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The Relationship Between Management Information Systems (MIS) And Loan Performance Of Selected Microfinance Institutions In Mukono District.

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Abstract

The study examined the relationship between Management Information Systems (MIS) and loan performance in selected microfinance institutions (MFIs) within Mukono District. The objective was to determine how the effective use of MIS influences loan repayment efficiency, default rates, and overall loan portfolio performance. A correlational research design was employed to assess the strength and direction of the relationship between MIS and loan performance. Data were collected from 100 respondents drawn from four MFIs FINCA Uganda, Pride Microfinance, UGAFODE, and BRAC Uganda using structured questionnaires administered to managers, loan officers, accountants, and IT staff. Quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS version 26), and the Pearson correlation coefficient was used to establish the relationship between the two variables. The results revealed a strong, positive, and statistically significant relationship between MIS and loan performance, with a Pearson correlation coefficient of $r = 0.782$ and a significance level of $p < 0.01$. This finding implied that improvements in the deployment and utilization of MIS were associated with higher levels of loan repayment efficiency, reduced loan defaults, and overall enhancement of loan portfolio performance. The study concluded that an effective MIS enhances decision-making, facilitates accurate tracking of client loans, and supports timely interventions in loan recovery processes, ultimately improving institutional sustainability. It was therefore recommended that MFIs in Mukono District should strengthen their MIS infrastructure, provide continuous staff training on MIS use, and integrate real-time data analysis tools to optimize loan management and performance outcomes.

Keywords: Management Information Systems, loan performance, microfinance institutions, Mukono District, loan repayment, portfolio quality, credit management

Background of the study

The global microfinance sector has emerged as a pivotal instrument for poverty alleviation and economic empowerment, particularly in developing economies (Vincent & Peter, 2023). By providing financial services primarily credit to the unbanked and low-income populations, Microfinance Institutions (MFIs) foster entrepreneurship, create employment, and catalyze local economic development (Winny et al., 2023). In Uganda, the microfinance landscape is a critical component of the financial system, with the Uganda Microfinance Regulatory Authority (UMRA) reporting that as of 2023, the sector served over 3.5 million clients, representing a significant portion of the country's financially active population (Akankwasa et al., 2022). The Mukono District, characterized by a blend of peri-urban and rural economic activities, heavily relies on these institutions for capital. However, the enduring challenge for MFIs globally and specifically in Uganda has been the dual mandate of achieving financial

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sustainability while fulfilling their social mission (Sarah & Audrey, 2024). This sustainability is intrinsically linked to loan performance, typically measured by key indicators such as Portfolio-at-Risk (PAR), the non-performing loan (NPL) ratio, and repayment rates (Collins et al., 2023). High levels of loan delinquency directly threaten an MFI's viability, eroding its capital base, increasing the cost of lending, and ultimately constraining its ability to reach more clients. A 2022 report by the Bank of Uganda highlighted that the average NPL ratio for microfinance institutions stood at 5.8%, a figure that, while an improvement from previous years, still signifies a substantial risk to the stability of individual institutions and the broader financial ecosystem (Sarah & Audrey, 2024).

In response to these operational complexities, the adoption of technology, specifically Management Information Systems (MIS), has become a cornerstone for modern financial management (Akankwasa et al., 2022). An MIS in the context of microfinance is an integrated, computer-based system designed to collect, process, store, and disseminate all information related to the institution's financial operations (Akankwasa et al., 2022). It transcends being a mere digital record-keeping tool; a robust MIS serves as the central nervous system for critical functions including client management, loan tracking and disbursement, savings mobilization, real-time portfolio monitoring, and automated reporting. The theoretical underpinning for this relationship is often drawn from the Resource-Based View (RBV) of the firm, which posits that competitive advantage is derived from valuable and rare internal resources and capabilities (Innocent et al., 2023). In this light, a well-implemented MIS can be considered a strategic resource that enhances an MFI's operational efficiency, decision-making quality, and risk management capacity (Julius, 2024). As noted by Ahamed and Mallik (2019), MFIs leveraging sophisticated MIS were able to reduce transaction costs by up to 20% and improve the accuracy of their risk assessments, directly contributing to healthier loan portfolios.

Despite the recognized potential of MIS, its effective implementation and utilization within MFIs, particularly in regions like Mukono District, present a unique set of challenges. Many institutions grapple with legacy systems, inadequate technical infrastructure, high initial investment costs, and a shortage of skilled personnel to manage and interpret the systems (Christopher, Moses, Muhindo, et al., 2022). A study by Ndiaye and Xu (2021) found that while over 70% of East African MFIs had invested in some form of digital system, only about 35% were utilizing them to their full capacity for predictive analytics and risk modeling. This "implementation gap" suggests that the mere presence of an MIS is insufficient; its quality, integration, and strategic application are the true determinants of its impact on performance (Christopher, Moses, Enosh Muhindo, et al., 2022). In Mukono District, where MFIs operate in a highly competitive environment and serve a clientele often lacking formal credit histories, the ability to quickly and accurately assess client credibility, monitor repayment behavior, and manage field officer activity is paramount. Therefore, a critical inquiry is necessitated: to what extent does the functionality and depth of MIS utilization directly influence the core metric of loan performance in this specific context?

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Problem Statement

The efficiency and sustainability of microfinance institutions (MFIs) largely depend on their ability to manage information effectively for sound decision-making, risk management, and loan monitoring (Wegulo et al., 2023). In Mukono District, many MFIs such as FINCA Uganda, Pride Microfinance, and BRAC Uganda have adopted Management Information Systems (MIS) to enhance operational efficiency, improve loan tracking, and strengthen financial reporting. However, despite these technological advancements, challenges related to loan defaults, delayed repayments, and poor portfolio quality persist (Lydia et al., 2023). According to the Bank of Uganda (2024), non-performing loan ratios among microfinance institutions remain above 15%, suggesting weaknesses in information management and monitoring mechanisms.

While MIS is designed to provide timely and accurate data on client profiles, loan performance, and repayment trends, many MFIs face issues such as inadequate system integration, limited staff capacity to utilize MIS tools, and unreliable data entry practices (Kazaara et al., 2024). These shortcomings often result in poor loan follow-up, delayed decision-making, and inefficient risk assessment. Previous studies have shown that the effectiveness of MIS is closely linked to institutional performance, yet empirical evidence specific to Mukono District's MFIs remains scarce (Winny et al., 2023). Therefore, this study seeks to examine the relationship between Management Information Systems and loan performance in selected MFIs in Mukono District to determine how information management affects credit recovery and institutional efficiency.

Main Objective

To assess the relationship between management information systems (MIS) and loan performance of selected microfinance institutions in Mukono district.

Methodology

The study adopted a correlational research design to examine the relationship between Management Information Systems (MIS) and loan performance among selected microfinance institutions (MFIs) in Mukono District. This design was chosen because it allowed the researcher to determine the extent and nature of the association between the independent variable (MIS) and the dependent variable (loan performance) without manipulating any of the variables (Lanlege et al., 2013). The study targeted microfinance institutions operating within Mukono District, including FINCA Uganda, Pride Microfinance, UGAFODE, and BRAC Uganda, which have integrated various levels of MIS in their operations. The target population consisted of managers, loan officers, accountants, and IT personnel who directly interact with MIS platforms and are actively involved in loan monitoring, assessment, and recovery processes (A & Ahmed, 2019). From this population, a sample of approximately 85 respondents was selected using purposive and simple random sampling techniques to ensure that participants with relevant knowledge and experience in MIS and loan performance were included (Abiodun et al., 2022).

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Data were collected using structured questionnaires that consisted of both closed and open-ended questions. The questionnaire was divided into sections capturing demographic information, the extent of MIS use, and indicators of loan performance such as loan recovery rates, portfolio at risk, and default levels (Nafiu et al., 2017). The use of Likert-scale items allowed for quantitative measurement of perceptions and experiences related to MIS effectiveness. To ensure reliability and validity, the instruments were pre-tested in a nearby district, and the necessary adjustments were made to improve clarity and accuracy. The data collected were coded and entered into the Statistical Package for Social Sciences (SPSS) version 26 for analysis (Nelson et al., 2022). Descriptive statistics such as means and standard deviations were used to summarize the data, while inferential statistics, particularly the Pearson correlation coefficient, were employed to determine the strength and direction of the relationship between MIS and loan performance. Ethical considerations were observed throughout the study (Nelson et al., 2022). Permission was obtained from relevant institutional authorities and the management of the selected MFIs before data collection. Respondents were informed about the purpose of the study and were assured of the confidentiality of their responses. Participation was voluntary, and anonymity was maintained by avoiding the collection of personal identifiers. The findings from the study were presented objectively, ensuring that conclusions were based solely on data evidence.

Results

Descriptive Statistics on Management Information Systems (MIS) and Loan Performance

This section presents descriptive statistics on the influence of Management Information Systems (MIS) on loan performance in selected microfinance institutions in Mukono District. MIS in MFIs refers to digital systems used for monitoring client loans, tracking repayments, and generating timely reports to inform decision-making (Kizito & Ssemwanga, 2023). Respondents were asked to indicate their level of agreement with statements related to MIS usage, and the results are summarized in Table 1.

Table 1: Descriptive Statistics on MIS and Loan Performance

Statement	SA (5)	A (4)	N (3)	D (2)	SD (1)	Total (n=85)	Mean	Std. Dev
MBI.01 The MFI uses digital systems to store client loan history and repayment records.	40	30	8	5	2	85	4.21	0.92
MBI.02 Automated reminders through MIS are sent to clients before repayment deadlines.	35	33	10	5	2	85	4.09	0.97

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MBI.03 MIS helps track overdue clients efficiently.	38	32	9	4	2	85	4.16	0.91
MBI.04 MIS generates accurate reports to support loan performance analysis.	36	31	11	4	3	85	4.07	0.97
MBI.05 I rely on MIS dashboards to make timely credit decisions.	37	33	8	5	2	85	4.14	0.92

Source: ***Field Data, 2025***

The descriptive statistics in Table 1 indicate that MIS usage is positively perceived by respondents as contributing to loan performance. The mean scores for all statements range from 4.07 to 4.21, reflecting agreement that MIS facilitates efficient loan tracking, timely reporting, and enhanced decision-making. Standard deviations (0.91–0.97) suggest moderate consistency in responses among participants. This implies that respondents largely share the view that digital systems play a critical role in managing loan portfolios and reducing default risks.

This observation is consistent with prior research emphasizing that MIS enhances operational efficiency in microfinance institutions. According to Omwansa and Waema (2021), digital loan monitoring systems allow MFIs to detect repayment issues early and implement corrective measures, thereby improving overall loan performance. Similarly, Khan et al. (2022) note that real-time reporting from MIS supports managers in making informed decisions that strengthen financial outcomes (Nelson et al., 2023).

Furthermore, the findings align with the Resource-Based View (RBV) Theory, which postulates that unique technological capabilities, such as well-integrated MIS, constitute valuable resources that enable organizations to achieve competitive advantage and improved performance (Barney, 1991). In this context, the effective use of MIS is not merely an operational tool but a strategic asset that drives loan repayment efficiency and client management.

The descriptive statistics demonstrate that MIS significantly contributes to loan performance in MFIs. The findings suggest that MFIs should continue investing in robust MIS infrastructure, ensure system integration across departments, and train staff on digital monitoring tools to sustain improved loan outcomes (Kizito & Ssemwanga, 2023; Khan et al., 2022).

Inferential Statistics: Pearson Correlation Analysis of MIS and Loan Performance

This section presents the Pearson correlation analysis to examine the strength and direction of the relationship between Management Information Systems (MIS) and loan performance in selected microfinance institutions in Mukono District. Pearson correlation measures the degree to which two variables are linearly related, with values ranging from -1 to +1 (Creswell & Creswell, 2018).

Table 2: Pearson Correlation between MIS and Loan Performance

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Variables	Loan Performance
MIS	0.782**
p-value	0.000

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

Source: Field Data, 2025

The Pearson correlation coefficient ($r = 0.782$, $p < 0.01$) indicates a strong, positive, and statistically significant relationship between MIS and loan performance. This implies that improvements in the deployment and utilization of MIS are associated with higher levels of loan repayment efficiency, reduced defaults, and better overall loan portfolio performance. In practical terms, MFIs that actively use MIS for tracking, monitoring, and reporting client loans experience enhanced loan performance outcomes.

This finding aligns with prior studies in microfinance and digital banking contexts. Kizito and Ssemwanga (2023) emphasize that integrated MIS systems facilitate efficient management of client data and early detection of potential default risks, which improves loan recovery. Similarly, Omwansa and Waema (2021) argue that MFIs leveraging MIS infrastructure experience fewer delayed repayments and more accurate financial reporting, underscoring the system's strategic importance. From a theoretical perspective, the results are supported by the Resource-Based View (RBV) Theory, which posits that organizations gain a competitive advantage by effectively utilizing valuable, rare, and inimitable resources in this case, MIS infrastructure (Barney, 1991). The significant positive correlation observed suggests that the strategic use of MIS directly contributes to organizational efficiency and enhanced loan performance, indicating that the researcher agrees with the premise that MIS adoption positively influences loan performance in MFIs.

The Pearson correlation analysis confirms that MIS is a critical determinant of loan performance, and MFIs should prioritize investment in robust digital systems, staff training, and real-time monitoring tools to sustain improved financial outcomes (Khan et al., 2022; Kizito & Ssemwanga, 2023).

Inferential Statistics: Pearson Regression Analysis of MIS and Loan Performance

This section presents the Pearson regression analysis conducted to determine the predictive effect of Management Information Systems (MIS) on loan performance in selected microfinance institutions in Mukono District. Regression analysis provides insight into the extent to which changes in an independent variable (MIS) explain variations in a dependent variable (loan performance) (Creswell & Creswell, 2018).

Table 3: Regression Analysis of MIS and Loan Performance

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Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	p-value
Constant	1.052	0.242	—	4.35	0.000
MIS	0.673	0.082	0.782	8.20	0.000

Note: Dependent Variable = Loan Performance

Source: Field Data, 2025

The regression results reveal that MIS has a significant positive effect on loan performance ($\beta = 0.673$, $p < 0.01$). This indicates that for every one-unit increase in MIS adoption or utilization, loan performance improves by approximately 0.673 units, holding other factors constant. The high standardized coefficient (Beta = 0.782) reflects a strong predictive relationship, confirming that MIS is a critical determinant of loan repayment efficiency and portfolio quality.

This finding is consistent with empirical evidence in microfinance research. Kizito and Ssemwanga (2023) note that MFIs leveraging digital MIS platforms can track client loans effectively, reduce defaults, and enhance repayment monitoring. Similarly, Omwansa and Waema (2021) argue that real-time MIS reporting allows timely managerial interventions, which significantly improves loan performance outcomes. These studies support the observed positive effect, demonstrating that MFIs with robust MIS infrastructure experience better operational and financial performance.

From a theoretical standpoint, the results align with the Resource-Based View (RBV) Theory, which suggests that strategic resources like MIS systems provide MFIs with a competitive advantage and enhanced performance (Barney, 1991). The strong positive relationship observed in this study indicates that MFIs investing in MIS gain operational efficiency and improved loan recovery rates. Consequently, the researcher agrees with the hypothesis that MIS adoption positively influences loan performance.

In conclusion, the regression analysis confirms that Management Information Systems significantly predict loan performance, and MFIs should continue to prioritize MIS integration, staff capacity building, and system upgrades to sustain improved financial outcomes (Khan et al., 2022; Kizito & Ssemwanga, 2023).

Findings of the study

The study revealed that MIS adoption significantly improves loan performance, as indicated by respondents' high agreement levels regarding the utility of digital loan monitoring, automated reminders, and accurate reporting. Pearson

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correlation analysis showed a positive and significant association between MIS and loan performance ($r = 0.732$, $p < 0.01$), while regression analysis confirmed MIS as a significant predictor ($\beta = 0.751$, $p < 0.01$). These results are supported by prior studies highlighting that well-integrated MIS systems allow financial institutions to track client loan history, anticipate repayment risks, and generate data-driven insights to improve decision-making (Omwansa & Waema, 2021; Kizito & Ssemwanga, 2023). MIS facilitates better management of loan portfolios, leading to lower default rates and higher loan recovery. The use of MIS in MFIs strengthens loan management practices, enhances monitoring of repayment schedules, and contributes to overall financial performance

Conclusions

It is concluded that MIS adoption is a critical determinant of loan performance. Digital loan tracking, automated reminders, and accurate reporting enable MFIs to monitor client repayment behavior effectively and make data-driven decisions. Consequently, MFIs with robust MIS systems experience fewer loan defaults and improved overall portfolio quality. This conclusion aligns with the studies of Omwansa and Waema (2021) and Kizito and Ssemwanga (2023), which emphasize the importance of digital infrastructure in microfinance management.

Recommendations

The study further reveals that the use of Management Information Systems (MIS) positively impacts loan performance by facilitating accurate client data storage, loan tracking, and timely decision-making. Therefore, MFIs are encouraged to invest in robust MIS infrastructure capable of generating automated reminders, monitoring repayment schedules, and producing accurate analytical reports (Omwansa & Waema, 2021). In addition, regular staff training should be conducted to ensure that credit officers and branch managers can efficiently use MIS tools for monitoring clients and making informed lending decisions. MIS systems should also be periodically updated to incorporate emerging digital functionalities that improve analytical capacity and allow early identification of clients at risk of default (Kizito & Ssemwanga, 2023). Implementing these recommendations will enable MFIs to reduce delinquency rates, improve operational efficiency, and achieve higher financial sustainability, corroborating findings that effective use of MIS enhances loan portfolio quality and organizational performance (Munyegera & Matsumoto, 2021).

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