Record Management Technology and Information Service Delivery at the Land Registry in Nyandarua County, Kenya

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Abstract

Kenya's devolved government established by the 2010 constitution places land management and administration under county government to take information services closer to the general public. Therefore, this function is a key duty of the Department of Lands, Housing, and Physical Planning in most Counties in Kenya. Previous studies reveal that most land registries cannot deliver efficient customer information services. This research aimed to determine the extent to which institutional factors enhance information service delivery at land registration in Nyandarua County. It mainly focused on improving information service delivery through record management technology. New Public Management Theory grounded this study and adopted the descriptive survey research design. The target group included all 53 staff working in the land registry: 19 land administration, four housing, 17 surveys and mapping, 12 physical planning personnel, and the county land registrar. Data was collected using questionnaires and an interview guide. To address the validity and reliability of the research instruments, a pre-test was conducted. SPSS was used to analyze the quantitative data, where descriptive and inferential statistics were employed to summarize information and test hypotheses, respectively. The thematic method was used to analyze the qualitative data. The study found that the operations at the Nyandarua land registry were still manual. This resulted in sluggishness in the delivery services, inaccuracies, poor record storage practices, poor efficiency and effectiveness in service delivery, client dissatisfaction, and lack of remote access to services. The Land Registrar in partnership with the County administration should buy and install relevant records management technology at the Nyandarua land registry to improve information service performance. The study underscored the essence of embracing records management technologies in enhancing information service delivery in land registries.

Keywords: *Records management technologies, land registry, land records, service delivery, Nyandarua County*

1.0 Introduction

The land is a valuable asset. Many people rely on the land to satisfy their current land-related needs (Kopnina, 2017). As a result, land management, adjudication, and surveying necessitate the careful maintenance of records. Kenya's decentralized government, established by the 2010 constitution, places land management and administration in the hands of county administrations. This has provided county land registries in Kenya with a solid incentive to bring land information services closer to ordinary individuals (Mung'ale et al., 2021; Wagunya,

2018). However, providing information services has remained difficult for many governments worldwide (Lopes et al. (2017).

Service delivery in land registries refers to providing intangible and tangible information services relating to land concerns to citizens in a timely, convenient, and cost-effective manner to meet customers' land demands (Bel et al., 2014). It culminates in providing direction, assistance, response, action, or activity to a needy individual, leaving them satisfied (Maina, 2016). The benefits of quality service delivery by a public institution, such as land registries, are invaluable. Among these is the ability of ordinary citizens to obtain satisfaction from their land information requirements (Hossain, 2015). Satisfactory service delivery demonstrates the government's efficiency and effectiveness (Hilhorst & Meunier, 2015).

Improved land information service is indicated by the simplicity with which services may be accessed, the efficiency of information services, and the quality of services, all of which lead to customer satisfaction (Gurung et al., 2015). On the other hand, poor service delivery is frequently characterized by a neglect of people's requirements, delays in service delivery, and difficulties accessing the many services provided by government organizations. Other concerns highlighted as barriers to service delivery by government agencies include a lack of openness and accountability in service delivery, poor service quality, and service delivery delays (Bel et al., 2014; Blair, 2018; Mansoor & Williams, 2018).

To address the issue of poor service delivery in the public sector, governments worldwide are implementing a digital strategy (Blair, 2018; Mansoor & Williams, 2018). Digitization of land records provides numerous benefits, including easy and faster access to records for researchers, allowing multiple users to access records simultaneously, saving storage space in offices, saving time searching for paper records, backup disaster recovery, and record safety, and saving maintenance costs on hardware reader/printers. It is also a strong deterrent to corruption and other property-related fraud since it provides a speedier and more reliable method of verifying land ownership and transactions (Aditya et al., 2021).

In Kenya, the issue of land administration is handled by National Land Commission. The commission played a role in operationalizing the devolvement of land function to the county governments. Therefore, the issue of land administration and related services in county governments are provided through the Department of Lands, Housing, and Physical Planning. Notably, the Kenya National Government adopted Land Information Management (LIMS) in land management and administration through the Ministry of Lands. However, the roll-out of the same to all land registries in the county governments was yet to happen.

Problem statement

In the long term, effective information service delivery in land registries typically leads to better land administration, legitimate possession, Management, usage, good governance, and economic growth. The government has used technology in Kenya to improve service delivery by automating and digitizing operations through the Ministry of Land and Natural Resources (Mwanza, 2018; Wagunya, 2018).

Apart from taking services near the public, the devolvement of the land function and administration was expected to facilitate efficiency and effective service delivery to clients. Despite the government's continuous investment, measures, and effort to eliminate redundancies in land registries, multiple previous studies reveal that most land registries cannot satisfy their clients, who often complain about poor service delivery (Kimenyi, 2004; Wangondu & Winfred, 2018). According to a Land Development and Governance Institute (2021) assessment, land registry customers are unsatisfied with the information services that

the majority of county land registries. Notably, many counties, including Nyandarua County, have continued to use manual processes for record administration and service delivery (Kariuki et al., 2018; Eric, 2019). This usually results in delays in the provision of information services to clients (Kariuki et al., 2018; Eric, 2019). Other issues include corruption, difficult processes for obtaining information services, and sluggishness among employees. This raises concerns about the implementation and efficiency of record management technology in assuring the delivery of high-quality, efficient information services. Several scholars, including Wangondu and Winfred (2018), Wagunya (2018), Juma (2013), Mulenga et al. (2018), and Kamau (2020), have investigated various strategies to improve public service delivery; however, no researcher has specifically investigated record management technologies as a strategy for information service delivery at land registry in Nyadarua county, thus this paper.

Purpose of the study

As a result, this article aimed to explore the implementation of record management technologies to improve information service delivery at land registration in Nyandarua County.

The hypothesis of the study

H_0: Record management technologies do not affect information service delivery at the land registry in Nyandarua County.

2.0 Literature Review

Overview of literature on record management technology and information service delivery

The new public management theory informed a deeper understanding of record management and information delivery (Hood & Jackson, 1991). The theory clarifies what it takes to achieve efficient information service delivery. The theory argues that service delivery in the public sector may be achieved by accepting different techniques, such as focusing on customers and utilizing ICT technology in performing organizational operations. This ideological framework is informative and beneficial in evaluating records management technologies since it explicitly expounds on the procedures that should be in place, such as implementing land records information systems.

In the public sector, competent record management is crucial to improving the efficiency and effectiveness of public service delivery. Record management technologies involve using technology such as computers and the internet in the record management process, including production, storage, retention, destruction, and access to records (Masenya, 2020). Many firms are struggling to maintain their records; thus they have increasingly adopted new technologies such as blockchain, cloud computing, and the Internet of Things (IoT) to accomplish this (Masenya, 2020).

The significance of record management technology in improving service delivery has sparked substantial scholarly interest in many nations worldwide. Ack, Ramirez, and Marin (2020) investigated the efficacy of the Ministry of Natural Resources Land Registry Department's land folio information system in Belize. Ack, Ramirez, and Marin (2020) rated the system's success to be above average. Related research looked into how land records were managed in India (Mishra and Suhag, 2017). The analysis showed that land records were scattered across many agencies and were poorly maintained. To address this issue, a plan advocating for the modernization and digitization of land records was developed.

To increase the speed and efficiency with which government services are delivered, the services provider, according to Kulcu (2009), needed to shift to an electronic environment since it decreased management expenses. In a study conducted in Ghana, Tagbotor et al. (2015)

highlighted that record management utilizing computers and the internet allowed for rapid access and retrieval of records and reduced errors and mistakes that might harm the institution's reputation. Furthermore, an electronic record management system solved the issue of lengthy processes and insufficient record documentation. Ameyaw and de Vries (2021) concluded that adequate record management systems boosted organizational performance.

Studies done in Kenya reported similar results to other studies done worldwide. Moemi (2015) observed in his study that manual systems were becoming less viable for everyday land registry activities. Omboti, Chepkilot and Tanui (2019) investigated the use of ICTs in simplifying record storage and retrieval at the Nairobi City Council. The research found that the bulk of the records was in paper form, implying that ICTs technologies had not been completely integrated into record management.

Abuki (2014) recognized the adoption of information and communication technology as a problem that must be addressed to enhance record management and hence improve service delivery in the public sector. As a result, the current study studied the effect of implementing ICTs technologies on service delivery in Nyandarua County, focusing on the land registry office.

3.0 Methodology

The study adopted a descriptive survey research design. It was carried out in Nyandarua County land registry in Kenya. It had 53 respondents from the land administration (19), housing (4), survey and mapping (17), and physical planning (12) staff, as well as (1) county land registrar. Questionnaires and interviews were used to collect data for the study. The suggested instruments were piloted at the Nyeri County land registry, where ten land registry administrative staff and one county land registrar were issued with them. Piloting was required to confirm the study instruments' validity and reliability. The Cronbach alpha value was used to determine the reliability of the principal data collecting tool. SPSS was used to analyze quantitative data, where descriptive statistics were computed. The thematic analysis was used to assess qualitative data. Tables and identified themes and categories were used to display the findings.

4.0 Results and Discussions

Response rate

The study's reliability test results showed a Cronbach's Alpha score greater than 0.7. This implies that the information gathered was trustworthy. Fifty-two, 52 of the 53 questionnaires distributed to land registration workers were returned, representing a 98% response rate. Nyandarua County's land registrar was also available for the interview.

Finding information service delivery at the land registry

The dependent variable in this study was information service delivery at the Nyandarua lands registry. Respondents presented several sentiments, and they were asked to indicate their answers to each. During the interview, the Land Registrar provided clarification and explanatory material. The replies are summarized in Table 1.

Table 1: Information service delivery

Statements on information service delivery (N = 52)	SD(1)	D(2)	N(3)	A(4)	SA(5)
• There is no sluggishness in the way services are offered at Nyandarua land registry	2 (3.8%)	23 (44.2%)	19 (36.5%)	8 (15.4%)	0 (0%)
• Customers have not been complaining of inconsistencies at the Nyandarua land registry	2 (3.8%)	20 (38.5%)	19 (11.6%)	11 (21.2%)	0 (0%)
• There are no gaps in information service delivery at Nyandarua land registry	2 (3.8%)	23 (37.2%)	19 (11.6%)	8 (17.4%)	0 (0%)
• There are no cases of misplacement or misfiling of records at Nyandarua land registry	3 (5.8%)	33 (63.5%)	10 (19.2%)	6 (11.5%)	0 (0%)
• Customers have not been complaining of dissatisfaction in the manner in which they receive services at the Nyandarua land registry	2(3.8%)	28 (53.8%)	15 (28.8%)	7 (13.5%)	0 (0%)
• Implementation of records management technologies has enabled staff to improve information service delivery at the Nyandarua land registry	13 (25.0%)	33 (63.5%)	4 (7.7%)	2 (3.8%)	0 (0%)

Table 1 shows the condition of service delivery in Nyandarua County's land registry. According to Table 1, twenty-five, 25 (48%) of personnel stated that there was some sluggishness in the manner services were provided at the Nyandarua land registry. There were also apparent gaps in the way information services were offered, as noted by 25 (41.0%). Customers had complained about inconsistencies at the Nyandarua land registry and were displeased with the method they were obtaining information services, according to a sizable number of land registry workers, 22 (42.3%).

Furthermore, misplacement or misfiling of records at the land registry was noted and was inconveniencing customers, as mentioned by two-thirds of employees (36 (69.3%). According to Brauley (2016), consumers' opinions and degree of satisfaction with their demands were unfavorable; hence the value and quality of service delivery were deemed wanting.

Other areas of weakness identified in Table 1 and indicated by two-thirds of personnel were recorded management technologies to assist the enhancement of information services at the Nyandarua land registry. The Land Registrar also recognized deficiencies in service delivery procedures related to information technology systems. According to the findings, the quality of information service delivery was lacking.

Records management technology and information service delivery

The primary goal was to examine how record management technology influenced the enhancement of information service delivery. Other issues covered were system security, maintenance, and updating; management support; and the adequacy of IT employees. Sentiments were developed to gauge the capacity gained by using technology in the record management and service provisions, such as speedier services and more accuracy in data storage, fewer incidents of land ownership concerns, increased efficiency and effectiveness in service delivery, customer happiness, and remote access to services by clients. Table two summarizes the responses.

Table 2: Records management technology

Statements on records management technology (N = 52)	SD(1)	D(2)	N(3)	A(4)	SA(5)
• Nyandarua land registry has adopted appropriate records management technology to facilitate efficient services to our clients	23 (44.2%)	16 (30.8%)	5 (9.6%)	8 (15.4%)	0 (0%)
• The use of a records management technology has enabled our services to be timely and faster	11 (21.2%)	23 (44.2%)	11 (21.2%)	7 (13.5%)	0 (0%)
• The utilization of land administration technologies has reduced queues and delays in the land registry	9 (17.3%)	20 (38.5%)	9 (17.3%)	14 (26.9%)	0 (0%)
• Adopting technology has enabled us to accurately store citizens' data and important documentation	15 (28.8%)	24 (46.2%)	10 (19.2%)	3(5.8%)	0 (0%)
• By adopting technology, cases of land ownership issues have been reduced	9(17.3%)	22 (42.3%)	13 (25.0%)	8 (15.4%)	0 (0%)
• I have high regard for records management technology used at the land registry	6 (11.5%)	25 (48.1%)	11 (21.2%)	10 (19.2%)	0 (0%)
• The technologies adopted have enhanced efficiency and effectiveness in service delivery at the land registry	11 (21.2%)	24 (46.2%)	12 (23.1%)	5 (9.6%)	0 (0%)
• The technologies adopted have made clients happy	6 (11.5%)	22 (42.3%)	14 (26.9%)	10 (19.2%)	0 (0%)
• There is a good security system that ensures financial and land records are not accessed and manipulated by unauthorized personnel	15 (28.8%)	16 (30.8%)	14 (26.9%)	7 (13.5%)	0 (0%)
• The use of registry record management technologies has enabled us to improve the delivery services at the land registry	13 (25.0%)	25 (48.1%)	9 (17.3%)	5 (9.6%)	0 (0%)
• The technologies in place have enabled our citizens to access our department of lands registry services remotely	18 (34.6%)	25 (48.1%)	6 (11.5%)	3 (5.8%)	0 (0%)
• We have a clear strategy in place for ensuring maintenance and upgrading of the land administration records management technology	19 (36.5%)	18 (34.6%)	10 (19.2%)	9.6 (7.7%)	0 (0%)
• There are adequate IT personnel to troubleshoot technology-related issues at Nyandarua County land registry	11 (21.2%)	27 (51.9%)	10 (19.2%)	4 (7.7%)	0 (0%)
• We receive management support for technology deployment at Nyandarua County land registry	7 (13.5%)	27 (51.9%)	12 (23.1%)	6 (11.5%)	0 (0%)

Table 2 reveals that three-quarters of employees (39 (75%) disagreed that the Nyandarua land registry has adopted proper records management technology to serve its clients effectively. That automation had not occurred, and hence systems for records management had not been established. This explains the reason for ineffective information services delivery processes, as

a result, indicated no faster services, accuracy in data storage, reduced cases of land ownership issues, enhanced efficiency and effectiveness in service delivery, client satisfaction, and remote accessibility by clients. Most employees disagreed with the opinions expressed to them regarding the aforementioned results of implementing technology to improve information service delivery at the Nyandarua land registry. The Land Registrar affirmed this information, saying, *"We have not adopted proper records management technologies." We continue to rely on manual processes, which frequently cause delays in providing information to our clients."*

Williamson et al. (2017) and Adeniyi et al. (2018) argued about using information technology in land registries. The failure to use technology to improve service delivery caused the land registry to overlook opportunities to speed up the supply of services to clients. Other benefits forgone include the capacity to preserve correctness in stored data, which would eventually lead to a reduction in instances of land ownership, improved efficiency and effectiveness in service delivery, and increased customer satisfaction.

Table 4.6 also reveals that 38 (73.1%) of workers disagreed that there were enough IT personnel to solve technical difficulties at the Nyandarua County property registry. Furthermore, the majority of personnel, 34 (65.4%), believed that the Nyandarua County land registry did not get management support for technology adoption in the land registry.

The findings indicate a need for technology to improve information service delivery at the Nyandarua County land registry; hence, managerial support was required. Moemi (2015) also recognized that implementing ICT technology in land registries was hampered by employee incompetence and bad attitudes toward digitization procedures.

The relationship between record management technology and information service delivery was determined by carrying out a correlation analysis. The results of the correlation analysis are shown in Table 3.

Table 3: Correlations analysis of institutional-based factors and information service delivery

		X	Y
X	Pearson Correlation	1	.938**
	Sig. (2-tailed)		.000
	N	52	52

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

Table 3 shows a personal correlation, r =.938*, and a P value less than 0.05. The P-value indicates that record management technologies have a statistically significant impact on information service delivery; hence the study rejected the null hypothesis that records management technologies do not affect information service delivery at the land registry in Nyandarua County. The study concluded that record management technology significantly influenced the information service delivery at the land registry in Nyandarua County. Masenya (2020) highlights the importance of management technologies such as computers, the internet, and automated records management procedures such as record production, storage, retention, destruction, and access in increasing service delivery in registries.

5.0 Conclusion

The study found that the operations at the Nyandarua land registration were still manual. Consequently, it was losing opportunities to improve the speed of service delivery due to delays in deploying relevant technologies. Other potential losses by the registry were inconveniences in data storage and lost opportunities to enhance efficiency and effectiveness in service delivery and customer satisfaction.

6.0 Recommendation

The research recommended that the Department of Lands, Housing, and Physical Planning in Nyandarua County implement relevant record management technologies. This will improve the accuracy of data and faster delivery of information services; hence, fewer land ownership cases, improved efficiency and effectiveness in service delivery, and increased customer satisfaction. The support of Management is essential in this endeavor; therefore, the Land Registrar, in partnership with the County administration, should purposefully buy and install relevant technology at the Nyandarua land registration to improve service delivery. The Land Registrar should also lobby for the allocation of sufficient money in the budget for acquiring IT infrastructures, training staff, and maintaining the systems.

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