



ADOPTION OF DIGITAL TOOLS AND THE EFFICIENCY OF RECORDS MANAGEMENT AMONG DT-SACCO IN NAIROBI CITY COUNTY, KENYA

Osewe Dickson Ongadi^{1*}, Catherine Mueni Nzioka¹, Daniel Onger Kerandi¹

¹School of Computing and Informatics, Kenya Methodist University

*Email of Corresponding Author: odickson3590@stu.kemu.ac.ke

Abstract

Effective records management is essential for DT-SACCOs to ensure timely information retrieval, data security, regulatory compliance, and operational efficiency. However, challenges associated with delayed retrieval, data loss, weak security and compliance gaps continue to affect the sector, creating a need to understand the contribution of digital tools to records-management efficiency. This study examined the adoption of digital tools and records management efficiency among DT-SACCOs in Nairobi City County, Kenya. The study adopted a positivist philosophy and a descriptive cross-sectional design using a concurrent mixed-methods approach. From a target population of 144 records management officers, ICT officers, and operations managers from 48 licensed DT-SACCOs, the study selected a sample of 106 respondents using proportionate stratified random sampling and Yamane's formula. Data were collected using structured questionnaires and key informant interviews and analysed using descriptive statistics, Pearson correlation, and thematic analysis. The findings showed that adopting digital tools had a positive and statistically significant effect on records-management efficiency, particularly by improving access and retrieval, security, accuracy, and cost-effectiveness. The study concluded that although DT-SACCOs have made progress in adopting digital tools, gaps remain in their effective integration and utilisation. The study recommends that DT-SACCOs strengthen the adoption and utilisation of digital tools, integrate existing digital records systems, expand cloud-based records management, and provide continuous staff training to enhance records-management efficiency.

Keywords: *Digital tools, Records-management efficiency, DT-SACCOs, Nairobi City County*

1. INTRODUCTION

Records management is a fundamental organisational function involving the systematic creation, classification, storage, security, retrieval and disposition of records throughout their lifecycle (ISO 15489-1:2016; Yeo, 2023). Effective records management provides reliable evidence of organisational activities, supports decision-making, enhances accountability and enables compliance with legal and regulatory requirements. With organisations increasingly generating large volumes of information in both physical and electronic formats, efficient records management requires systems that ensure records are accessible, reliable, secure and retrievable when needed.

Digital transformation has increasingly changed how organisations manage records through the adoption of electronic document and records management systems, scanning technologies, cloud storage and automated workflows (Vial, 2019; Masenya, 2020). These tools can reduce reliance on paper, improve retrieval and accessibility, strengthen information security and reduce storage and administrative costs. The global electronic document management system market grew from USD 6.37 billion in 2024 to a projected USD 11.17 billion by 2028, reflecting increasing demand for digital records solutions (The Business Research Company,



2024). However, adopting digital tools does not automatically translate into efficient records management, as effectiveness may depend on integration, infrastructure, user capacity, and organizational acceptance. This study therefore focuses on the adoption of digital tools and the efficiency of records management among DT-SACCOs in Nairobi City County, Kenya.

1.1 Problem Statement

Despite regulatory requirements for DT-SACCOs to maintain secure, accessible and efficiently retrievable records (SASRA, 2024; ISO 15489-1, 2016), records-management challenges remain evident. SASRA (2024) reports that approximately 22% of DT-SACCOs received qualified or adverse audit opinions linked to incomplete records, weak audit trails and inadequate information systems, while 17% breached prudential reporting deadlines. Between 2019 and 2024, at least 11 DT-SACCOs were placed under statutory management or supervisory restrictions, with investigations highlighting missing documents, falsified records and unreconciled accounts (SASRA, 2024). Although digital tools can improve records storage, retrieval, security, and accessibility, existing studies have largely focused on SACCO financial performance, governance, and credit management, while digital records-management research has mainly examined public-sector institutions (Ambira, 2019). Consequently, empirical evidence on the adoption of digital tools and their contribution to records-management efficiency among DT-SACCOs, particularly in Nairobi City County, remains limited. This study therefore examines the adoption of digital tools and records-management efficiency among DT-SACCOs in Nairobi City County, Kenya.

1.2 Research Objective

To examine the effect of adopting digital tools on records management efficiency among DT-SACCOs in Nairobi City County, Kenya.

1.3 Research Hypothesis

H₀₁: Adoption of digital tools has no statistically significant effect on the efficiency of records management among DT-SACCOs in Nairobi City County, Kenya.

2. LITERATURE REVIEW

This section presents an empirical and theoretical review related to the study.

2.1 Empirical Review

The adoption of digital tools is an important foundation for digital transformation in records management, with technologies such as electronic document management systems (EDMS), scanning equipment and cloud storage supporting improved storage, retrieval, accessibility and security of records. Globally, the EDMS market grew from USD 6.37 billion in 2024 and is projected to reach USD 11.17 billion by 2028, reflecting increasing demand for digital records solutions (The Business Research Company, 2024). Wagan et al. (2025) found that EDMS adoption streamlined workflows, improved information access and strengthened regulatory compliance, although the study was conducted in a higher-education setting whose context differs from financial cooperatives.

In Africa, empirical studies similarly demonstrate that digital records technologies can enhance records-management efficiency, particularly in retrieval, accessibility and compliance. Chikomba et al. (2021) found that shifting from paper-based to digital records in Zimbabwean financial services improved access speed, retrieval accuracy and information availability for decision-making. However, the study also identified infrastructure limitations, weak policies and inadequate staff competencies as constraints to effective adoption. This suggests that



digital tools alone may not improve records-management efficiency without adequate organizational and technical support.

In Kenya, evidence has mainly examined technology adoption in relation to broader organisational outcomes rather than records-management efficiency specifically. Kangangi and Mang'ana (2024) found that communication technologies and financial information systems significantly improved DT-SACCO performance, while Kotonya and Odollo (2022) found that cloud computing enhanced organizational responsiveness in commercial banks. More directly, Ogindo and Njoka (2023) found that EDMS adoption at Sheria SACCO improved audit trails, loan processing and storage efficiency, although implementation costs, inadequate infrastructure and limited staff competencies constrained its benefits. These findings demonstrate the potential of digital tools to improve records management but leave limited empirical evidence on their effect on records-management efficiency across DT-SACCOs in Nairobi City County.

2.2 Theoretical Review

The Diffusion of Innovation (DOI) Theory, developed by Rogers (2003), explains how, why and at what rate new technologies and practices are adopted within a social system. The theory proposes that adoption is influenced by perceived attributes such as relative advantage, compatibility, complexity, trialability and observability. In this study, DOI provides a framework for explaining the adoption of digital tools, including electronic document management systems, scanning technologies and cloud storage, among DT-SACCOs, and how their adoption contributes to records-management efficiency through improved retrieval speed, accessibility, security and cost-effectiveness. Thus, the theory guides the examination of the relationship between digital-tool adoption and records-management efficiency among DT-SACCOs in Nairobi City County (Rogers, 2003).

3. MATERIALS AND METHODS

The study was anchored in the positivist philosophy, which assumes that reality can be objectively measured through systematic and replicable procedures (Saunders et al., 2019). A descriptive cross-sectional research design incorporating a concurrent mixed-methods approach was adopted and the study was conducted among 48 licensed DT-SACCOs headquartered in Nairobi City County, with a target population of 144 respondents. Using proportionate stratified random sampling, the study selected 106 respondents, with individual officers as the unit of analysis because they directly interact with and use records-management systems. The study collected both primary and secondary data. The study analyzed quantitative data from questionnaires using SPSS Version 29, employing frequencies, means, and standard deviations for descriptive analysis; Pearson correlation was used to establish relationships between digital-tool adoption and records-management efficiency. The study analyzed qualitative data from open-ended questionnaire items and key informant interviews using thematic analysis to complement and explain the quantitative findings.

4. RESULTS AND DISCUSSION

This section reports the study's findings, interprets them, and discusses them in relation to the literature review.

4.1 Response Rate

Questionnaires were distributed to 106 respondents selected through proportionate stratified random sampling from the target population of 144 records officers, ICT officers, and

operations managers in the 48 licensed DT-SACCOs headquartered in Nairobi City County. All 106 instruments were returned in usable form. Key informant interviews were also conducted with records management officers holding operational responsibility for both physical and digital records. Two factors account for the return. Advance clearance was secured through each SACCO's management before any instrument reached a desk, and the three respondent categories were selected because records work forms part of their daily duties, so the questions addressed matters they already had opinions on. Kajuju et al. (2022) reported comparable cooperation when surveying records staff in Kenyan public institutions, attributing it to the same institutional routing of requests.

4.2 Results on the Efficiency of Records Management

Efficiency of records management was the dependent variable. It was measured as a latent construct across four indicators specified in the conceptual framework: access and retrieval speed, security and compliance, accuracy and reliability, and cost-effectiveness, using sixteen statements rated on a five-point scale, where 1 denoted strong disagreement and 5 strong agreements. In reporting, responses of "agree" and "strongly agree" are summed to give an agreement position, and "disagree" and "strongly disagree" to give a disagreement position. Table 10 sets out the distribution.

Table 1: Efficiency of Records Management

Statements on efficiency (N = 106)	SD(1)	D(2)	N(3)	A(4)	SA(5)	Mean	STD DEV
Records can be accessed and retrieved quickly when needed	0 (0.0%)	0 (0.0%)	4 (3.8%)	54 (51.9%)	46 (44.2%)	4.40	0.57
The time taken to locate specific records has significantly improved	0 (0.0%)	0 (0.0%)	5 (4.9%)	59 (57.3%)	39 (37.9%)	4.33	0.57
Multiple users can access records simultaneously without delays	0 (0.0%)	0 (0.0%)	5 (4.8%)	40 (38.1%)	60 (57.1%)	4.52	0.59
The search functionality in our records system is efficient and effective	0 (0.0%)	0 (0.0%)	8 (7.7%)	61 (58.7%)	35 (33.7%)	4.26	0.59
The system ensures the security and confidentiality of records	0 (0.0%)	0 (0.0%)	9 (8.5%)	59 (55.7%)	38 (35.8%)	4.27	0.61
Access to sensitive records is properly controlled and monitored	0 (0.0%)	0 (0.0%)	4 (3.8%)	43 (41.3%)	57 (54.8%)	4.51	0.57
Our SACCO complies with all regulatory requirements for records management	0 (0.0%)	0 (0.0%)	7 (6.7%)	63 (60.6%)	34 (32.7%)	4.26	0.57
Audit trails are maintained for all access and modifications to records	0 (0.0%)	0 (0.0%)	7 (6.6%)	50 (47.2%)	49 (46.2%)	4.40	0.61
Records in our system are accurate and up-to-date	0 (0.0%)	0 (0.0%)	5 (4.8%)	43 (41.0%)	57 (54.3%)	4.50	0.59
There are minimal errors in data entry and record keeping	0 (0.0%)	0 (0.0%)	5 (4.8%)	46 (43.8%)	54 (51.4%)	4.47	0.59
Records are consistently organized and properly categorized	0 (0.0%)	0 (0.0%)	2 (1.9%)	47 (44.8%)	56 (53.3%)	4.51	0.54
Our records management system is reliable with minimal downtime	0 (0.0%)	0 (0.0%)	4 (3.8%)	50 (47.2%)	52 (49.1%)	4.45	0.56
Our records management operations are cost-effective	0 (0.0%)	1 (1.0%)	4 (3.8%)	67 (64.4%)	32 (30.8%)	4.25	0.57
Digital transformation has reduced the cost of physical storage	0 (0.0%)	0 (0.0%)	10 (9.4%)	54 (50.9%)	42 (39.6%)	4.30	0.63
The cost of maintaining digital records systems is justified by the benefits	0 (0.0%)	1 (1.0%)	12 (11.4%)	62 (59.0%)	30 (28.6%)	4.15	0.65
Resource utilization in records management has improved significantly	0 (0.0%)	0 (0.0%)	15 (14.4%)	60 (57.7%)	29 (27.9%)	4.13	0.65
Overalls						4.35	0.60



Perceived efficiency is uniformly high. Consistent organisation and categorisation of records drew the widest agreement at 103 (98.1%), followed by simultaneous multi-user access (100 (95.2%)), controlled access to sensitive records (100 (96.2%)) and system reliability with minimal downtime (102 (96.2%)). Not a single respondent selected “strongly disagree” against any of the sixteen statements, and outright disagreement appeared only twice in the entire block, against cost-effectiveness (1 (1.0%)) and the justification of maintenance costs (1 (1.0%)).

The pattern within the block is instructive. The strongest scores cluster around retrieval and integrity, finding a record, trusting it, and being able to show who touched it. The weakest, though still high, cluster around cost. Resource utilisation attracted the lowest agreement in the block at 89 (85.6%) with 15 (14.4%) neutral, and the search functionality statement drew 8 (7.7%) neutral. Respondents are, in other words, more confident that the digital system finds and protects records than that it does so economically.

The qualitative findings from the key informant interview further explained the strong ratings on records retrieval. The coded interview data indicated that introducing electronic records systems substantially reduced the time required to locate and retrieve records. As explained by the key informant (KI-01). The coded interview data also provided insight into the cost implications of digital transformation, showing that the changes represented more of a redistribution of costs than an outright reduction. This perspective helped to explain the relatively lower ratings on the cost-related efficiency indicators. As noted by the key informant (KI-01). That qualification maps onto the quantitative result precisely. Where a saving is directly observable- cupboards emptied, files no longer photocopied- agreement is high. Where the saving is a net figure that only surfaces in a budget, respondents hesitate. Masenya (2020) made a comparable observation, noting that digital records projects in South African institutions were routinely justified on storage savings while their recurrent licensing and security costs went unbudgeted.

On security and compliance, agreement on audit trail maintenance reached 99 (93.4%) and regulatory compliance 97 (93.3%). The informant tied both directly to the supervisory relationship with SASRA, reporting that the ability to retrieve records quickly had “enhanced audit preparedness and facilitated timely responses to SASRA inspections and reporting obligations”. This is a meaningful result in a sector where SASRA (2024) reports that a substantial share of DT-SACCOs continue to attract qualified audit opinions traceable to incomplete records and weak audit trails. The SACCOs represented here appear to have moved past that particular exposure. The informant was equally clear that the move created new exposures, citing “phishing attempts, malware and unauthorized system access” as risks that did not exist in the paper environment, a trade-off Marutha (2019) characterizes as substituting one class of records risk for another rather than eliminating risk altogether.

4.3 Results on Adoption of Digital Tools

The study examined how adopting digital tools affects records management efficiency. Ten statements addressed the presence and usability of an electronic document management system, scanning technology, cloud storage, system integration, paper displacement, and staff acceptance. Table 2 presents the responses.

Table 2: Adoption of Digital Tools

Statements on adoption (N = 106)	SD(1)	D(2)	N(3)	A(4)	SA(5)	Mean	STD Deviation
Our SACCO has fully implemented an Electronic Document Management System (EDMS)	0 (0.0%)	0 (0.0%)	18 (17.1%)	56 (53.3%)	31 (29.5%)	4.12	0.68
The EDMS in our SACCO is user-friendly and easy to navigate	0 (0.0%)	0 (0.0%)	16 (15.5%)	50 (48.5%)	37 (35.9%)	4.20	0.69
Our SACCO uses scanning technologies to digitize physical documents	0 (0.0%)	0 (0.0%)	21 (20.0%)	52 (49.5%)	32 (30.5%)	4.10	0.71
The scanning technologies produce high-quality digital copies of documents	0 (0.0%)	1 (1.0%)	27 (25.7%)	52 (49.5%)	25 (23.8%)	3.96	0.73
Our SACCO utilizes cloud storage solutions for storing and managing records	0 (0.0%)	12 (11.4%)	46 (43.8%)	41 (39.0%)	6 (5.7%)	3.39	0.77
Cloud storage has improved accessibility to records from different locations	0 (0.0%)	12 (11.4%)	43 (41.0%)	46 (43.8%)	4 (3.8%)	3.40	0.74
Digital tools are well integrated with other organizational systems	0 (0.0%)	3 (2.9%)	37 (35.2%)	54 (51.4%)	11 (10.5%)	3.70	0.70
Adoption of digital tools has reduced our reliance on paper-based records	0 (0.0%)	5 (4.8%)	44 (41.9%)	45 (42.9%)	11 (10.5%)	3.59	0.74
Staff members readily accept and use the digital tools provided	0 (0.0%)	3 (2.9%)	43 (41.0%)	55 (52.4%)	4 (3.8%)	3.57	0.62
The digital tools adopted meet our records management needs	0 (0.0%)	1 (1.0%)	21 (20.4%)	64 (62.1%)	17 (16.5%)	3.94	0.64
Overalls						3.80	0.70

Core document infrastructure is firmly in place. EDMS usability drew agreement from 87 (84.5%), full EDMS implementation from 87 (82.9%), and scanning technology from 84 (80.0%). Fit to organisational need scored 81 (78.6%). Disagreement across these four statements never exceeded one respondent.

Cloud storage breaks the pattern sharply. Only 47 (44.8%) agreed that their SACCO uses cloud storage, with 46 (43.8%) neutral and 12 (11.4%) disagreeing, the widest neutral band of any item in the construct. The companion statement on cloud-enabled remote accessibility behaved identically (50 (47.6%) agreement). A neutral response rate above forty per cent on a question about whether one's own organisation uses a technology is not indifference; it signals that respondents do not know, which itself indicates that where cloud services exist they sit inside the ICT function rather than in the records workflow. The interview listed cloud storage among the systems in use but characterised it narrowly, as being deployed “to securely back up electronic records and ensure business continuity in case of system failures or data loss”. Cloud capacity is treated as insurance, not as a working platform, which is exactly what a records officer would be unaware of.

Two further items sit below the construct's general level. Reduced reliance on paper drew 56 (53.3%) agreement against 44 (41.9%) neutral, and system integration 65 (61.9%). The informant accounted for the persistence of paper without hesitation, identifying “the handling of externally received paper documents” and “the digitisation of legacy records” as processes still requiring manual intervention, and adding that “regulatory requirements for physical documentation” independently sustain a paper trail. Paper survives here not because digital tools failed but because the SACCO does not control every document that enters it, and because some documents must exist physically by law.



Staff acceptance registered 59 (56.2%), with 43 (41.0%) neutral. Set against the reported usability of the EDMS, this gap is more revealing than either figure alone: systems that work are not automatically systems that are embraced. The informant described initial reluctance among “some employees to transition from manual to digital record-keeping processes”, framing acceptance as something achieved over time rather than granted at installation. Kaupa and Chisa (2020), applying the Technology Acceptance Model to EDRMS rollout, found the same asymmetry, with perceived usefulness driving acceptance far more strongly than ease of use.

The construct describes selective rather than comprehensive adoption. Document capture and storage are solved; integration, cloud utilisation and the full displacement of paper are not. This is the pattern Yang et al. (2021) label partial digital transition, where organisations replicate paper processes in digital form without reconstructing the process itself, and it anticipates the automation results reported next.

4.4 Hypothesis Testing

With the assumptions satisfied, Pearson correlation was used to test the research hypothesis. Correlation results appear in Table 3.

Table 3: Correlation Analysis on Digital Transformation and Records Management Efficiency

	X
X	1
Y	.73**

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

The null hypothesis stated: Adoption of digital tools has no statistically significant effect on the efficiency of records management among DT-SACCOs in Nairobi City County, Kenya. Table 3 returns $r = 0.73^{**}$ with $p < .001$, a strong positive association and the largest bivariate coefficient in the matrix. The null hypothesis is rejected. Adoption of digital tools significantly influences records management efficiency.

5. CONCLUSION

The study concludes that digital-tool adoption among DT-SACCOs in Nairobi City County has improved records-management efficiency, but remains incomplete. While electronic document management systems and scanning technologies are widely adopted and usable, limited integration across platforms, inadequate use of cloud services, and continued reliance on paper records constrain further efficiency gains. The findings further indicate that digital-tool adoption is a significant predictor of records-management efficiency, supporting the view that technology creates operational value when effectively embedded in organisational processes. However, the gap between system usability and staff acceptance suggests that achieving greater efficiency requires not only investment in digital tools but also improved integration, staff capacity and user acceptance.

6. RECOMMENDATIONS

DT-SACCOs should strengthen the adoption and effective utilisation of digital tools such as electronic document management systems, scanning technologies and cloud-based records solutions to improve records accessibility, retrieval, security and cost-effectiveness. Existing digital tools should be better integrated with relevant organisational information systems to facilitate seamless access and retrieval of records, while cloud services should be extended



beyond backup functions to support routine records storage and accessibility. DT-SACCOs should also provide continuous training and technical support to records-management staff to enhance effective utilisation of adopted digital tools. In addition, SACCOs should prioritise investment in appropriate digital records-management technologies and digitisation of legacy records to maximise the contribution of digital-tool adoption to records-management efficiency.

REFERENCES

- Ambira, C. M. (2024). Digital transformation and records management in Kenya's public sector: Challenges and opportunities. *Journal of Information Science*, 50(2), 234–248. <https://doi.org/10.1177/01655515221134567>
- Chikomba, C., Rodrigues, A., & Ngoepe, M. (2021). Management of digital records in selected financial services parastatals in Zimbabwe. *South African Journal of Information Management*, 23(1), 1–9. <https://doi.org/10.4102/sajim.v23i1.1234>
- International Organization for Standardization. (2016). ISO 15489-1:2016 Information and documentation — Records management — Part 1: Concepts and principles. ISO. <https://www.iso.org/standard/62542.html>
- Kajuju, K., Wamukoya, J., & Mnjama, N. (2022). ICT adoption in records management at the Ministry of Foreign Affairs, Kenya. *Records Management Journal*, 32(2), 178–195. <https://doi.org/10.1108/RMJ-07-2021-0027>
- Kangangi, L., & Mang'ana, R. (2024). Technology adoption strategies and performance of deposit taking SACCOs in Nairobi City County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship*, 8(4), 112–128.
- Kaupa, S., & Chisa, K. D. (2020). Examining factors affecting the adoption and usage of the Electronic Document Records Management System using the Technology Acceptance Model: The case of Namibia. *Innovation: Journal of Appropriate Librarianship and Information Work in Southern Africa*, 2020(61), 27–43.
- Marutha, N. S. (2019). The application of legislative frameworks governing digital records management in the South African public sector. *Mousaion*, 37(2), 1–22. <https://doi.org/10.25159/2663-659X/6552>
- Masanya, T. M. (2020). Digital transformation in records management: Prospects and challenges. *South African Journal of Information Management*, 22(1), 1–9. <https://doi.org/10.4102/sajim.v22i1.1135>
- Ogindo, E. A., & Njoka, C. (2023). Digital transformation and financial performance of deposit-taking Savings and Credit Co-operatives in Nairobi City County, Kenya. *Journal of Finance and Accounting*, 3(2), 45–56. <https://ir-library.ku.ac.ke/items/a5c762be-353e-41d5-a4d6-280f84d831fd>
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- SASRA. (2024). SACCO supervision annual report 2024. SACCO Societies Regulatory Authority. <https://www.sasra.go.ke/>
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.



- The Business Research Company. (2024). Electronic document management system market size, share and forecast to 2033. The Business Research Company.
<https://www.thebusinessresearchcompany.com/>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118–144.
<https://doi.org/10.1016/j.jsis.2019.01.003>
- Wagan, M. A. A., Briones, J., Baldovino, F. P., & Refozar, R. F. G. (2025). Digital transformation in the records management of a private higher education institution in the Philippines. *International Journal of Marketing and Digital Creative*, 3(1), 18–33.
<https://doi.org/10.31098/ijmadic.v3i1.2878>
- Yang, Q., Du, Y., & Shi, L. (2021). Exploring the mechanisms for records management's digital transformation: A case study from China. *Records Management Journal*, 31(1), 34–47.
<https://doi.org/10.1108/RMJ-04-2020-0013>
- Yeo, G. (2023). *Records management principles and practice* (3rd ed.). Facet Publishing.