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Challenges in Intra-Data Sharing in Savings and Credit Cooperative Societies in Uganda: A Case of Wazalendo SACCO

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Abstract
Savings and Credit Cooperative Societies (SACCOs) increasingly depend on effective internal data sharing to support transparent governance, efficient services, informed decision-making, and financial inclusion. However, fragmented information practices, limited technological infrastructure, and governance constraints continue to hinder reliable data exchange within many SACCOs in Uganda. This study investigates the types of data shared, the mechanisms used for intra-organizational data exchange, and the major challenges affecting data-sharing practices at Wazalendo SACCO. A qualitative single-case study was conducted involving 30 participants, comprising 10 management personnel and 20 ordinary members. Data were collected through semi-structured interviews and analyzed thematically using NVivo 14, generating 187 initial codes that were refined into 42 focused codes and three major thematic clusters. The findings identified transparency deficits as the most prominent challenge, reported by 80% of participants, followed by standardization gaps (75%) and security concerns (65%). Digital systems accounted for 42.3% of identified sharing methods, while physical/manual methods represented 38.9%, revealing continued dependence on fragmented hybrid practices. The study's novelty lies in interpreting these challenges not as isolated technical limitations but as an interconnected socio-technical governance problem. It introduces the Governance-Capacity Paradox, demonstrating that transparency failures may arise from limited institutional capacity to process and communicate data effectively, thereby providing a broader framework for improving SACCO data governance.

Keywords: *Data Sharing, SACCOs (Savings and Credit Cooperative Societies), Security Concerns, Standardized Data Practices, Transparency.*

I. INTRODUCTION

Effective internal data sharing has become increasingly important for Savings and Credit Cooperative Societies (SACCOs) because it supports transparent governance, improves member services, strengthens organizational decision-making, and contributes to financial inclusion. In a data-driven financial environment, SACCOs require reliable information flows to manage lending, savings, member records, and other strategic activities efficiently (Wakyiku & Adong, 2022; Nuwagaba, 2022). However, the benefits of data sharing are often constrained by fragmented information systems, limited technological capacity, inconsistent data practices, and weak governance structures. These conditions can reduce operational efficiency and weaken members' confidence in cooperative institutions.

One of the most persistent challenges is the absence of standardized data practices and supporting technological infrastructure. In many SACCOs, data are managed using different formats, systems, and procedures across departments, making it difficult to exchange, reconcile, and interpret information consistently. Such fragmentation can affect the quality of decision-making and limit the organization's ability to use data effectively for member services and internal

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management (Nakajubi et al., 2025). The challenge is not only technical, because data-sharing practices are also closely related to organizational transparency and trust. When members have limited access to relevant financial or governance information, uncertainty may increase and confidence in the institution may decline.

Transparency therefore represents an important dimension of intra-organizational data sharing. Previous studies have indicated that inadequate transparency in data-sharing mechanisms may contribute to declining trust among SACCO members (Nakajubi et al., 2025). This problem can be intensified when institutions do not have clear guidelines regarding what information should be shared, how frequently it should be communicated, or which stakeholders should have access to it. As a result, data may exist within the organization but remain difficult to access, interpret, or use effectively. In cooperative institutions, where member participation and democratic oversight are central principles, such limitations can affect both operational performance and the broader cooperative mission.

Data security further complicates this situation. SACCOs process sensitive personal and financial information and must therefore balance the need for internal data accessibility with the obligation to protect member information from unauthorized access, disclosure, and emerging cyber threats. This issue has become increasingly important with the growing emphasis on data protection and privacy regulation (Coretec Solutions Africa, 2024; Onyango, 2023). Weak security controls may discourage information sharing, while overly restrictive practices may limit legitimate access to information required for effective governance and decision-making. Consequently, transparency, standardization, and security should not be treated as independent problems but as interconnected dimensions of data governance.

These concerns are particularly relevant in Uganda, where SACCOs continue to face significant governance and operational challenges. According to the 2023 Project for Financial Inclusion in Rural Areas (PROFIRA) report, 64 of the 453 registered SACCOs had collapsed, while 312 were experiencing serious operational difficulties associated with internal fraud and governance problems (The Independent, 2021; Nabunya, 2021). Although these institutional problems cannot be attributed solely to data-sharing practices, weaknesses in the way information is recorded, exchanged, controlled, and communicated may contribute to broader governance and operational vulnerabilities. Understanding these internal data practices is therefore necessary for strengthening accountability, institutional resilience, and member confidence.

Despite the growing attention to digital transformation, financial inclusion, governance, and data protection in financial cooperatives, limited attention has been given to the specific processes through which data are exchanged internally among SACCO departments, managers, and

members. Existing discussions often address technology adoption or institutional governance separately, while the interaction between the type of data being shared, the methods used to exchange it, and the problems encountered in the process remains insufficiently examined. This study addresses this gap through an in-depth investigation of intra-data sharing at Wazalendo SACCO in Uganda.

Accordingly, the study aims to examine the existing intra-data sharing practices within Wazalendo SACCO by identifying the types of data exchanged, analyzing the methods used to share information internally, and investigating the major challenges affecting these practices. Specifically, the study addresses three research questions:

RQ1. What types of data are shared internally within Wazalendo SACCO?

RQ2. What methods are used for intra-data sharing within Wazalendo SACCO?

RQ3. What challenges affect intra-data sharing practices within Wazalendo SACCO?

By answering these questions, the study seeks to provide a clearer understanding of the interaction between transparency, standardization, security, and organizational practices and to support the development of more effective data-governance strategies for SACCOs.

II. LITERATURE REVIEW

A. Data Sharing and Governance in SACCOs

Sound intra-data communication can be viewed as a foundation block to strong governance frameworks of Savings and Credit Cooperative Societies (SACCOs). The open information flow that exists between the management, board, and ordinary members creates a sense of accountability and enhances the principles of democratic governance embedded within the cooperative model of operations (Wakyiku & Adong, 2022). The studies show that SACCOs that have developed data-sharing processes exhibit higher decision-making abilities, especially in terms of credit risk assessment and managing portfolio (Mugambi and Karanja, 2021). Nevertheless, most SACCOs in Sub-Saharan Africa have a disjointed information system in which departments are acting as silos to holistic use of data. Such fragmentation leads to poor consistency in the member records, overlapping, and slow service provision, which eventually affects the operational efficiency of the cooperative and trust in its members (Nabunya, 2021).

B. Transparency and Trust Deficits

Openness to share information is directly associated with member confidence and organizational survival. Researchers in the SACCO industry of the Ugandan market show that the perceived obscurity of the financial reporting and decision-making conditions are a major contributor to a

drop in the confidence of the members (Tumwebaze & Byaruhanga, 2020). The members will doubt the integrity of the management when they are not more timely and accurate information about their savings balance, loan status or SACCO performance measurements. The lack of trust is especially acute in the time of financial distress when lack of proper disclosure practices have been associated with mass withdrawal of members and institutional collapse (PROFIRA, 2023). A study by Nakajubi et al. (2023) has established that SACCOs with frequent, systematic data sharing with members had 37 times more retention rates among members than the ad hoc communication practices. These results highlight transparency as not only the ethical requirement but also as the strategic requirement of the SACCO sustainability.

C. Standardization Challenges in Data Practices

Lack of standard data practices is another important obstacle to effective intra-data sharing in SACCOs. The heterogeneous nature of record-keeping systems used by many Ugandan SACCOs take the form of manual ledgers or a variety of disparate digital systems, with no definitions of common data, formats, and exchange protocols (Bank of Uganda, 2022). This heterogeneity makes the process of data aggregation, validation, and the cross-departmental use difficult. An example would be the profile of a member could be in three different forms within savings, loans, and membership departments, which would be a source of problems in the reconciliation process and data integrity. Nuwagaba (2022) counters this by noting that standardized data practices can allow SACCOs to create member-centered services as the data allows them to understand the financial behavior of the members holistically. Such standardization is needed in order to allow SACCOs to use their data capabilities to do predictive analytics, develop products in a more personalized way, or actively anticipate risks, which are becoming highly sought-after in competitive financial markets.

D. Data Security and Regulatory Compliance

The emerging data protection environment offers challenges and demands to the SACCO data-sharing practices. The Data Protection and Privacy Act (2019) in Uganda provides strict protection of personal data processing, including technical and organizational device to avoid unauthorized access, disclosure, and misuse (Parliament of Uganda, 2019). According to Onyango (2023), most SACCOs do not have the cybersecurity infrastructure or the capacity of staff to meet these requirements at the same time facilitating the required internal data flows. Such tension leads to a paradox, in which valid data-sharing requirements are at odds with security requirements. According to Coretec Solutions Africa (2024), 68 percent of the surveyed SACCOs in Uganda have had at least one data breach during the last two years, mainly because of weak access controls and insufficient training of staff. Besides putting members at risk of identity theft

and financial fraud, the security vulnerabilities also expose SACCOs to regulatory fines and intellectual harm.

E. Technology Infrastructure constraints

Intra-data sharing is an important hindrance to technological constraints in SACCOs, especially in rural Uganda. Most institutions have old core banking systems, which are not programmed with application programming interfaces (APIs) to facilitate unhindered data transfer among modules or with their partners (Mugisha, 2023). Also, these infrastructure issues may be further compounded by low internet connectivity, poor power supply and a lack of digital literacy among employees. According to a study by the Financial Sector Deepening Uganda (2022), only 28 percent of SACCOs in rural locations have incorporated managerial information systems, which are able to exchange data in real time and across branches. Such a technological disparity compels use of manual data transfer means like printed reports or USB disks that imposes delays, transcription errors and security threats to the data-sharing process.

F. Financial Inclusion and Data sharing

Strategic data sharing also has a direct impact on financial inclusion goal by allowing SACCOs to formulate the right product to the population that has not been well served. By successfully disseminating and interpreting data on the transactions of members, SACCOs may create alternative credit scoring models and serve members without formal credit histories (FSD Kenya, 2022). Nuwagaba (2022) shows that SACCOs that used shared internal data to learn the patterns of cash flow of the members were able to offer flexible savings products that mobilized savings by 42 percent amongst the low-income members. But to achieve these benefits of inclusion, it is necessary to overcome the transparency, standardization, and security issues mentioned above that underscore the interconnected effect of the barriers of data sharing and their overall influence on the developmental mandate of SACCOs.

G. Research Gap

Although the current literature focuses on isolated aspects of SACCO operations, such as governance, technology implementation, or regulatory compliance, there is a distinct lack of research analyzing the interdependence of factors that slow down intra-organizational data sharing among Ugandan SACCOs. Existing literature centres heavily on inter-institutional information sharing or member-facing web services, while internal data flows required for operational coherence are treated as a technical background issue. The paper fills that gap by offering a socio-technical governance interpretation of the complex impediments (lack of transparency, non-standardized practices, and security issues) at

Wazalendo SACCO. The novelty of this study does not lie merely in documenting these challenges, but in analytically demonstrating how they form a reinforcing loop driven by governance pathologies, shifting the academic conversation from viewing data sharing as a purely technical IT problem to recognizing it as a fundamental cooperative governance crisis relevant to other financial cooperatives in Sub-Saharan Africa.

III. RESEARCH METHOD

A. Research Design

The research design adopted in this study was a qualitative research design that was based on a single case study to discuss the problem of intra-data sharing in Wazalendo SACCO in Uganda. A case study design was chosen due to the possibility of an in-depth and contextual examination of a modern phenomenon in the context of its actual location (Yin, 2018). This method was well suited, considering that the study aimed at learning the subtle issues, practices, and perceptions of internal data sharing within a particular SACCO setting. The qualitative orientation made it easy to learn the lived experiences and views of participants, and socio-technical forces impacting data-sharing practices and aspects that quantitative methods could fail to capture (Creswell and Poth, 2018).

B. Study Area and Population

The research was carried out in Wazalendo Savings and Credit Cooperative Society (SACCO) which is a registered association based in Uganda. Wazalendo SACCO was selected purposively on its representative nature of mid-sized Ugandan SACCOs that have similar operational issues to deal with data management and governance. The target population was divided into two different categories: (1) SACCO management staff such as the manager, the IT officer, credit officer and the data governance decision board members; (2) the ordinary members of the SACCO who access the data systems of the institution through saving, loan facilities among other services.

C. *Technique of Sampling and the Size of the sample*

The sampling was carried out purposively to select information-rich participants that can give a thorough understanding of the intra-data sharing practice (Patton, 2015). The sample size was 30 participants who were stratified in two groups: Management tier (n = 10) and Member tier (n = 20), chosen to represent diversity in membership period, transaction frequency, and demographic features. The determination of this sample size was not arbitrary; rather, theoretical saturation was rigorously operationalized. Data collection continued iteratively until two criteria were met: (1) no new primary codes were emerging from the

member tier (achieved at interview 24), and (2) theoretical saturation was confirmed across both strata, meaning the management tier was no longer providing new explanatory power or divergent perspectives on the themes generated by the members (achieved at interview 30). This aligns with Saunders et al. (2018), who argue that saturation must be defined conceptually by the emergence of new theoretical insights, rather than by a fixed numerical threshold.

D. Data Collection Methods

Semi-structured interviews were used to collect primary data in the year 2025. Based on the three objectives of the research, an interview guide was created, which includes open-ended questions and probes that will summarize the types of data shared within the organization, how the data were shared, and what were the challenges in sharing data.

E. Data Analysis Procedures

Thematic analysis on collected data was done based on the six-phase approach proposed by Braun and Clarke (2006): (1) Familiarization with the 217,450 words of transcripts; (2) Systematic coding of interesting characteristics using NVivo 14; (3) Searching for themes by collating codes; (4) Reviewing themes against the dataset; (5) Defining and naming themes; and (6) Report creation.

F. *Analytical Rigor*

To ensure analytical transparency regarding how NVivo was used beyond mere procedural sorting, the transition from raw data to final themes was carefully documented. Initially, 187 primary in-vivo codes were generated (e.g., "board eye only," "didn't understand," "USB transfer," "different definitions"). Through iterative analytical mapping, these were aggregated into 42 theme-focused codes (e.g., "selective disclosure," "interpretability barriers," "hybrid physical-digital vulnerabilities"). Finally, these were collapsed into three overarching thematic clusters, Transparency, Standardization, and Security, based on their direct alignment with the research objectives and their theoretical interrelation. For instance, codes relating to "hidden audit reports" and "technical formats" were analytically unified under the broader theme of "Transparency Deficits" because both functioned to restrict democratic member oversight, albeit through different mechanisms.

G. *Reliability and Validity*

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To establish trustworthiness, several measures were implemented. First, a comprehensive audit trail was maintained within NVivo 14, with iterative versions of coding nodes and analytical memos saved to ensure the interpretive process was replicable. Second, peer debriefing was utilized to mitigate researcher bias; a co-author independently coded a random subset of six transcripts (20% of the dataset). The research team held consensus meetings to resolve discrepancies, achieving an initial inter-coder agreement rate of 82%, which was discussed and refined to 100% consensus before the remaining dataset was coded. Finally, preliminary thematic findings were subjected to member checking by sharing summaries with three management-tier participants to confirm whether the socio-technical interpretations resonated with their lived organizational realities (Lincoln & Guba, 1985).

H. Ethical Considerations

The institutional review board gave clearance on the ethical issues before data collection. Some of the key ethical guidelines that were followed were informed consent, Confidentiality, Anonymity, the right to withdraw, and Data security.

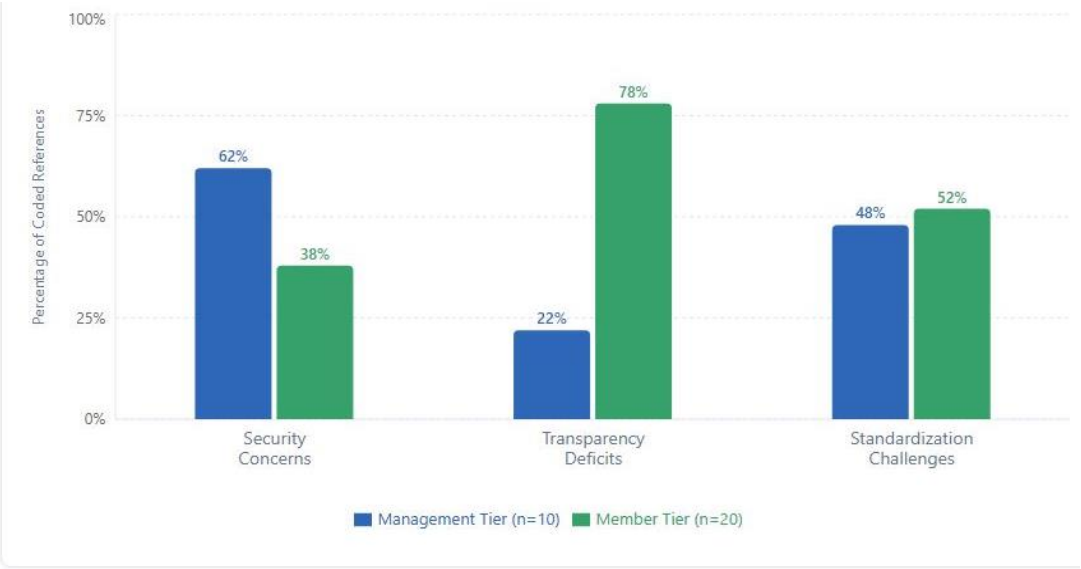

Figure 1. Distribution of Coded References by Participant Category and Thematic Domain (NVivo 14 Output)

IV. RESULT AND DISCUSSION

The analysis was conducted using NVivo 14 (QSR International, 2022) to support systematic coding, theme development, and visualization of qualitative patterns across 30 interview transcripts comprising approximately 217,450 words. The coding process initially generated 187

primary codes, which were subsequently refined into 42 theme-focused codes and organized into three overarching thematic domains: transparency, standardization, and security. The distribution of coded references across the management and member groups is presented in Figure 1.

As shown in Figure 1, the two participant groups emphasized different dimensions of intra-data sharing. Among management participants (n = 10), security concerns accounted for 62% of the relevant coded references, whereas transparency deficits were more prominent among ordinary members (n = 20), accounting for 78% of their relevant coded references. Standardization-related concerns were more evenly distributed between the two groups, with an approximate 48:52 distribution. These differences indicate that perceptions of data-sharing problems are influenced by organizational position: management is more directly concerned with data protection and control, while members are more sensitive to access, disclosure, and transparency.

A. Types of Data Shared Internally within Wazalendo SACCO

The first objective examined the types of information exchanged internally within Wazalendo SACCO. The thematic analysis identified four main categories: transactional data, member identification data, governance documentation, and risk-assessment data. Their distribution and primary sharing directions are summarized in Table 1.

Table 1. NVivo Code Frequency for Types of Data Shared Internally (N = 284 Coded References)

Data Category	Sub-Codes	Frequency (n)	% of Total	Primary Sharing Direction
Transactional Data	Savings deposits/withdrawals Loan disbursements Repayment histories Dividend allocations	109	38.2%	Front-office → Management → Board
Member Identification	Personal details (name, ID) Contact information Employment records Collateral documentation	84	29.7%	Membership → Credit → IT Department
Governance Documentation	Board minutes Audit reports Regulatory filings Policy documents	61	21.4%	Board → Management → Members (limited)
Risk Assessment	Credit scores Default histories Portfolio analytics Fraud alerts	30	10.7%	Credit → Management → Board (restricted)

As presented in Table 1, transactional data represented the largest proportion of coded data-sharing references at 38.2%, followed by member identification data at 29.7%. Governance documentation accounted for 21.4%, while risk-assessment data represented the smallest proportion at 10.7%. This pattern indicates that internal information exchange is dominated by operational data directly associated with routine financial activities such as savings, withdrawals, loan disbursements, repayments, and dividend allocation.

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The predominance of transactional information is consistent with Nuwagaba (2022), who emphasizes that SACCO information flows are primarily organized around the operational requirements of daily financial service delivery. However, the NVivo matrix coding analysis revealed that the existence of organizational data did not necessarily imply equal accessibility across stakeholder groups. Management personnel reported access to all four categories, with a mean accessibility score of 4.7/5. Ordinary members, in contrast, primarily accessed transactional information, with a mean access score of 2.1/5, while access to governance documentation and risk-assessment information was considerably lower at 1.3/5 and 0.8/5, respectively.

This information asymmetry was reflected in participant experiences. One member described the difficulty of obtaining governance-related information:

> *"I am able to look at my balance of savings as I visit the office but when I requested them to give me the annual audit report, they informed me that it was a board eye only activity at that time. And how do I place my money in their hands when I do not know the manner in which they run the SACCO?" (Member 14, 58 years old, 7 years membership)*

The limited circulation of governance information is particularly important in a cooperative institution because member participation depends partly on access to information required for oversight and informed decision-making. This finding is consistent with the Statement on the Cooperative Identity, which emphasizes democratic member control as a central cooperative principle (ICA, 2023). It also helps explain why transparency complaints were identified among 80% of participants (n = 24).

Nevertheless, restricted information should not automatically be interpreted as a governance failure. Some risk-assessment information, including credit scores, default histories, portfolio analytics, and fraud alerts, legitimately requires controlled access. The issue is therefore the absence of a sufficiently clear distinction between information that must remain protected and information that members reasonably require for participation and oversight. The findings suggest that the current approach concentrates sensitive information within management and the credit function without sufficiently balancing confidentiality requirements with member education and transparency.

B. Methods of Intra-Data Sharing within Wazalendo SACCO

The second objective examined the mechanisms used to exchange information internally. NVivo coding identified three principal methods: digital systems, physical or manual methods, and verbal communication. Digital systems accounted for 42.3% of identified sharing practices, physical or manual methods for 38.9%, and verbal communication for 18.8%. Participant

descriptions of these mechanisms are visualized in Figure 2, where terms such as *paper*, *USB*, *email*, and *meeting* appear prominently.

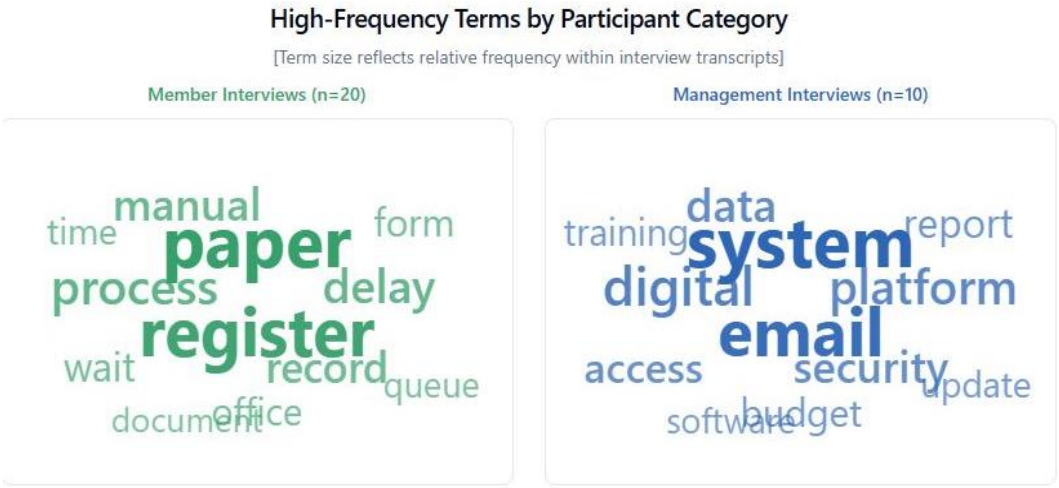

Figure 2. Nvivo Word Cloud of Participant Descriptions of Data-Sharing Methods

The coexistence of these terms indicates that Wazalendo SACCO does not rely on a single integrated information-sharing mechanism. Rather, digital and non-digital methods operate simultaneously. A comparison of management and member practices further revealed substantial differences in how the two groups access and exchange information, as summarized in Table 2.

Table 2. Methodological Divergence in Data Sharing between Management and Members

Method Category	Management Tier (n=10)	Member Tier (n=20)	Key Vulnerabilities Identified
Digital Systems	• Core banking software (daily) • Email attachments (weekly) • Shared network drives (ad hoc)	• SMS notifications (transactional only) • No direct system access	• Unencrypted email transfers • hared login credentials • No audit trails for USB transfers
Physical/Manual	• Printed reports for board meetings • drives for branch synchronization	• Manual passbooks updated weekly • Printed statements on request	• Lost/misplaced documents • Unauthorized photocopying • No version control
Verbal	• Management meetings (weekly) • Board briefings (monthly)	• Counter inquiries • Word-of-mouth from other members	• Information distortion • No documentation • Selective disclosure

As shown in Table 2, management personnel mainly used core banking software, email, network drives, and formal meetings, whereas ordinary members relied heavily on passbooks, printed statements, SMS notifications, and counter inquiries. This difference indicates that digitalization within the SACCO is uneven. Management has greater access to digital infrastructure, whereas members remain largely dependent on physical and interpersonal channels.

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A particularly important finding concerned the security implications of this hybrid environment. NVivo pattern-matching analysis indicated that 73% of the reported security-breach incidents described by participants were associated with hybrid practices, particularly the transfer of digital records to USB drives and their physical movement between branches. Participants associated this practice with irregular internet connectivity, which made direct digital synchronization difficult. This combination of digital and physical processes reflects the type of infrastructure-constrained operating environment discussed by Mugisha (2023). However, the vulnerability cannot be explained by connectivity limitations alone. From a socio-technical systems perspective, the risk emerges from the interaction between technical constraints and organizational practices (Muganyizi & Lwoga, 2021). Poor connectivity encourages the use of removable storage devices, but the absence of encryption, audit trails, and appropriate access controls transforms this workaround into a security weakness.

The findings also demonstrate that technological adoption does not automatically produce equal access to information. Management personnel use relatively advanced digital mechanisms, while ordinary members remain dependent on paper-based and face-to-face communication. This disparity can reinforce existing information asymmetries and limits the extent to which digital transformation contributes directly to member financial inclusion. Similar concerns have been identified in the broader Ugandan cooperative sector, where technological development remains constrained by infrastructure and unequal access to digital services (FSD Uganda, 2022).

C. Challenges Affecting Intra-Data Sharing Practices

The third objective examined the problems affecting intra-data sharing. Thematic analysis identified three major interconnected challenge domains: transparency deficits, standardization gaps, and security weaknesses. Transparency-related issues were identified among 80.0% of participants, standardization problems among 75.0%, and security concerns among 65.0%. These percentages represent the salience of the themes within the qualitative sample rather than population-level statistical prevalence. The relationships among these themes are illustrated in Figure 3. The NVivo cluster analysis showed particularly strong co-occurrence between transparency deficits and standardization gaps ($r = .78, p < .01$), indicating that difficulties in standardizing information were closely associated with problems of accessibility and transparency.

Transparency emerged as the most prominent challenge. The coding process identified three recurring manifestations: selective disclosure, information latency, and barriers to interpretability. Selective disclosure was identified in the accounts of 21 participants, particularly in relation to audit reports, board minutes, and other governance information. Participants perceived that some

institutional information was communicated selectively rather than systematically. Information latency was identified by 19 participants. In these cases, important organizational information reportedly reached members only after substantial delays. This reduced the practical value of disclosure because information was sometimes received after decisions or events had already occurred. A further 16 participants described interpretability problems, indicating that some information was technically available but presented in formats that were difficult for ordinary members to understand. Supporting this finding, the NVivo text-search query for *"didn't understand"* generated 47 instances across the interview transcripts.

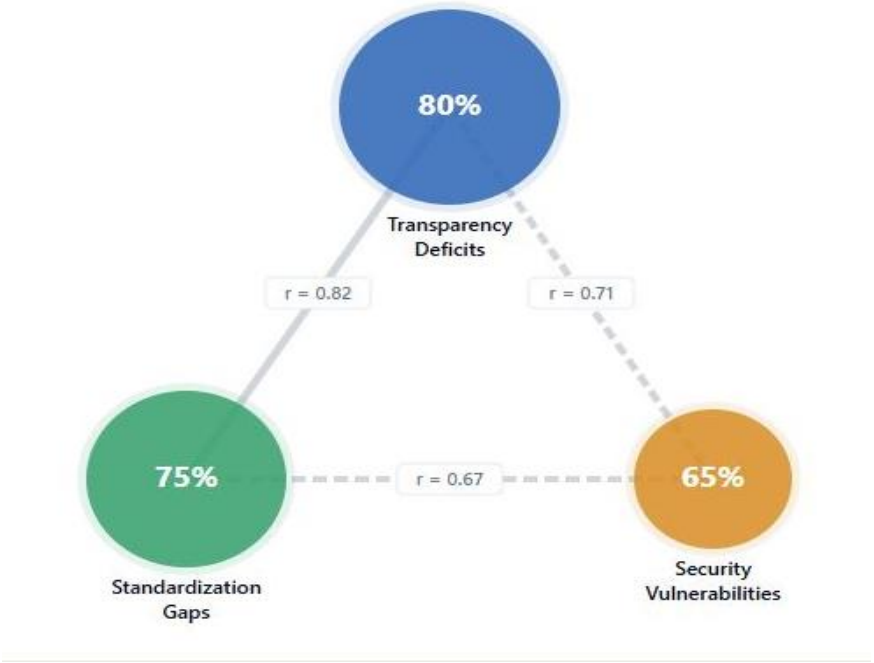

Figure 3. NVivo Cluster Analysis of Relationships Among the Challenge Domains

These findings suggest that transparency should not be defined solely by whether information is disclosed. Information that is delayed, overly technical, or difficult to interpret may still be functionally inaccessible. This provides a more nuanced explanation for the transparency deficits identified by participants and supports previous findings linking governance transparency with member trust in Ugandan SACCOs (Tumwebaze & Byaruhanga, 2020). The second challenge concerned standardization. Approximately 75% of participants referred to inconsistencies in data formats, definitions, and identifiers. Savings records were maintained in Excel, loan information was stored in the institutional system, and some membership information remained in handwritten registers. In addition, the definition of an "active member" differed between departments: the credit function defined active membership as more than one transaction per month, whereas management used more than one transaction per quarter. Member identifiers also varied between full names, membership numbers, and partial identification numbers.

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The NVivo coding comparison indicated that the absence of standardization contributed to reconciliation errors in 68% of transactions involving cross-departmental interventions. The consequences therefore extend beyond data formatting. Differences in definitions, identifiers, and storage mechanisms affect the consistency of financial administration and organizational decision-making. This supports Nabunya's (2021) observation that inconsistent information-management practices can contribute to wider SACCO governance problems. From a data-governance perspective, these inconsistencies also indicate weaknesses in metadata management and data stewardship (Bwire et al., 2023). For example, inconsistent definitions of an active member are not merely technical discrepancies because they can influence financial decisions and member entitlements. The manuscript further identified incorrect dividend calculations affecting 127 members as an operational consequence of this inconsistency. Standardization should therefore be viewed as part of financial governance rather than as an isolated IT activity.

Security weaknesses constituted the third challenge domain and were reported by 65% of participants. Three forms of vulnerability were identified. Technical vulnerabilities, mentioned by 14 participants, included unencrypted data exchange and shared login credentials. Procedural vulnerabilities, identified by 17 participants, included inadequate access-control policies and limited employee training in data protection. Physical weaknesses, reported by 12 participants, included unsecured filing cabinets, documents left on counters, and insufficient monitoring of access to back-office facilities. The consequences of these weaknesses extend beyond the immediate possibility of unauthorized access. Among participants who raised security concerns, 58% also reported reluctance to provide personal information to the SACCO. This indicates that perceived security weaknesses can undermine confidence in institutional data practices and potentially reduce members' willingness to participate in information-dependent financial services.

A particularly important interpretation emerging from these findings concerns the relationship between transparency and institutional capacity. Transparency deficits were not always associated with deliberate attempts to conceal information. The 47 occurrences of *"didn't understand"* suggest that even when data were disclosed, they were not always communicated in a form that members could meaningfully interpret. This finding gives rise to what this study conceptualizes as the Governance-Capacity Paradox. In some cases, management may lack the resources, data literacy, or time required to translate complex governance information into accessible formats. Weak governance can limit investment in staff capacity and information-management practices, while insufficient institutional capacity can subsequently reinforce poor transparency. The relationship is therefore circular: governance deficiencies restrict capacity building, and limited

capacity further weakens governance transparency. This interpretation broadens the transparency problem from one of deliberate secrecy alone to one that also includes organizational capability.

D. Cross-Objective Synthesis

When the three research objectives are considered together, the findings show that Wazalendo SACCO possesses substantial internal data resources but lacks fully integrated governance structures, technological mechanisms, and organizational practices for distributing those data consistently, securely, and transparently. Table 3 synthesizes how the type of information, the mechanism used to share it, and the dominant challenge interact to generate specific operational consequences.

Table 3. NVivo Framework Matrix of the Intersection Between Data Types, Sharing Methods, and Challenges

Data Type	Primary Method	Dominant Challenge	Operational Consequence
Governance documentation	Printed reports (board meetings)	Transparency deficit (selective access)	Members cannot exercise democratic oversight; 42% decline to attend AGMs
Member identification	Hybrid (system → drives → paper)	Security vulnerability (unencrypted transfer)	some identity fraud cases in 2024; delayed loan processing (avg. 14 days)
Transactional data	Core system (management) Passbooks (members)	Standardization gap (format divergence)	Reconciliation errors in 23% of multi-branch transactions; member complaints ↑ 37%
Risk assessment	Restricted digital access	Transparency + security tension	Members denied loans without explanation; perceived unfairness ↑ 58%

The relationships summarized in Table 3 demonstrate that the identified problems cannot be addressed effectively through isolated technological interventions. For example, insecure data transfer is not caused solely by the absence of encryption software. It also reflects poor connectivity, the absence of standardized offline synchronization procedures, and organizational tolerance of high-risk workarounds. Similarly, transparency problems are related not only to the willingness to disclose information but also to the consistency, timeliness, accessibility, and interpretability of the data being communicated.

Taken together, the findings indicate that transparency, standardization, and security form a mutually reinforcing system. Weak standardization makes information difficult to reconcile and interpret, which can reduce transparency. Security weaknesses can encourage stricter access restrictions, while excessive restrictions may reinforce perceptions of opacity among members. Infrastructure constraints can then encourage manual or hybrid practices that further reduce traceability and increase security exposure. The principal contribution of the study therefore lies in showing that intra-data sharing within SACCOs is fundamentally a socio-technical governance issue rather than an exclusively technological problem. Effective improvement requires simultaneous attention to technological infrastructure, data standards, access-control procedures, staff capacity, communication practices, and organizational culture. In the context of Wazalendo

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SACCO, addressing these dimensions together provides a more appropriate basis for improving internal data exchange, strengthening member trust, and supporting the broader financial-inclusion objectives of cooperative institutions in Sub-Saharan Africa.

E. Discussion

The findings suggest that the central issue in intra-data sharing at Wazalendo SACCO lies less in the availability of information than in the institutional arrangements governing how that information is accessed, interpreted, protected, and exchanged. This distinction is important because SACCOs operate simultaneously as financial institutions and member-based cooperatives. Their data practices therefore need to satisfy operational efficiency, confidentiality, and democratic accountability at the same time. The current pattern indicates that these objectives are not yet fully aligned. The observed information asymmetry between management and ordinary members highlights a broader governance challenge. In cooperative institutions, access to relevant information is closely related to meaningful participation and oversight. Restricted access may be justified for sensitive credit, fraud, or personal data, but governance information requires a different treatment because excessive restriction can weaken member confidence and accountability. This is consistent with previous work emphasizing the relationship between information transparency, member trust, and cooperative sustainability (Tumwebaze & Byaruhanga, 2020; Nakajubi et al., 2023). The implication is that SACCOs require differentiated access policies rather than a general culture of either disclosure or restriction.

A similar governance issue appears in the coexistence of digital and manual information-sharing practices. The presence of multiple channels is not inherently problematic, particularly in environments affected by unstable connectivity. The risk emerges when these channels are not supported by consistent procedures, traceability, and security controls. This supports the socio-technical perspective of Muganyizi and Lwoga (2021), which views information-system performance as the product of interactions between technology, institutional routines, and user behavior. In this context, improving infrastructure alone would not necessarily resolve the problem if informal practices, weak controls, and inconsistent procedures remain unchanged.

The findings also show that digitalization has different meanings for management and members. Internal administrative processes may become increasingly digital while member access remains dependent on more traditional channels. This creates a risk that digital transformation improves organizational efficiency without producing equivalent improvements in member participation or information access. For SACCOs, technological modernization should therefore be evaluated not only by the presence of digital systems, but also by whether those systems improve the quality, timeliness, and accessibility of information for relevant stakeholders. This interpretation is

consistent with discussions of digital financial inclusion in cooperative institutions, where technology is most effective when it expands meaningful access rather than simply automating existing processes (Nuwagaba & Mwesigwa, 2022).

Another important implication concerns data standardization. Inconsistent definitions, identifiers, and recording practices can affect much more than administrative efficiency. In a financial cooperative, inconsistencies can influence reporting, member entitlements, credit decisions, and institutional accountability. From this perspective, standardization should be treated as part of data governance rather than as a narrow technical function. This interpretation is supported by Bwire et al. (2023), who emphasize metadata management, common definitions, and data stewardship as foundational elements of reliable financial governance. The relationship between transparency and institutional capacity provides the most important interpretive contribution of the study. The findings indicate that poor transparency cannot always be reduced to deliberate information concealment. In some cases, institutions may possess the relevant data but lack the capacity to organize, simplify, and communicate it effectively. This produces what the study conceptualizes as the Governance-Capacity Paradox: weak governance can limit investment in data management and staff capability, while insufficient capacity can in turn reduce the quality of transparency and accountability.

This interpretation broadens the policy implications of the study. If transparency failures are treated only as governance misconduct, interventions may focus narrowly on disclosure requirements. However, where the underlying problem also involves limited data literacy, insufficient staff capacity, or weak information-management processes, disclosure obligations alone may not produce meaningful transparency. Effective reform therefore requires both governance improvement and capacity development. Security must also be considered within this integrated perspective. Stronger security controls are necessary, but security should not become a justification for unnecessary information restriction. SACCOs must balance confidentiality with appropriate access, particularly where member oversight is involved. This balance is consistent with data-governance frameworks that emphasize proportional access, privacy protection, and accountability rather than unrestricted openness (Bwire et al., 2023; Onyango, 2023).

Overall, the study demonstrates that transparency, standardization, security, infrastructure, and organizational capacity are mutually dependent dimensions of intra-data sharing. Weakness in one area can intensify problems in another. Poor standardization can reduce interpretability, limited interpretability can weaken transparency; security concerns can encourage restrictive access, and weak infrastructure can reinforce informal practices that reduce traceability. For this reason, isolated technological solutions are unlikely to be sufficient. The practical implication is

that SACCO data-sharing reform should be approached as an integrated governance program. Technology should support clearly defined access rules, standardized data structures, secure exchange procedures, staff capability, and member-oriented communication. This integrated approach is more consistent with the cooperative character of SACCOs and offers a stronger basis for improving trust, operational efficiency, and financial inclusion than technology-centered intervention alone.

V. CONCLUSION AND RECOMMENDATION

This study examined intra-data sharing practices at Wazalendo SACCO by focusing on the types of data exchanged, the mechanisms used for internal information sharing, and the challenges affecting these processes. The findings show that transactional data dominate internal exchanges, while governance and risk-related information remain comparatively restricted. Data sharing is conducted through a combination of digital, physical, and verbal mechanisms, creating a hybrid environment in which management has greater access to digital systems while ordinary members remain more dependent on printed documents, SMS notifications, passbooks, and face-to-face communication. The major challenges identified were transparency deficits, standardization gaps, and security weaknesses. These challenges are closely interconnected and demonstrate that intra-data sharing is not solely an information-technology issue, but a broader socio-technical governance problem. The study further introduces the Governance-Capacity Paradox, showing that transparency problems may result not only from deliberate information restriction but also from limited institutional capacity to process, standardize, and communicate information in a form that members can meaningfully understand. Overall, the findings emphasize that effective data sharing requires alignment between technological infrastructure, governance procedures, data standards, security controls, and organizational capacity.

Based on these findings, Wazalendo SACCO should strengthen its internal data-governance framework by establishing standardized data definitions, consistent member identifiers, clearly differentiated access levels, and documented procedures for information exchange. Governance information that can appropriately be disclosed should be communicated in timely and member-friendly formats, while sensitive personal, credit, and risk information should remain protected through role-based access controls. High-risk practices such as unencrypted USB transfers, shared login credentials, and poorly controlled physical records should be progressively replaced by secure data-transfer and offline synchronization mechanisms suitable for intermittent connectivity. Continuous staff training in data protection, data stewardship, and transparent communication is also recommended. In addition, regular member-oriented reporting and data-dialogue mechanisms should be introduced to improve interpretability and trust. Future studies

should extend the analysis to multiple SACCOs and evaluate the effectiveness of these recommendations through longitudinal or post-implementation assessment, particularly in relation to transparency, data quality, security incidents, operational efficiency, and member confidence.

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