOI Theory, policymakers and administrators can facilitate the adoption of digital technologies, leading to: enhanced service delivery and efficiency, improved transparency and accountability, cost reductions through streamlined processes and increased public trust and satisfaction (Greenhalgh et al., 2004).

Diffusion of Innovation Theory offers valued insights into how digital technologies can be effectively adopted within public sector institutions to enhance national productivity. By focusing on the innovation attributes, communication channels,

social system dynamics, and the adoption timeline, public sector leaders can develop strategies to overcome barriers and accelerate the diffusion of digital innovations. Despite its widespread use in understanding how innovations spread, DOI faces some key criticisms. Critics argue that DOI inherently favours innovation, neglecting potential downsides or unintended consequences. DOI's model with adopter categories (innovators, early adopters, etc.) is seen as overly simplistic. Adoption might not always follow a linear progression, and individuals can be early adopters for some innovations but laggards for others (Maharati & Entezarian, 2023).

In the framework of digital dynamics, the DOI theory contributes to understanding how digital technologies propagate and are adopted inside organizations and society. Given the rapid speed of digital innovation, understanding how new technologies are accepted can have a substantial impact on strategic planning and implementation. The theory validated the research based on three fundamentals; firstly, organizations can use the DOI model to identify which segments of their workforce or customer base are likely to adopt new technologies first and tailor their communication and support strategies accordingly (Rogers, Singhal & Quinlan, 2014). The theory further provides insights into the barriers to adoption and helps in designing interventions to support different categories of adopters. Finally, the theory guides tactics for fostering digital literacy and competence, which are required for the successful implementation of digital initiatives.

### Empirical Literature Review

The article by Casalino *et al.* (2020) explores the importance of digital competencies among civil servants and the role of digital ecosystems in enhancing the efficiency and effectiveness of working processes in public organizations. It emphasizes the need for public sector employees to have digital skills, as well as the integration of digital technologies to support better service

delivery and organizational effectiveness. The authors highlight the growing need for civil servants to acquire digital competencies due to the increasing digitalization of public services. Digital skills cover a variety of talents, including information and data literacy, communication and cooperation, digital content creation, safety, and problem-solving within digital contexts. Casalino et al. (2020) highlight the importance of digital capabilities and ecosystems in modernizing public sector enterprises. Public organizations can increase efficiency and effectiveness in their operations by providing civil servants with the appropriate digital skills and promoting interconnected digital environments, resulting in increased service delivery and national production.

Adenekan and Jimoh's (2021) study investigates the relationship between technological innovation, digital competence, and work performance among secretaries in public tertiary institutions in Ogun State, Nigeria. It tries to examine how improvements in technology and the development of digital skills among secretaries influence their job performance. The article explores the role of technological innovation in the workplace, particularly in educational institutions. According to the survey, technological developments considerably improve the efficiency and effectiveness with which secretaries conduct their tasks. Adenekan and Jimoh (2021) suggest that technological innovation and digital competence are critical variables in improving the job performance of secretaries in public tertiary institutions in Ogun State, Nigeria. By addressing the challenges and investing in both technology and skills development, institutions can significantly improve the efficiency of their administrative staff.

Malin and Perritt (2020) examine the implications of the National Labor Relations Act (NLRA) in the context of electronic workplaces, focusing on union organizing. The article addresses how traditional labour laws apply to the increasingly digital work environment and the challenges and opportunities

this transition presents for union activities. Malin and Perritt (2020) highlight the need to adapt traditional labour laws to the realities of electronic workplaces. While digital communication tools offer new opportunities for union organizing, they also present significant challenges. The authors call for updated legal frameworks to ensure that the rights of workers to organize and engage in collective activities are protected in the digital age.

Selimović, Pilav-Velić, and Krndžija's (2021) study examined the relationship between employees' expectations and intent for digital workplace transformation in the financial services sector. Using a survey-based quantitative research approach, the authors analyzed employee perceptions of digital tools and their effects on work processes. Key findings reveal that positive expectations about technology, such as improved efficiency and flexibility, significantly influence employees' intentions to adopt digital solutions. However, the report emphasizes possible problems, such as the need for robust training and support mechanisms to align staff capabilities with technological improvements. The authors conclude that understanding employee expectations is crucial for successfully implementing digital workplace transformations.

## RESEARCH METHODOLOGY

This study was thus informed by a positivistic research philosophy, which holds that reality is stable and can be objectively observed and characterized (Flick, 2018). The research collected quantitative data using rigorously prepared instruments based on significant measures scored on a Likert scale. This research utilized an explanatory design. Explanatory study design is a methodological approach focused on clarifying the causal relationships between variables. It aimed to elucidate the reasons and processes behind certain events by identifying fundamental causes and mechanisms. This study design is frequently employed to develop or evaluate ideas, offering insights into the interrelations among variables.

The unit of analysis of the study was the 433 MDAs while the unit of observations was Heads of departments, directors and supervisors of performance monitoring units in the MDAs that had mainstreamed national productivity. The study comprised a sample size of 204 respondents. The study employed stratified random sampling to

determine the sample population. Stratified random sampling was employed to ensure the representation of the MDAs while random sampling was used to ensure that all the members of the study population had an equal chance of being selected hence eliminating the selection bias.

**Table 1: Sample Size Determination**

Category	Population	Sample
Ministries	4	1
State Departments	312	147
State Agencies	118	56
Total	433	204

Source: National Productivity and Competitiveness Centre (NPCC) (2024)

Primary data was collected via semi-structured questionnaires, while secondary data was gained by reviewing relevant literature and existing records. A linear regression model was used to determine the impact that the four constructs have on the productivity of public sector institutions in Kenya. Linear regression is ideal for examining how several predictors (independent variables) simultaneously influence a single outcome (dependent variable). This is particularly critical in complex models where predictors are often interrelated (Kutner et al., 2005).

The linear regression model was as follows:

$$Y = \beta_0 + \beta_1 DW + \epsilon$$

Where:

Y= Productivity of Selected Public Sector Institutions in Kenya.

DW= Digital workplace

$\epsilon$ = error term.

$\beta_0$ = Refers to the constant.

### STUDY FINDINGS AND DISCUSSIONS

The findings indicate a very strong response rate for the survey. With 169 returned surveys out of a total of 204, the response rate was significant at 83%. This implied a high level of engagement from the target population and increased confidence in the generalizability of the research findings to the larger population under study. The findings can be extended to the full population of 433 MDAs with reasonable confidence, provided that the sample was representative and respondents were scattered throughout different MDAs.

**Table 2: Response Rate**

Response Rate	Frequency	Percent (%)
Completed and Returned Questionnaires	169	83%
Unreturned Questionnaires	35	17%
Total	204	100%

Source: Survey Data, (2025)

### Descriptive Statistical Analysis Results

The descriptive statistics in Table 3 provide insights into the adoption and effectiveness of a digital

workplace in the selected public sector institutions. The results are analyzed based on various aspects such as collaboration tools, remote work policies,

training, employee satisfaction, feedback mechanisms, and system integration.

**Table 3: Descriptive Statistics for Digital Workplace**

Descriptive Statistics	N	Min	Max	Mean	Std. Dev
Our institution regularly uses digital collaborative tools (such as Microsoft Teams, Slack, or Zoom) to facilitate teamwork and communication among employees	168	1	5	3.72	1.33
There is a strong emphasis on interdepartmental collaboration through digital platforms within our institution	168	1	5	3.76	1.39
Our institution has established and supports remote work policies, enabling employees to work from various locations using digital tools	168	1	5	3.71	1.34
Our institution provides comprehensive training and ongoing support to employees in using digital workplace technologies	168	1	5	3.79	1.25
There are effective mechanisms in place for employees to provide feedback on digital tools and systems, leading to continuous improvements	168	1	5	3.52	1.36
Employees in our institution generally express high levels of satisfaction with the digital tools and technologies provided for their work	168	1	5	3.67	1.32
Our institution has successfully integrated various digital systems (e.g., HR, finance, communication) to streamline operations and improve efficiency	168	1	5	3.70	1.36
There is significant investment in modernizing our institution's technology infrastructure to support a digital workplace environment	168	1	5	3.70	1.36
<b>Aggregate mean score</b>				<b>3.70</b>	<b>1.34</b>

Source: Survey Data (2024)

The aggregate mean score of 3.70 indicates that respondents generally agree that their institutions have made progress in establishing and maintaining a digital workplace. However, the score also reflects room for further enhancement. While the aggregate standard deviation of 1.34 showed the variability in responses which suggested that the implementation and effectiveness of digital workplace initiatives differed across institutions.

On the use of digital collaborative tools (Mean = 3.72, Std. Dev = 1.33), respondents moderately agree that digital tools like Microsoft Teams, Slack, and Zoom are regularly used for teamwork and communication, indicating a moderate adoption of

collaboration technologies. There was a slightly stronger emphasis (Mean = 3.76, Std. Dev = 1.39) on fostering interdepartmental collaboration through digital platforms. This reflects a growing focus on breaking silos and enhancing cross-functional teamwork. On remote work policies (Mean = 3.71, Std. Dev = 1.34), the results showed that public institutions have implemented remote work policies enabled by digital tools, suggesting a moderate commitment to flexible work arrangements. However, there is some variability, indicating differences in the robustness of these policies. On training and support for digital technologies (Mean = 3.79, Std. Dev = 1.25), the results showed that this aspect scores were

relatively higher, indicating that institutions prioritize training and providing ongoing support for employees to enhance their proficiency with digital workplace technologies.

On feedback mechanisms for digital tools (Mean = 3.52, Std. Dev = 1.36) this score was among the lowest, highlighting a weakness in the mechanisms for employee feedback on digital tools and systems. Improvements in this area could lead to better alignment of tools with user needs. On employee satisfaction with digital tools (Mean = 3.67, Std. Dev = 1.32), the respondents moderately agree that employees are generally satisfied with the digital tools provided. However, variability suggests that satisfaction levels may vary across departments or institutions.

On whether there was integration of digital systems (Mean = 3.70, Std. Dev = 1.36), the respondents moderately agreed that various digital systems (e.g., HR, finance, communication) have been integrated to improve efficiency. This indicates progress but also suggests the need for further optimization. The study further sought to find out whether there was investment in technology infrastructure. The results showed that (Mean = 3.70, Std. Dev = 1.36) public institutions had made moderate investments in modernizing technology infrastructure to support a digital workplace environment, reflecting a commitment to maintaining technological relevance. The findings suggest that public sector institutions in Kenya are making moderate progress in adopting a digital workplace. Key strengths include training and interdepartmental collaboration, while feedback mechanisms require significant improvement.

The finding of this study supported the finding of Casalino *et al.* (2020) who highlighted the growing need for civil servants to acquire digital competencies due to the increasing digitalization of public services. The cultivation of these competencies is essential for civil officials to proficiently utilize digital tools and technology, facilitating more efficient and responsive public service provision. Further, the study findings agreed with Adenekan and Jimoh (2021) who found that technological innovations significantly enhance the efficiency of secretaries in performing their duties. Adenekan and Jimoh (2021) assert that technological innovation and digital proficiency are essential elements in improving job performance in Nigeria. Malin and Perritt (2020) also highlight the need to adopt traditional labour laws to the realities of electronic workplaces. While digital communication tools offer new opportunities for union organizing, they also present significant challenges. The authors call for updated legal frameworks to ensure that the rights of workers to organize and engage in collective activities are protected in the digital age.

### Regression Analysis Results

The results of the model summary show  $R^2=0.708$  which implies that 70.8% of the variance in productivity was explained by the digital workplace. The high R-squared demonstrates that the model is highly effective in explaining the relationship between digital workplace and productivity in public institutions in Kenya. The ANOVA analysis confirms the robustness and statistical significance (f-statistics =403.163, p-value=0.000) of the regression model in explaining productivity in selected public institutions.

**Table 4: Regression Analysis Results**

	$\beta$	Std. Error	Beta	t	Sig.
(Constant)	0.5	0.162		3.084	0.002
Digital Workplace	0.859	0.043	0.842	20.079	0.000

  

ANOVA	Sum of Squares	df	Mean Square	F	Sig.
Regression	87.041	1	87.041	403.163	.000b
Residual	35.839	166	0.216		
Total	122.879	167			

  

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842a	0.708	0.707	0.46464

a Dependent Variable: Productivity  
 b Predictors: (Constant), Digital Workplace

**Source:** Survey Data (2025)

The coefficient ( $\beta$ ) for the digital workplace was 0.859, indicating a positive correlation between the digital workplace and productivity. p-value equals 0.000. This is below the significance level of  $\alpha=0.05$ , indicating a statistically significant connection. The positive coefficient ( $\beta=0.859$ ) indicates that improving the digital workplace leads to increased productivity in public entities. Specifically, a unit increase in Digital workplace contributes to an increase in productivity by 0.859 units, assuming all other factors remain constant. The finding of this study supported the finding of Casalino et al. (2020) who highlighted the growing need for civil servants to acquire digital competencies due to the increasing digitalization of public services. The cultivation of these competencies is essential for civil officials to proficiently utilize digital tools and technology, facilitating more efficient and responsive public service delivery.

Further, the study findings agreed with Adenekan and Jimoh (2021) who discovered that technological advancements substantially improve the efficiency and efficacy of secretaries in executing their responsibilities. Adenekan and Jimoh (2021) assert that technological innovation and digital proficiency are essential determinants in improving job performance. Malin and Perritt

(2020) also highlight the need to adopt traditional labour laws to the realities of electronic workplaces. While digital communication tools offer new opportunities for union organizing, they also present significant challenges. The authors call for updated legal frameworks to ensure that the rights of workers to organize and engage in collective activities are protected in the digital age.

The findings of the study support Diffusion of Innovation (DOI) theory. By understanding and leveraging the principles of DOI Theory, policymakers and administrators can facilitate the adoption of digital technologies, leading to: enhanced service delivery and efficiency, improved transparency and accountability, cost reductions through streamlined processes and increased public trust and satisfaction. Diffusion of Innovation Theory offers valued insights into how digital technologies can be effectively adopted within public sector institutions to enhance national productivity. By focusing on the innovation attributes, communication channels, social system dynamics, and the adoption timeline, public sector leaders can develop strategies to overcome barriers and accelerate the diffusion of digital innovations.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The study concluded that digital workplace adoption was a significant driver of productivity, with the strongest direct effect among the digital dynamics components. Public institutions that implemented digital workplace technologies, such as remote working platforms, collaborative tools, and digital communication channels, recorded better employee engagement and efficiency. Digital workplace innovations support a flexible and modernized work culture, critical for addressing emerging challenges such as remote operations and hybrid working arrangements. By adopting technologies that support remote working, collaboration, and digital communication, institutions achieved improved employee engagement, flexibility, and efficiency. The adoption of digital workplace solutions is vital for addressing modern challenges such as remote operations, hybrid work models, and employee well-being.

### Recommendations

To fully realize the benefits of digital workplaces, public sector entities need to upgrade their IT infrastructure. This includes investing in high-speed internet connectivity, cloud computing platforms, and secure remote working tools. Providing employees with access to these resources ensures continuity in service delivery and improves productivity, even during disruptions such as pandemics or natural disasters. Public institutions should integrate AI technologies to automate routine administrative tasks, optimize resource allocation, and improve service delivery timelines. For instance, AI-powered chatbots can be deployed for handling citizen inquiries, while machine learning algorithms can assist in fraud detection and compliance monitoring. Such implementations can reduce operational bottlenecks and enhance public trust in government services.

### Limitations of the Study

The key limitation that the study encountered was limited data availability. Obtaining complete and accurate data on digital dynamics and national productivity was challenging. Limited access to internal documents or inconsistencies in record-keeping was projected to hinder a comprehensive analysis. However, the study put in place mitigation measures that ensured the reliability and validity of the data was guaranteed. The study further focused on selected public sector institutions in Kenya, potentially limiting the generalizability of the findings to the entire sector. Additionally, measuring productivity within individual institutions was challenging, however extensive literature review was used to mitigate this limitation.

### Suggestions for Further Studies

Future research could focus on how emerging technologies such as blockchain, the Internet of Things (IoT), and quantum computing influence transparency and accountability in the public sector to address existing research gaps. Secondly, the cultural and ethical dimensions of digital transformation have received limited attention in existing studies. Future research could examine how digitalization intersects with cultural norms, citizen behaviour, and ethical considerations, particularly in resource-constrained or diverse societies. Such studies could focus on addressing resistance to digital adoption, privacy concerns, and the digital divide between urban and rural areas, providing insights into inclusive policy and practice design.

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