Influence of Digitization of Public Records on Service Delivery of Government Institutions. A Literature Review

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Abstract

Purpose: The aim of the study was to examine the influence of digitization of public records on service delivery of government institutions.

Methodology: This study adopted a desktop literature review. It utilized content analysis of the reviewed literature related to digitization of e-government services in public service delivery.

Findings: The study revealed that use of e-government enabled database sharing, lowered the costs of delivering services, reduced time taken to process a transaction, lead to improved management of records, eased working procedure and improved staff productivity.

Unique Contribution to Theory, Practice and Policy: The study recommends enactment of policies aimed at regulating of e-government implementation. The study also recommends that there is need for the government to ensure they have enough funds to ensure they are ready for ICT projects, good practice, effective project, coordination and change management.

Keywords: Digitization, Public Service Delivery, Records, Government Institutions

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INTRODUCTION

Reducing litigation risks, fostering accountability and transparency, ensuring compliance with regulatory standards, and promoting accountability and openness, good records management enhances the efficient and effective delivery of public services (Abuzawayda, Yusof & Aziz, 2017). According to Hoque and Sorwar (2019), a nation's ability to access and utilize records efficiently is a determining factor in that nation's potential to progress. Therefore, implementing retention and disposal schedules, international records management standards and processes; records managers can enhance their records management programs. Plans for disaster management, user-friendly classification systems, records management guidelines, and electronic records management systems that will improve public service delivery and information access. User-generated data and content have increased as a result of new technologies and rising digital adoption. Although the potential utility of this data is obvious, systems frequently have trouble making inferences and acting on the data (Ambira, 2016). These technologies are thought to be able to change how information management functions, moving information from being documented to being processed, stored, and retained (Drucker, 2013). Information systems have been successfully integrated to enhance records management in industrialized economies. To design, manage, and maintain standards in records management, the Open System Interconnection (OSI) standard has been adopted. This has increased consumer satisfaction with the services provided and enhanced service delivery efficiency (Musembe, 2016).

E-government deployment in Central Asian transition economies has not yet been thoroughly investigated (Kolko and Johns, 2010). In order to improve their efficiency and achieve greater economic growth, Central Europe and Central Asia decided to follow the path of shifting from centrally planned economic regimes to a market-oriented economy.

The e-government initiative was introduced in Indonesia before the country's laws were passed or even before it became a significant problem (Aritonang, 2017). By this time, all necessary preparations had been made, including the setup of a data center, specialized units, and physical supporting equipment. The creation of the e-government system came next. This era mostly took place in a few institutions of the central government. The Department of Finance was one of them. The central government began to consider the need to update the technology and public service equipment in all public institutions during this process. The federal government then became aware of some developed and developing nations, including Malaysia, Thailand, Singapore, and Japan, for being late. Modernizing the delivery of public services is essential to raising competitive quality. The following phase involved approving a number of national guidelines and rules as well as promoting the finest e-government implementation methods.

The creation of the Participa.br Portal is one of the new modes of public discourse made possible by Brazilian e-government (Filgueiras, 2019). The structural components of Brazilian democracy were altered by these participation and debate activities, which also increased the space for political confrontation. In order to encourage the digitalization of services, new operating procedures, and the integration of the overall the process of going digital, a national strategy for digital governance was developed. The Ministry of Planning, Development and Management was given sole responsibility for carrying out the digital transformation policy in order to increase policy consistency, system interoperability, and facilitate the numerous organizations' examination
of their processes and digitization of services. In addition to ensuring the system architecture, this digital transformation process should reinforce the Federal Government's open data policy and create a Digital Citizenship Platform.

Major determinants of electronic government preparedness include gender equality, institutional collectivism and performance focus (Khalil, 2011). The cross-cultural disparities between Kuwaiti and British users' opinions of e-government quality attributes are further explored by Hooda (2022). The analysis revealed a considerable difference between the two groups in terms of how well quality qualities were assessed to perform. Hamner and Al-Qahtani (2009) use a people-centric methodology to assess whether Saudi Arabians in general find electronic government to be acceptable. For evaluating the benefits of e-government to the public, it is essential to consider the delivery of high-quality information and services, user-orientation of those services, the effectiveness and responsiveness of public organizations, and the contributions of those organizations to environmental sustainability.

Exploiting the potential of ICT in the public sector and attaining a high coverage of the people with public services through digitization, Estonia and Poland have served as role models for other emerging nations (Kattel and Mergel 2018). For instance, Estonia, which has consistently ranked in the top 20 of the UN E-Government Development Index in recent years, has been acknowledged as a pioneering post-Soviet European nation in digital governance. The majority of transition economies, however, are still lagging behind in terms of public participation, openness, and democratic governance, according to studies of the implications of e-government for democratic processes (Kattel and Mergel 2018; Knox 2019; Johnson and Kolko 2010).

Cheah (2012) claims that Malaysia is making its statistics available to the public for review. The public trust can be increased by the government by making data freely available online. Big data analytics and information openness can improve service effectiveness and allow for the personalization of public services. The public will have the necessary information from such transparency to evaluate the government's accountability for the services provided. Internally, the public service is strong enough to start the digital transformation. Its ICT professionals are qualified, and its institutional infrastructure, technological systems, and operational procedures are well-governed online. Many digital channels to maximize citizen interaction, one-stop access to government services, and data sharing among connected institutions are all seen as crucial building blocks of an efficient digital governance. Additionally, it envisions government using innovation to become even more efficient and focused on the needs of its citizens. The DG's objective is in line with the public service's overall modernization drive as a result.

By effectively exploiting the potential of ICT in the public sector and attaining a high coverage of the people with public services through digitization, Estonia and Poland have served as role models for other emerging nations (Kattel and Mergel 2018). For instance, Estonia, which has consistently ranked in the top 20 of the UN E-Government Development Index in recent years, has been acknowledged as a pioneering post-Soviet European nation in digital governance. The majority of transition economies, however, are still lagging behind in terms of public participation, openness, and democratic governance, according to studies of the implications of e-government for democratic processes (Kattel and Mergel 2018; Knox 2019; Johnson and Kolko 2010).
In Africa, digitizing government is frequently seen as a practical and effective means to improve governance. Several governments plan to employ ICTs to improve transparency (Bertot, 2010), expedite internal processes (Distel, 2019), or change how accountability and transparency are included into the provision of public services. Public officials are required to report to those who oversee their work at all organizational levels. This refers to hierarchical responsibility, which includes public employees and organizations being accountable to the relevant authorities outside of their organizations. It is founded on the assumption that governmental entities are structured hierarchically and are politically responsible. Due to the ability to measure workflow, ICT systems can be used to monitor work processes and reveal corrupt behaviors (Machova, 2018). This explains why international organizations strongly support technological development and adoption in the public sphere on the grounds of increased transparency and effectiveness.

The necessity to improve recordkeeping procedures and deploy various electronic records management systems to better service delivery has arisen as a result of the high occurrence of poor service delivery in the land boards caused by poor records management (Ayieko & Gitonga, 2020). This is in line with Kampamba's (2019) observation that tribal land administration in Botswana has presented some difficulties for the Department of Land Boards Services. Dispersed records, which require a great deal of time to locate, incomplete registers, lost records, a lack of a common register for tribal land, poor record keeping, which causes backlogs, duplication of rights to land parcels, and improper registers over allotted land were a few of these difficulties.

Zumofen (2022) claims that Benin has generated interest in the state’s overall growth of e-government. Modernizing the public sector continues to be a top political priority. Current obstacles include drawn-out processes, the challenges of accessing to information, the delivery of ineffective services to citizens, and administrative procedures that are unsuited to a changing environment marked by the increasing influence of ICTs. The Beninese government has made it plain that the main goals of this digitization development are to increase efficiency, cut costs, and provide services of higher quality in order to address these issues. The reform is anticipated to boost leverage from actors outside of government, improve public officials’ accountability for their decisions, and lessen corruption.

In Kenya, the provision of public services is hampered by a lack of transparency, lack of accountability, corruption, traditional management structures, unfavorable working conditions, and frequently by employees who have received only a cursory education in cutting-edge information management techniques. This results in inefficiency, rigidity, ineffectiveness, underperformance, and dissatisfaction. Since this condition has affected developing nations all over the world, there has been an international effort to solve this long-standing problem (Ayieko & Gitonga, 2020). Kenya is one of the nations with major difficulties integrating records management systems within their ministries, according to Abuki (2014). According to Manyungu (2019), the country must incorporate new technology to improve record management if it is to realize its goal for 2030, which calls for improving efficiency and effectiveness in service delivery.

**Statement of the Problem**

Using online feedback forums and a legislative and regulatory framework that guarantees the security of online services, public institutions have enhanced the delivery of services. Despite the high levels of worry expressed about the networks’ susceptibility to fraudsters, service
performance had apparently improved in several sectors and the digitalization of government was helpful in battling corruption. Kenya must incorporate modern technologies to improve record keeping in all of its government agencies if it is to realize Vision 2030. In order to improve service delivery, Kenya has been leading the charge to digitize its services (Manyungu) (2019). This has helped the current investigation on the impact of public record digitalization on service delivery. This will make it easier to pinpoint the advantages and difficulties of digitalization.

LITERATURE REVIEW

Theoretical Review

Records Continuum Theory

The goal of this theory, which was developed by Marchall in 2000, is to describe the various purposes that records serve. It claims that long-term record-keeping systems must capture, manage, and maintain the integrity of records (Flynn, 2001). This theory outlines the management's responsibility in developing, utilizing, designing, and maintaining record-keeping systems as archives and offers a consistent framework and model for the records continuum. The generation of the records, capture, organization, and pluralization are the four elements that this paradigm focuses on. They interact with transactionality, evidentiality, record keeping, and identification. These interactions are crucial components of this model because they explain the many processes involved in the long-term preservation of data. As both paper and electronic data sets may be managed over a long period of time, this model can serve as the bottom line of the study (Svärd, 2013). Also, it aids in the identification of potential users of the data who would gain from their use in the future, enhancing archival systems.

This theory contends that there are many defined stages that enhance all records, challenging prior theories on record lifespan that were linear in nature. Instead, this model assumes that the lifecycle of records is continuous rather than linear. Traditional models classify records according to their phases of life, designating recent records as current records and old records as "archaic," but this model does not classify records, contending that their uses vary and can be employed simultaneously, albeit with various objectives and purposes. According to McKemmish (2010), similar records can be accessed to help with current needs and can also be used as source data by researchers. According to Atherton (1985), the stages of records management are strongly interconnected, creating a continuum where records managers, users, and archivists can all access records at various periods and for various purposes.

The continuum approach has drawn some criticism while having a significant impact on those who work in record-keeping (Svärd, 2013). McKemmish (2010) saw an increase in criticism from record managers and archivers, who may feel threatened by continuum model's impact on their professional autonomy. Additionally, they claim that this approach might be used as an excuse for businesses to restructure their record-keeping processes, perhaps eliminating some employees' jobs or functions. The theory was pertinent to this study because, according to Marchall (2000), it
places emphasis on the variety of functions that records serve and calls for the creation of record-keeping systems that capture, manage, protect, and safeguard priceless organizational records. As a result, this idea predominated the Ministry of Lands' investigation into the factors that contribute to effective land record administration systems.

Technology Acceptance Model

This model contends that there are many defined stages that enhance all records, challenging prior theories on record lifespan that were linear in nature. Instead, this model assumes that the lifecycle of records is continuous rather than linear. Traditional models classify records according to their phases of life, designating recent records as current records and old records as "archaic," but this model does not classify records, contending that their uses vary and can be employed simultaneously, albeit with various objectives and purposes. According to McKemish (2010), similar records can be accessed to help with current needs and can also be used as source data by researchers. According to Atherton (1985), the stages of records management are strongly interconnected, creating a continuum where records managers, users, and archivists can all access records at various periods and for various purposes.

Davis proposed this idea in 1989 as a theory of information systems that depicts how adoption occurs on the usage of a technology (Venkatesh & Davis, 2000). According to Davis's model, when a new technology is introduced to consumers, there are various aspects that may affect their decision to accept it based on perceived use and perceived utility (Chuttur, 2009). The degree to which users believe that using a particular system will increase their ability to execute their jobs is known as perceived utility, whereas consumers' level of belief that using the system made their jobs simpler is known as ease-of-use (Lala, 2014).

Generally speaking, the TAM postulates that people only employ emerging technologies when they believe them to be valuable and when they have a favorable attitude toward doing so (Ghazizzadeh, Lee, & Boyle, 2012). It's important to note that TAM was created expressly to comprehend how information technology is adopted and employed at work. It only explains how users respond to new technology when it is introduced and when they utilize it (Kiarie, 2013). There are numerous elements that influence how consumers of new technologies view those technologies (Adler-Milstein, 2015). This theoretical framework, which was used in our study, shows the connection between users' acceptance and perceptions of using new information recording systems; in this particular case, it showed how the employees perceived and accepted using the Information Management System that the Lands Ministry had implemented. The theory plays a crucial role in elucidating the justification for the adoption of a system for maintaining land records as well as the potential effects of various internal and external elements on the project's execution.

Empirical Review

Kiprotich (2012) studied the level of ICT preparedness and other variables influencing its adoption in the delivery of public services in the Nakuru district. A descriptive survey was used as the research design. Questionnaires were utilized in the study to collect data. A population of 196 government employees from 44 departments was used in the study. The study was founded on the principle of technological diffusion. The majority of departments appeared to be ready for the ICT
in terms of skilled employees, but the survey found that significant investment is still needed in terms of infrastructure, equipment, and maintenance staff if the e-government effort is to be fully successful as envisaged. Despite the high levels of worry expressed about the networks' vulnerability to fraudsters and the resulting need to strengthen the integrity of information management in the networks, service delivery had reportedly improved in many departments and the digitization of government was effective in battling corruption. For the country to produce innovative ICT goods that meet the nation's technological needs across all social strata and terrain and guarantee product neutrality, a sizeable percentage of the budget must be allocated to ICT research and development. There is a conceptual disconnect because the previous study concentrated on the digitization of public services, whereas the present study concentrates on already existent and operational digital public services.

Yussuf (2014) evaluated the impact of E-government information systems management methods on service delivery in Kenyan government ministries. A descriptive survey research design was used for the investigation. All of the E-government systems in Kenya's 18 government ministries made up the target population. A questionnaire was used to collect primary information. The SPSS was used to analyze the quantitative data by employing descriptive statistics. The study discovered that the ministry has a shared network computing and information infrastructure that is easily available to all employees, boosting the quality of services provided to the general public. According to the study, maintenance is one of the ISM lifecycle activities (Systemic Processes) that has a significant impact on the ministry's ability to supply services. According to the study's findings, factors including IT staff task specialization levels, application server and LAN/WAN maintenance, and IS design, planning, analysis, and specification have an impact on how well government ministries in Kenya offer services.

Abuki (2014) conducted research on county government document management practices, paying particular attention on county headquarters and how records management improves the provision of high-quality public services. To gather data, questionnaires and interview schedules were employed. The study was quantitative in nature and a case study. 5 records managers, 12 members of senior management, 28 members of action, 36 members of clerical, and 19 members of the registry made up the study sample. The county admitted that it has not adopted a records management program, that its records management staff is inadequately trained, that there is no records center, and that there is no archive for semi-current and non-current records. The equipment and storage facilities are inadequate, non-records management staff are unaware of the significance of records and the county has not embraced information and communication technologies for records management. In order to enhance and improve records management. Additionally, the county has not implemented a disaster management program, specifically for its vital records.

Okongo (2014) conducted research on the availability and use of digital information services in Kenyan academic libraries. The study's objectives are to evaluate how well the university of Nairobi library's digital information resources are accessed and used, to gauge how well patrons are aware of these services, and to pinpoint any obstacles that may stand in the way of patrons' ability to use and access these services. A descriptive survey design was used for this investigation. 96 University of Nairobi postgraduate students made up the target audience. We utilized a
questionnaire to collect information. According to the report, the majority of respondents frequently used the library to access digital information sources, mostly for writing tasks for classes. The study also showed that the majority of respondents tended to avoid seeking out librarians in the library for assistance and that most had little to no knowledge of digital services. The study found that informational deficiencies, knowledge gaps, lack of training and infrastructure were the main obstacles to obtaining and using digital information.

Kihiu (2012) examined the variables affecting the use of ICT in government offices. The purpose of the study is to evaluate the current state of the ICT infrastructure at the Ministry of Public Works and their impact on the quality of service delivery, to evaluate the level of ICT expertise among government officials for quality service delivery, to ascertain the influence of level of ICT access, usage, and expertise on quality of service delivery, to investigate the impact of risks and security concerns associated with ICT adoption on the quality of service delivery, and to examine the relationship between these factors. The findings showed that there are enough ICT facilities, however there are still some that are shared by the staff. Because there are little security access controls in place, there are many instances of unlawful access to buildings and workstations. The study found that management promotes ICT use and that ICT adoption has enhanced the delivery of high-quality services.

Okiro (2015) looked into how electronic payment methods affected the Nairobi City County Government’s ability to collect taxes. In this study, descriptive research was used. The 18 government departments in Nairobi were the chosen target population. The information was gathered from secondary sources. Both descriptive and inferential statistics were used in the analysis of the data. The study concluded that the installation of the e-payment system in revenue collection significantly improved the performance of revenue collection in Nairobi City County. According to the report, the use of the e-payment system has a favorable impact on performance in revenue collection. According to a study, the Government of Nairobi City County should make sure that all of its wards, departments, and other related units are required by law to adopt e-payment and other ensure management of revenue collection system in order to ensure total compliance to the budgets. Additionally, there should be awareness campaigns to make sure that the general public is provided with accurate information regarding e-payment revenue collection.

Mugambi (2013) investigated how e-government strategy affected the provision of services by government ministries. A descriptive survey design was adopted for the investigation. All government ministries in Kenya made up the target population for the census. Questionnaires were used to gather the information. The SPSS was used to examine the data. Tables, frequencies, and percentages were used for data presentation. The study found that using e-government facilitated database sharing, reduced service delivery costs, accelerated transaction processing, improved record management, streamlined business procedures, and raised worker productivity.

**METHODOLOGY**

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.
## RESULTS

<table>
<thead>
<tr>
<th>Author</th>
<th>Focus of the study</th>
<th>Key findings</th>
<th>Research gaps</th>
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</thead>
<tbody>
<tr>
<td>Kiprotich (2012)</td>
<td>the state of ICT readiness and other factors influencing the adoption of ICT in the public service delivery in Nakuru district</td>
<td>There is big investment gap in terms of equipment and infrastructure and maintenance personnel needed to make the e-government initiative a complete success as intended.</td>
<td>There is a conceptual gap as the study focused on the digitizing their services while the current study focusses on the already existing and functioning digitized public services</td>
</tr>
<tr>
<td>Yussuf (2014)</td>
<td>The effect of E-government information systems management practices in service delivery in Kenya</td>
<td>There is a common network computing and information infrastructure that is readily accessible to everyone in the ministry thus improving service quality to the public.</td>
<td>There is a conceptual gap as the study focused on how the information systems affect public service delivery while current study focusses on the influence of digitization of public services</td>
</tr>
<tr>
<td>Abuki (2014)</td>
<td>record management practices at the county government</td>
<td>The county has also not implemented a disaster management program especially for its vital records, the equipment and storage facilities are not adequate, there is lack of awareness on the importance of records and records management</td>
<td>There is contextual as the study focusses on the benefits and risks of cloud computing while the current study focusses on the bigger picture(impact)</td>
</tr>
<tr>
<td>Okongo (2014)</td>
<td>The extent of access and utilization of digital information services in academic libraries in Kenya.</td>
<td>majority of the respondents often used the library to access digital information resources mainly for writing class assignments</td>
<td>There is a contextual gap as the study only focused on academic libraries while the current study focuses on all the public institutions</td>
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<tr>
<td>Kihiu (2012)</td>
<td>the factors that influence the integration of ICT in government offices.</td>
<td>There are sufficient ICT facilities but still there are facilities that are shared amongst the employees. The security access measures are low and therefore cases of unauthorized access to premises and workstations are high.</td>
<td>There is a conceptual gap as the study focusses on factors while current study focusses on the influence/impact on public service delivery</td>
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## Conclusion

According to the study's findings, the e-government strategy has enhanced service delivery through online venues for customer input and a legislative and regulatory framework that assures
the security of online services. Despite the high levels of worry expressed about the networks' susceptibility to fraudsters, service performance had apparently improved in several sectors and the digitalization of government was helpful in battling corruption. The creation of record-keeping systems that capture, manage, maintain, and protect priceless organizational documents is required as digitization assures that records are useful. The application of ICTs to improve internal procedures, increase openness, or change how accountability and transparency are included into the provision of public services.

**Recommendations**

According to the study, training and awareness-raising were necessary to make sure that e-government stakeholders were better familiar with the platforms and vision in order to foster greater awareness and ownership. In order to ensure that stakeholders use ICT in the delivery of services, it is also advised that government institutions allocate and spend more money into ICT and inspire participants through rewards, ICT trainings, and engagements. The research also urges the government to make sure it has adequate resources to ensure that it is prepared for ICT projects, best practices, successful projects, coordination, and change management. Also, Kenya's government needs to enhance its IT policy.
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