The Effectiveness of Electronic Office System for Service Delivery at the Ministry of Finance, Tanzania

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Abstract

This study assessed the effectiveness of e-office system for service delivery. Specifically, it set out to examine the role of e-office in supporting e-records management for service delivery, determine organisational capacity to enhance e-office for service delivery, evaluate the challenges users of the e-office for service delivery at the Ministry of Finance (MoF) face, and suggest strategies for a more effective e-office system in public offices. The study employed a descriptive research design with both quantitative and qualitative approaches albeit with the quantitative dominating the study. Moreover, the study used interview and questionnaires from a sample of 53 staff purposively and conveniently collected. The findings indicated that the e-office has managed to enhance retrieval and use of records, movement of files from one officer to another for timely decision making and attending to organisational tasks. Regardless of such benefits, e-office factors pertaining to organisational capacity, internal and external factors associated with the system limited the effectiveness of its operations. The study found that e-office system depends on technology, ICT legal tools, digital technologies, personnel, e-records management system characteristics, and organizational capacity all of which need to be improved. As such, e-office remains a challenging technology, which requires the availability of traditional paper-based systems to backup records management practices. Implicitly, the adoption and use of e-office should not be an individual organisational strategy but as mandatory government-supported requirement for any institution seeking to improve service delivery through e-records management in Tanzania.

Keywords: E-records, e-Records Management, e-Office System, Service Delivery

1.0 Introduction

The paradigm shift from paper and analogy to e-records management began from the late 1950s to 1970s with the adoption and utilisation of information and communication technologies (ICTs) in managing records (Schoenherr, 2014). The universal need for electronic government (e-government) stems from the recognition of the need of electronic records (e-records) management as essential tool to promote good governance and service delivery (Katuu & Ngoepe, 2015). Moalthodi and Kalusopa (2016) insisted that e-records contribute to national development by supporting effective transparency and accountability in decision making. E-office systems were adopted to improve the sharing of information in promoting transparency, efficiency, accountability, and timely decision-making. These e-office systems gained its applicability in the years of 1980 (Chang'a & Mwilongo, 2022).

Developed countries such as Canada, the United Kingdom (U.K), the United States (USA) and Australia are advanced in the deployment of e-office systems through formulation of records management policies, conducive environment and resources, trained staff and effective records management systems (Malanga & Kamanga (2018). The US, for example, has been superbly effective in establishing e-office platforms in the health sector, hence the timely service delivery, according to the American Hospital Association (AHA, 2018). In the same vein, the US National Archives and Records Administration (NARA) has established the numerous e-records management platforms for managing electronic records and digital reservation strategies in public offices to prolong the life span of federal archives (Akporhonor, 2020).

In Africa, on the other hand, South Africa, Nigeria, Malawi, and Ghana established e-office systems to promote e-government; however, some of these countries particularly Kenya and Uganda have been largely ineffective due to insufficient initiatives towards modern e-office (Chang'a & Mwilongo, 2022; Malanga & Kamanga, 2018). One of the public services reforms the government of Malawi had undertaken was the creation of government website and computerise its operations (Malanga, 2016). The aim is to improve service delivery through government ministries, departments and agencies, and local authorities (Malanga & Kamanga, 2018). In Ghana, public offices faced challenges of inadequate space, shortage of storages, poor retrieval and misfiling, which led to the establishment of e-office platforms to support e-records management, with the increased use of technology-based systems to support records management having proven to be problematic (Nyampong, 2015). In another study, Ibrahim (2016) found sharing information through e-office platforms as a challenging practice since work environment and facilities are not sufficient in Uganda, particularly Mbale District where the study was conducted to support digital technologies in managing e-records in Uganda public offices.

Tanzania has established e-records on different platforms including electronic office (e-office) in public offices (Chang'a & Mwilongo, 2022). Financial institutions, educational institutions, health sector and government agencies have all established e-records management system aimed to promote good governance and service delivery (Kamatula, 2018). From 2000 to 2011, records management in Tanzania's public service faced daunting challenges that affected good governance and service delivery. These challenges included lack of space, inadequate professional staff to manage records, the lack of storage facilities, poor retrieval and access to information and backlogs of public files (Kashaija, 2022). These challenges were associated with paper records management. The Tanzania Government took the initiative of developing the National Records and Archives Management Policy of 2011 to address these challenges.

In terms of the Tanzania's policy and legal framework, the National Records and Archives Management Policy of 2011 insists on public offices deploying new technology to address the challenges to paper-based records management systems. Moreover, the Tanzania Government initiated the adoption of e-government strategy by issuing e-Government guidelines through the President's Office - Public Service Management and Good Governance in December 2017, followed by the enactment of e-Government Act No. l0 of 2019 and e-Government Authority (e-GA) to oversee e-office in public offices (Maleko, 2022). These initiatives aimed to reduce paperwork in terms of documents acquired, prepared, circulated, and preserved by public offices (Maleko, 2022). As a result, ministries,

departments, and agencies (MDAs) decided to establish an e-office and started to transfer records from paper to electronic system. The initiative to establish and e-office in Tanzania is vested in the Records and Archives Management Department (RAMD) and the electronic Government Authority (e-GA). The Ministry of Finance adopted the e-office since 2019 from the first version. The system has since been improved time to time to address some hitches, and currently version 5 is in practice.

However, regardless of the initiative of the Tanzania Government has taken to replace paper works including the establishment of e-office in MDAs, both paper and electronic records management system are still in use (Maleko's (2022) with a lot of inefficiencies. They include persistent records management challenges such as lack of space, inadequate storage facilities, a lack of security and inadequate confidentiality (Issa & Wamukoya, 2018; Kashaija, 2022; Mang'ira (2022). The implication is that the e-office has yet to bring about the desired results due to indeterminate barriers. This study, therefore, aimed to assess the effectiveness of e-office system, specifically its strength, weakness, and limiting barriers and establish a framework for effectiveness of an e-office.

2.0 Literature Review

2.1 Overview of e-office systems and e-records management

Nyampong (2015) defines e-records as records information that provides evidence of transactions in an electronic environment. According to the Tanzania National Records and Archives Management Policy (2011), e-records include information generated, distributed and stored in an electronic form. Moreover, Chang'a and Mwilongo (2022) define an e-office system as a computerised system for capturing and sharing records to improve organizational performance. An E-office aims to improve transparency, efficiency, accountability, and provide modernized working environment (Chang'a & Mwilongo, 2022). In the global north, NARA (2018) established that, a complete e-office system requires records management professionals, decision-makers or action officers and IT experts to operate the system. Akporhonor (2020) further contends that, like traditional manual record system, e-records management system support day-to-day activities through an e-records management. In this regard, the US developed the AZAEM system for managing records through records lifecycle to assist both the Records Managers and archivists to control records and archives using retention and disposal schedules (Akporhonor, 2020). In the global south, particularly in Africa, the application of ICT infrastructures such as the internet resulted to public service reform in adopting e-records management generation (Nyampong, 2015). In the study area, Tanzania established e-records on different platforms including the e-office in public entities (Chang'a & Mwilongo, 2022).Therefore, an e-office system is a comprehensive electronic office system that controls the whole e-records management process vital in enhancing organisational performance. E-office receives e-records and facilitates sharing among different users, with paper records scanned and uploaded into the system for easy usage.

2.2 Role of E-office in Supporting E-records Management for Service Delivery

E-office's electronic record management improves the provision of quality services. Systems for managing electronic documents help ensure that records are processed and sent on time (Nyampong, 2015). According to Bhartiya, Mehrotra, and Girdhar (2016), communication offices were able to make better decisions and perform better every day by exchanging e-records via an e-office. E-Office offers a solid environment for security, confidentiality, retrieval and usage, and integrity. It also offers a decent way to monitor how well users are handling pending letters and files (Chang'a & Mwilongo, 2022). According to Maleko's (2022) study on the acceptance and usage of e-offices, productivity, time efficiency, accountability, and effective operation are crucial elements that contribute to e-offices' capacity to successfully serve the public. Any electronic records management system may achieve auditing capabilities, financial benefits, efficiency, effectiveness, and adaptability (Akporhonor, 2020). In maintaining e-records for service delivery, an e-office serves as a replacement for physical labour, which is ineffectual and inefficient in the public sector. The problems associated with managing paper records, such having a lot of storage spaces, workers disseminating physical files, and inadequate retrieval, are lessened by e-records management. Without considering the risks connected with new technology in service delivery, these studies examined the return on investment of electronic records over paper record management. To provide services, this study evaluated how e-office facilitates e-records management.

2.3 Organisational Capacity for Effective Electronic Office Management Systems

The degree to which a public office can support an e-office management system depends on its organisational capabilities. According to Kamatula (2019), resources, electronic records management technologies, user training, organisational strategies for digital preservation, management support, policy and responsibility development, and adherence to guidelines provided by the International Records Management Trust (IRMT) E-Readiness tool are all necessary for the successful adoption and implementation of any e-records management system. Accordingly, the implementation of e-offices by any public office necessitates the availability of qualified personnel, funding for the development of capacity, the creation of policies, and an organisational plan for digital preservation. Chang'a and Mwilongo's (2022) study found that preserving information security requires e-record sharing inside the system to be governed by rules, guidelines, policies, standards, and principles. Users of the system should, therefore, be made aware of these tools (Pan, 2017). Moreover, helping consumers embrace the evolving technology, regular training must be provided (Kamatula, 2018). IT specialists and e-record staff should also work together to develop the system to produce a complete solution that satisfies all necessary requirements for e-record process and control (Madulu, 2016; Savolainen, 2017). In this regard, an organisation should hire skilled IT specialists and record staff to meet such needs. The adoption and use of an e-office system for maintaining e-records for service delivery is facilitated by the current ICT facilities, training, policies, resources, and legal compliance. Any effective e-office system that a company can implement depends on these characteristics.

2.4 Challenges to the Effective Operationalisation of E-office and E-records Management

An e-office has endured challenges that limit its implementation, especially in developing countries. As Akporhonor (2020) contends, "despite the changes in records management brought about by innovations and application of ICTs and their tools, e-office is yet to be felt completely in the traditional African organizational settings especially libraries and information centres" (1). Odekunle, Odekunle, and Srinivasan's (2017) study on e-office platforms found that sub-Saharan African countries confront common problems such as low level of development in technology, inadequate IT expertise, ICT infrastructures, and resources. According to Bigirimana, Jagero, and Chizema (2016) the adoption of e-office platforms have been compromised by limiting factors such as a lack of legal tools, dependence on traditional systems, poor commitment from the management, a lack of awareness, and complexity of language used in developing the tools. A study by Nyampong (2015) in Ghana found that despite the unique features of digital records, the general principles of records management are applied in the system. This situation affects the protection of content and context to ensure the authenticity, reliability, and trustworthiness of records (Nyampong, 2015).

Kamanga (2018), who assessed e-records readiness in Malawi, found the prevalence of low readiness due to inadequate and obsolete e-record products and technologies, and inadequate and poor adherence to policies, standards and procedures for e-records management practices. Additionally, Tsabedze and Kalusopa's (2018) study on a framework for effective management of e-records in Eswatini found low compliance in ministries due to lack of contemporary e-records management skills, and low capacity-building among record personnel. Also, Chang'a and Mwilongo's (2022) study on e-records guidance tools in Tanzania found that public offices were characterised by few e-records guidance tools lacking user friendliness, with employees not assured of the availability of these tools. Nyampong (2015) further stressed that public offices still practice paper filing system due to challenges affecting e-office management system. An organisation must be able to hire IT specialists and record staff who meet the necessary qualifications to meet these needs. An e-office system for managing e-records for service delivery may be adopted and used more effectively thanks to the current ICT facilities, training, policies, resources, and legal compliance. These elements determine the effectiveness of any e-office system that a company should be able to implement.

3.0 Methodology

This study was conducted at the Ministry of Finance (MoF) in Dodoma City, the country's capital located in central Tanzania. It employed the descriptive research design in which the quantitative approach dominated the study, with the qualitative approach supplementing the assessment of the effectiveness of e-office in managing e-records towards service delivery. The study used purposive and convenience sampling to draw a sample of 53 staff from the Departments of Financial and Information System Management (FIMS), Administration, Government Budgeting and Debt Management of the MoF. Specifically, purposive sampling was used to select 18 records personnel, 3 Secretaries and 2 Human Resource Officers (HROs) from administration. Also, it was convenience to pick 30

comprising 19 Information Technology (IT) Officers who, sometimes doubled as Action Officers from FIMS Department, and 11 Action Officers from the Government Budgeting and Debt Management wings.

The triangulation data collection methods integrating document review, interview, questionnaires and observation—enriched the study and made it robust in addition to improving data quality. Three interview guides (one for 2 HROs and one Action Officer; one for 1 IT staff; one for 2 records staff, and 3 secretaries) facilitated the collection of data on the role of e-office system, organisational capacity and challenges associated with operationalising e-office system. On the other hand, two sets of self-administered questionnaires (one for 18 IT Officers and 10 Action Officers, and the other for 16 records personnel) gathered data on the role of e-office system, organisational capacity and challenges associated with operationalising e-office system. Data collection tools were pretested with professional staff at the Tanzania Public Service College. Informed consent, voluntary participation, bias control and confidentiality were an integral part of research process carried out in accordance with the research protocol. Furthermore, excel spreadsheet facilitated the analysis and presentation of quantitative data descriptively and in tabular form whereas qualitative data were subjected to thematic analysis and presented in narrative form.

4.0 Results

4.1 Role of e-office in Supporting e-records Management for Service Delivery at MoF

The study examined the role of e-office from three dimensions: the state of e-office in attaining the purpose for which it was established; support e-office renders to the e-records process and control; and the level of security e-office provides for service delivery.

4.1.1 Attainment of e-office Records Management Purposes

The study intended to determine the level of achievement made by the e-office based on its purpose for service delivery. Thus, the respondents indicate the purpose for establishing e-office as presented in table one below.

Table 1: Purpose for Installing e-office at the MoF (n=44)

Reasons	Frequency	Percentage
Easy access of records	38	86
Records and file movement control	28	64
To save storage facilities	18	41
To decrease number of staff working with paper files	10	23
To save organizational space	6	14
To enhance archiving of public records	2	5

Source: Field Data (2023)

Table one shows that main purposes that led to the establishment of an e-office include easy access indicated by 38 (86%) respondents, followed by record and file movement control (64%), and saving storage facilities (41%). Moreover, the results indicate a decrease in the number of staff working with paper files, which saved organisational space, and improved archiving of public records. During an interview one respondent said,

> *"E-office was installed to improve records management from paper to electronic records in terms of saving time and space, limiting disasters affecting records like water... e-office aimed to improve records management performance, to have large quantity of records with few resources"*

In addition, the respondents indicated the extent to which e-office has managed to attain the objectives of its establishment. Table two below presents the results:

Table 2: Extent to which E-office has Achieved its Purposes (n=44)

Aspects	Above average		Average		Below average	
	F	%	F	%	F	%
Easy access of records	38	86	0	0	0	0
Records and file movement control	20	45	0	0	0	0
To save storage facilities	0	0	0	0	17	39
To save organisational space	0	0	0	0	0	0
To enhance archiving of public records	0	0	0	0	0	0
To decrease number of staff working with paper files	0	0	0	0	0	0

Source: Field Data (2023)

Results in table two show that 38 (86) of the respondents indicated that an e-office had succeeded above average in facilitating access and 20 (45%) others said it had improved above average file movement control from one office to another. On the other hand, some 17 (39%) respondents rated an e-office as below average in saving organisational space, with the security of public records attained an average level. It seems an e-office has managed to facilitate timely retrieval and access of records in addition to controlling the file movement from one office to another. One of the interviews respondents had this to say:

> *Since the system was installed in 2019 and currently we use Version 5 of the e-office; it has been assisting [us] to make information available for timely attending to tasks, timely feedback, timely decision-making…*

Furthermore, the study also sought to confirm whether an e-office system used to receive and maintain records to confirm whether an e-office has managed to work without paper system. Table three below presents the results.

Table 3: System Used to Receive and Maintain Records at MoF (n=44)

Variable	Frequency	Percentage
Both paper and e-office management system	28	64
E-office management system (e-office)	11	35
Paper records management systems	3	7

Source: Field Data (2023)

As Table three illustrates, 28 (64%) respondents identified both paper and e-office management system, 11 (35%) respondents identified e-office management system whereas three (7%) respondents indicated that paper records management system as the systems used to receive and maintain records at MoF. The results provide evidence that an e-office has not managed to work without paper records management systems. Regarding why an e-office cannot work without paper system, table four presents the responses in terms of frequency and percentage.

Table 4: Why e-office works alongside paper records management system (n=44)

Reasons	Frequency	Percentage
Both systems complement each in case Network breakdown	13	30
Some decisions are met through paper files	6	14
Some letters requires signature from responsible officers	6	14
Security and Confidentiality	6	14
Government cannot work in paperless	3	9
Some mails are received in paper form	3	9
Financial transactions like payments requires physical evidence	3	9
Paper files are recognised as evidence in Court	3	9

Source: Field Data (2023)

From table four, 13 (30%) respondents indicated that paper and an e-office system complement each other in daily operations. Six (14%) respondents indicated that some information needs were met through paper files, some letters require signatures from responsible officers, security and confidentiality issues as reasons as to why an e-office works alongside paper records management system. Also, three (9%) respondents insisted that the government cannot work in paperless; some mails are still received in paper form from public offices, and financial transactions such as payments require physical evidence, and paper records remain the most permissible evidence in the court of law.

Other reasons were also recorded during interviews. In this regard, most of the Action Officers reported preferring using paper files even though full automation of all files seemed possible. *"Most of the action officers prefer much hard copy, they don't like to use physical file, and they deal with letters physically without attaching in the system."* Another respondent said, *"Some documents need to be approved by the Minister in hard copy to provide evidence."*

In other words, the issue of permissible evidence and operational preferences of the Action Officers constituted some of the factors limiting full automation of records in the e-office system.

4.1.2 E-office support on e-records process and control for service delivery

This study also determined the role of an e-office in supporting records creation and capturing, classification, appraisal, and disposal. In this regard, the record personnel confirmed that an e-office supports the creation and capture, classification, appraisal, and disposition of records. Most (n=14, 88%) of the respondents agreed but 2 (12%) disagreed with the statement that an e-office supports the creation and capture of records. The findings show that the system has managed to support the creation and capture of records. Even though an e-system supports the creation and capturing of records, it does not provide feedback on mails sent especially when records are printed by the secretary from the system and submitted in paper form at the Record Office. One interviewee explained this anomaly, *"An e-office does not show whether the mail has been sent because it is printed in hard copy from the Secretary to the Record Office, an e-office communication ends from the office to the Secretary.*" Regarding an e-office support to the classification of records, nine (57%) of the respondents agreed that classification has been done whereas seven (43%) indicated otherwise. Interview data further confirmed that the system allows classification only after being commanded by the officer responsible, *"The system classify in terms of file subject and security being commanded by officer something which is not done automatically."*

Additionally, when the record personnel were asked to indicate the support the e-office provided in appraising and disposing public files, all the 16 (100%) respondents were non-affirmative. They insisted that the e-office did not provide support in appraising and disposing of records as per legal requirements. The same findings were reported during interview because the system did not provide the criteria for closing files with records non-transferrable from one stage to another as one aspect of disposition since the retention and disposition decisions were not set in the system, One interviewee explained this anomaly, *"...the system does not show the time to transfer or to close the file, retention and disposal decisions were not installed in the system. There are closed paper files but still are used in the system.*"

Another interviewee said,

> *"There is no criteria in the system to close a file, it is an individual decision to close. Sometimes, you may have two paper files which are closed which reflect the same file that is still used in the system. Also, there is no option of transferring records through the system.*"

These findings indicate that an e-office does not indicate the time of closing a file; moreover, there is no option for transferring files from current stage to the semi-current stage. Therefore, the complete process of controlling records from the creation stage to its disposition had yet to be attainable in the system.

4.1.3 Level of Security e-office Provides to Public Records for Improved Service Delivery

The study further determined the state of security an e-office provides in terms of confidentiality and data security. The results are as presented in table five below.

Table 5: Security Measures Available for Public Records (n=44)

Methods	Frequency	Percentage
Assigning password	34	77
Backup to paper files	31	70
Cloud computing	17	39
Appropriate storage facilities	17	39

Source: Field Data (2023)

The results show that most of the methods, which were applied to ensure security included assigning a password as indicated by 34 (77%) of the respondents, followed by paper file as backup of records in e-office system (n=31, 70%), and cloud computing and appropriate storage facilities (n=17, 39%).

Further findings on the security of an e-office came from interview data. Through interviews, the respondents provided similar divergent views on the security an e-office can provide. Some respondents reported an e-office as well-secured. As one interviewee explicated, *"Security is ensured through digital signature, login password, assigning work signature but some officers do not delegate in the system instead they pass some passwords to other people to work on behalf."* In other words, the electronic signature and password constituted one of the mechanisms for securing records in the system; however, there was another catch—some officers shared passwords to log into the system, hence making the system culpable for being comprised security-wise. Another respondent reported that records were safe since an e-office required a government network for logging in: "*The use of government network enhances security against hacking.* Another respondent further stressed the idea of an e-office security by saying, *"The system is able to classify open and confidential records and restricts access of confidential files among record personnel from open registry."* Such security measures facilitated the protection of records against unauthorised access and data loss.

Furthermore, security of records can be assured by the e-GA, which controls the server, as one of the respondents elaborated. Additionally, there was the office-managed cloud computed information: *"The full security of records in an e-office is under e-GA where the server is found, here, we just use computed information."* On the other hand, the respondents reported that, security of records was in dilemma since the system does not provide adequate mechanisms of security. One respondent questioned the use of one password for an e-office and government mail which can be vulnerable to hacking. Through interview one respondent said,

> *There are risks associated with government mail because, sometimes, you may receive mails from Gmail and Hotmail because the same password of an e-office is applied in government mails, hackers who are able to get mail password can access the system*

Another problem was related to record personnel who access their records and communication from one officer to another through an e-office. One respondent said,

> *Record Officers in the same Registry may trace a letter uploaded by another person and may be able to access their information and comments provided by Officers... and due to confidentiality matters, some of the personal files are not automated in the system, still some confidential issues are done in paper.*

This situation does not ensure confidentiality from record personnel who can access some communications**.** Another question asked was the level of security provided by an e-office; and most, 29 (66%), respondents rated the system at average level, followed by nine (20%) respondents who rated the system at above average, and 9 (14%) rated the system below average. This indicates that security of public records is at an average level. The study findings show that the security of records provided by an e-office is average.

4.2 Organisational Capacity to Enhance e-office for Service Delivery at MoF

The research evaluated organisational strategy, ICT infrastructure accessibility, and capacity building. In the initial inquiry, participants were asked to indicate whether they had received any instruction on the e-office platform. The findings show that 38 respondents (86%) said they had received e-office training, whereas eight respondents (14%) reported to have never received such training. Although IT Officers and e-GA have been offering training for new recruits and system updates, it appears that most system users had their training at the time the system was established, and few people who were employed after the system was implemented did not receive any training. During an interview, one respondent said,

> *Training was provided when the system was installed but the problem is new employees who did not get the training before, IT officers and e-GA provides training to new employees and for any new changes of the system.*

Also, the respondents provided data on the availability of any national or organisational policies and guidelines to provide a framework for an e-office system operation regarding the national policy and guidelines, 30 (69%) agreed with the availability of national policies and guidelines to guide an e-office system while 14 (31%) disagreed. One respondent said: *"We don't have any national Act, policy and guidelines relating to an e-office provided, we received Government Circular Na. 2 of 2021 which provided on e-office system in public offices only."* In the aspect of organizational policy and guidelines, most of the respondents reported that the ministry had not managed to develop any policy and guideline for an e-office system despite the directive of the PO RAMD regarding the need for the provision of such documents. Another interviewee said, *"We don't have any in house policy and guideline, but RAMD has advised the ministry to establish it.*" This concern confirmed that the MoF has not managed to establish a guideline for an e-office system. Another question asked was on ICTs facilities available to support an e-office system; the results are indicated in table six below.

Table 6: Digital Facilities Available to Support E-office (N=44)

ICT facilities	Frequency	Percentage
Internet	32	73
Computers	28	64
Scanners	23	52
Server	6	14

Source: Field Data (2023)

Results in table six show that most of the ICTs facilities available include the internet as identified by 32 (73%) respondents, followed by computers mentioned by 28 (64%) respondents, scanners identified by 23 (52%) respondents, and the server identified by six (14%) respondents. Other questions were on determining the stability and the conditions of facilities. Table seven presents the findings on the internet stability.

Table 7: Stability of electricity and internet to facilitate e-office operation (n=44)

Variable	Stability					
	Very stable		Average		Not stable	
	F	%	F	%	F	%
Electricity	25	57	19	43	0	0
Internet	15	34	26	59	3	9

Results in table seven show that the internet stability is average as identified by 26 (59%), 15 (34%) respondents indicated that the internet is very stable, and three (9%) indicated that the internet is unstable. On the aspect of electricity, 25 (57%) indicated that electricity is very stable whereas 19 (43%) indicated that the stability of electricity is average. Through interviews, the respondents reported that sometimes the internet is unstable and affects the daily operations, as attested by the following interviewee,

> *The internet is not stable because it depends to e-GA server, sometimes it cut off about three hours, and for emergency, we use paper system to work upon it and after, communication are registered in the system though the whole process will not be captured.*

MoF has managed to ensure the stability of electricity though one interview respondent said: *"The ministry has managed to put in place emergence generator but it is not sufficient to support all the departments."*

The study results revealed that electricity was stable even though the emergency generator was insufficient to support all the departments. In the aspect of adequacy and conditions of computers and scanners, interview respondent said: *"There are enough computers and scanners but most of computers are old version, we need some assistance to update the computers though new version in order to facilitate the work."* The findings show that the ministry's initiatives are to guarantee that computers and scanners are available, but they

need to replace some old version computers. The interview revealed that the MoF has good strategy known as ***paperless strategy*** to ensure all the operations are conducted through an e-office. One respondent said,

> *The ministry has established paperless strategy to ensure e-office is used effectively, for the time being, users of e-office can sign electronically, there are initiatives for stability of internet, computers and scanners.*

To some extent, the MoF can meet e-office requirements including the availability of paperless office.

4.3 Challenges Users Face in use of e-office for Service Delivery at MoF

Under this objective, the study examined the challenges users face when operating an e-office. Table eight presents the results.

Table 8: Challenges Users Face in Operating e-office

Challenges	F	%
Due to lack of guidelines, I fail to know the standards of good practices	**34**	**77**
It is difficult to capture communications in minute sheet from previous letters	**16**	**36**
Due to new technology, I find it very difficult to operate an e-office	**14**	**31**
The dashboard of the system is not friendly	**12**	**27**
Due to technology dependent, I find it difficult to get feedback	**9**	**20**
In sharing computers and scanners, it is not easy to maintain confidentiality	**8**	**18**
Instability of Internet	**5**	**11**
Lack of Training when upgrading into new version	**4**	**9**

Source: Field Data (2023)

Results in table eight shows that lack of guidelines made it difficult to capture information from the previous minute sheet, difficulties in the system itself, and the dashboard of the system made users face difficulties in operating an e-office. The interviews further unveiled the challenge of guideline, as one interviewee claimed, *"...we don't have any guideline for e-office, the government circular is limited to IT Officers, and I have never seen it because it is made available to IT Officers only."* The findings imply that most of the users of an e-office lack guidelines for practice, and the government circular is used by IT Officers. The challenge of failure to capture communications in minute sheet from previous letters was captured through an interview where one interviewee said,

> *In an e-office you cannot use one-minute sheet dealing with all mails in one file, once the mail is worked upon, we just print minute sheet and once we receive another mail we start a new communication without using the same minute sheet as per paper files.*

Also, lack of training among users of an e-office affected daily operations, which led to some of the respondents calling for more training among officers.

> *The system is not bad, but users need to be trained to get rid of some challenges. Some officers may close an assignment without initiating the feedback letter, some officers do not visit their account regularly, and they need to be reminded through their private mobile phones.*

Another challenge that emerged during the interview was lack of insufficient capacity of an e-office to allow attachments. One respondent reported, *"The system allows attachment of not more than 500kb."* Also, the ministries lack the mandate of making any changes since the system is owned by e-GA and PO-RAMD. One respondent said, "*We lack the mandate to make some changes since the system is owned by e-GA and RAMD.*" These challenges affect system users in operating e-office.

4.4 Strategies for Effective e-office for Service Delivery in Public Offices

To make the system and its operation effective, the respondents suggest some factors. Table nine presents the results:

Table 9: Factors for Effectiveness of e-office System

Factors	F	%
Regular practical training and staff awareness	34	77
Regular upgrading and reform e-office to meet all requirements	30	68
Sufficient and stable ICTs infrastructures	29	66
Developing and implementing organizational and National policy and guidelines	27	61
National awareness and enforcing the use of e-office (MDAs and LGAs)	25	57
Strengthening security measures	14	31
Financial support from the government	3	9
Timely communication for any new changes	3	9
Installing time limit to work on a particular assignment or file	3	9

Source: Field Data (2023)

As table nine illustrates, frequent staff awareness and practical training, regular e-office reform and upgrade to fulfil all requirements, sufficient and modern ICT infrastructure, creation and execution of organisational and governmental policy and guidelines were the reported factors for the effectiveness of an e-office System. The respondents' main recommendations were to raise national awareness and make the installation of e-offices in all MDAs and LGAs mandatory. Since training has an impact on many activities, it recommended to be mandatory. During the interview, participants highlighted the need for security and confidentiality training, managing emails inside the system, and enhancing the ability of all users to make some changes on their own without the help of IT Officers. One respondent said: *"Training should be provided to officers dealing with files, to ensure*

confidentiality, and tackling some changes without consulting IT Officers." In order to make regular upgrading and reform to the e-office to meet all the requirements such as business requirements and other organisational productivity tools and evaluation, there is a need of increasing capacity of attaching documents from 500kb to 1000kb and productivity tools on dashboard. One respondent said,

> *The system should be upgraded to meet business requirements and link e-office with other productivity tools. ... Capacity to attach documents should be upgraded to at least 1000kb, and dashboard should be improved by adding productivity tools.*

Further, the system should be updated to meet all the records management system features whereby all the files should be captured by the system, security measures, retention schedule, and file movement control tools to ensure records are processed and controlled. One interviewee said: *"To make e-office effective, all qualities and characteristics of any records management system should be captured by the system, and all files should be created and maintained in the system."* Sufficient and stable ICTs infrastructures such as computers, the internet, electricity and other digital technologies should be put in consideration. One respondent said: *"We need updated computers, regular maintenance of ICT facilities, stability of Internet, and to have strong standby generator to supply adequate electricity.*" Another factor worth noting was availability and use of both national and organizational guidelines to provide a framework for the e-office system. The organizational tools were cited the most by respondents since they believe that the tools could enforce some officers to use the e-office and limit users' actions. One respondent reported, *"...We need to have internal policy, guidelines, rules and regulations to enforce all officers to use an e-office in the given directives."* Furthermore, the respondents suggested that the government of URT should enforce all public offices to adopt and use an e-office since the government cannot shift to paperless system while some public offices are still sending letters through postal office. One interviewee said,

> *The government should enforce the use of an e-office all over the country, we should have a paperless government policy to support this initiative. The government should facilitate the whole country to ensure an e-office is used even in LGAs because most written communications are still made through postal office.*

Furthermore, the respondents provided data on the improvement of security measures, support from the government, timely communication for any new changes from e-GA and installing time limit to work on a particular assignment or file reported among Action Officers who deal with file in unlimited time.

5.0 Discussion

Data were discussed objective-wise from the role of an e-office in supporting the e-records management for service delivery; determining organisational capacity to enhance e-office at MoF; identifying challenges facing users in e-office at MoF to developing a framework for effective an e-office system in public offices

Firstly, it is observed that most of the respondents indicated that an e-office system has not managed to attain all the reasons for its establishments. It has managed to support easy

access of records and control of file movement from one office to another. The E-office assists the availability of information for timely decision making and tasks accomplishments. Maleko (2022) demonstrated that electronic offices (e-offices) enhanced productivity, efficiency, and ease of use. The anticipated degree of staff reduction in the use of paper files has not yet been reached, nevertheless. Because of this, both manual and electronic office systems are in use. According to the respondents, e-offices are unable to function freely because of unavoidable tendencies such as system interdependence, the preference for paper files in some choices and approvals, the need for physical signatures on some letters, and security and confidentiality concerns. Public employees continue to hold the view that paper-based transactions are necessary for government operations since courts and most financial transactions need it. These tendencies are major obstacles to fully automation of public offices.

Secondly, regarding the e-office support on e-records process and control for service delivery, it was discovered that as per ISO 15489 (2016), an e-office helps with record production, capture, and classification to a certain extent. As reported by the respondents, while the technology makes it possible to catch mail, some letters are not collected because personal secretaries print them, and other letters are received through postal offices and need printing and scanning. Classification needs to be ordered by the competent official; it is not done automatically. These findings demonstrate how e-offices continue to capture and categorise information in conjunction with manual methods. All the respondents reported that because retention and disposal schedules were not set up in the system, the e-office did not offer the criteria for evaluating files and moving from the current to the semi-current stage. Since some files are closed on paper even if they are still valuable in the system, this has an impact on the entire process. As a result, an e-office has not been able to independently oversee and assist the e-records management process.

Thirdly, regarding security provided by e-office to public records, it was discovered that at the MoF, password assignment, electronic government networks, paper file backups, cloud computing, digital signatures, and suitable storage facilities were the most often utilised security measures. Because the same password is used to enter onto government mail and e-offices, where respondents expressed fear of hacking using government mail, these safeguards are insufficient to maintain secrecy. Furthermore, there were no reliable controls in place to prevent some record staff from accessing personal data stored in the system. The Public Service Standing Order of 2009 stipulates that public servants are not permitted to obtain information on themselves, which conflicts with this circumstance. Users of the e-office system were losing faith in the system's security and confidentiality because some of them thought that e-GA controlled the server, and that security was dependent on measures the company had put in place. To maintain security and secrecy, certain private files were not loaded into the system. Additionally, since the paper records management system is utilised as a backup to control risks related to the e-office, the security of records cannot be guaranteed above average.

On the second objective which sought to assess the organisation capacity to enhance e-office for service delivery, it is found that, consistent with Kamatula (2019), we argue that for effective use of e-office, MoF has to be ready with ICT resources, legal instruments, and capacity building. The MoF's results show that training has been scheduled since the system was put in place, but it was not enough for every user to work with an e-GA and

PO-RAMD, which the government required to coordinate the e-office. Respondents who get training can use the system and become aware of new applications. A similar level of accomplishment was obtained in ICT facilities with decent PCs and scanners, internet access, and energy access, but with mediocre stability. There were signs of internet instability since on certain days there was a three-hour cut-off, which caused everyday activities to stop. ICT resources and trained personnel have contributed to keeping the e-office running smoothly daily to enhance service delivery. The MoF has not been able to establish the anticipated legal toolkit. As Chang'a and Mwilongo (2022) argue, to preserve content security, an e-record sharing inside the system should be governed by rules, processes, standards, principles, and laws; nevertheless, MoF chose not to utilise them. The findings concur with the findings in as study by Chang'a and Mwilongo (2022), who found that the presence of a few unintuitive guiding aids had an impact on e-offices.

On the third objective which sought to discuss on challenges facing users of e-office for service delivery at MoF, it was found out that the guidelines to benchmark their practices fell short when operating an e-office. Also, the technology used to install an e-office does not support internal communication procedures. The system does not allow capturing previous information of last folios since after communication minute sheet is printed for next folio it starts afresh. Insufficient training especially for new versions and sharing some computers are in position to breach confidentiality, and failure to provide feedback among officers. Because of the unfriendly e-office interface, the dearth of productivity tools, and the limited room for attaching large documents, several users found the system unsettling. Users further said that because document libraries are not operating efficiently and PO RAMD and e-GA have the whole mandate, the system prevents staff from making certain adjustments. These difficulties have an impact on record protection. Similar findings are reported in a study by Nyampong's (2015) exploration, which said that e-records management system's problems impact the context and content protection necessary to guarantee the veracity, validity, and trustworthiness of records. On the other hand, because the e-offices rely so largely on these resources, everyday activities are impacted by the internet and electrical instability. Because of these difficulties, manual systems have to be employed to fulfil business objectives. As Nyampong (2015) noted, public offices continue to utilise paper file systems in their daily operations because of the difficulties resulting from using e-offices.

Regarding the fourth objective on strategies for effective e-office service delivery in public offices, it was discovered that Tanzania's e-office systems are dependent on several factors, including human resource, digital technologies, ICT legal instruments, e-records management system features, and organisational capabilities. Employees' training is essential to ensuring efficacy and efficiency. Maintaining integrity, dependability, security, systematics, and comprehensiveness of an electronic records management system requires complete system integration (ISO 15489, 2016). Acts, policies, rules, guidelines, and standards are examples of legal instruments that help define best practices and restrict unethical practices. The government ought to guarantee the development of capacity and reliable ICT infrastructure, including power, computers, and the internet. Laws requiring the adoption and usage of e-offices must also be enacted since public offices rely on one another for communication. As required by the corresponding Acts for Tanzanian records management, PO-RAMD and e-GA will work together to accomplish these goals.

6.0 Conclusion and Policy Implications

An e-office is still a difficult technology, and to support records management procedures in service delivery, traditional paper solutions must be available. Moreover, physical records must be used to meet digital difficulties and provide better services, digital measures to improve the efficiency of e-offices, including frameworks for legislation, digital technology, and capacity building. The adoption of e-offices was a smart approach, but because of gaps in technology, users, policies, records management needs, and the system itself, public offices have not yet reached the intended aim. Paper document management solutions should take into consideration the compensation for the e-office shortcomings now. Thus, the current study offers a new perspective important on the successful implementation of e-offices in public offices. Given this conclusion, we recommend that, to meet the digital needs in record production, maintenance, and disposal, a paper-based system is required. The adoption and use of e-offices nationally is required to overcome these challenges. If organisations want to enhance service delivery by using electronic records management, the government needs to require them to set up electronic offices. National legislative framework development and insistence on organisational policies and norms are two ways of doing this. The installation of e-offices and expansion of user capacity require sufficient budget allocated to PO-RAMD and e-GA. The public service sector can benefit from increased capacity building through partnerships with educational establishments such as Tanzania Public Service College.

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